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UKRAINE MACROECONOMIC HANDBOOK

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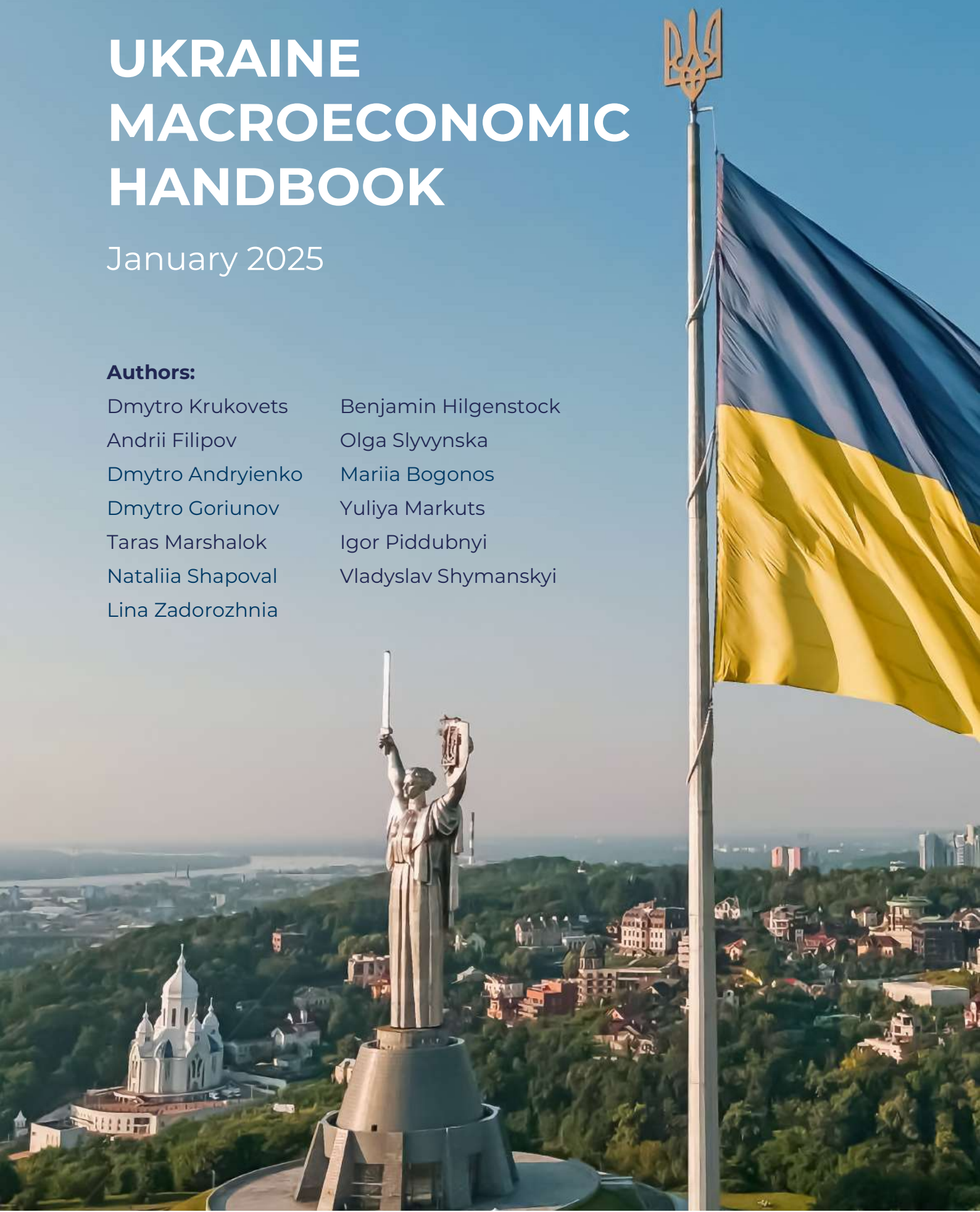

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Introduction and Assumptions

This forecast covers Ukraine's macroeconomic trajectory for 2024-27 in the context of ongoing Russian aggression, but also taking into account current and future opportunities for the country once the war comes to an end. Projections rely on the Quarterly Projection Model (QPM) for the majority of the macroeconomic indicators, with accounting-based modeling used for external, fiscal, and real sectors as well—accompanied by expert assessments of issues related to current and future policy implementation. The transparent discussion of assumptions allows readers to adjust key forecast indicators based on their own beliefs. Assumptions are a challenge given the extraordinary situation that Ukraine's economy—and, in fact, the country as a whole—has been facing for three years. The assumptions used here are based on expert judgments by the KSE Institute team and summarized in Table 1 below.

The core assumption is an end of the full-scale war by late-2025, followed by a low-intensity conflict or a full cessation of hostilities. We believe that the current situation on the battlefield as well as diplomatic efforts by Ukraine undertaken with support from its allies, will lead to a negotiated settlement by the end of 2025, which will effectively freeze the conflict while providing Ukraine with important security guarantees. Whether such an outcome will prove to be durable remains an open question given Russia's determination to halt Ukraine's Euro-Atlantic integration through force, but it will allow for a recovery of the Ukrainian economy. An end to the full-scale war would also likely allow to hold elections in Ukraine, possibly in the spring of 2026, with the electoral cycle having various effects on macroeconomic developments.

For the future course of Ukraine, the $50 billion in additional support from the G7, backed by the so-called *Extraordinary Revenue Acceleration Loans for Ukraine (ERA)* initiative, which relies on proceeds from the frozen assets of Russia's central bank, is of critical importance. Altogether, we assume that Ukraine will receive close to $93 billion in foreign grants and loans over 2025-27 after a record disbursement of $41 billion in 2024, which will ensure macroeconomic stability, provide sufficient funding for the budget, and allow for reserve accumulation. Another key issue for Ukraine's macroeconomic outlook is the situation regarding electricity generation and distribution. For our forecast, we assume that net imports of electricity will gradually decline over 2025-27 as capacity is restored and shortages subside.

Table 1. Key assumptions

	2021	2022	2023	2024	2025	2026	2027
War intensity	Low int.	Full-scale				None/low int.	
Financial assistance, $ billion	7.5	32.6	42.4	41.4	45.4	25.9	21.2
Net electricity exports, TWh	1.8	1.8	-0.4	-4.1	-2.7	-1.9	0.0

Key risks to the forecast include the future trajectory of the war as well as budget, trade, and labor market-related issues. First and foremost, the full-scale war could extend beyond 2025 and additional destruction, especially to the energy infrastructure, this year and/or beyond would have a noticeable impact on the recovery of Ukraine's economy. Less favorable external conditions and higher defense spending would also create additional financing challenges. Uncertainty regarding foreign financing was resolved through the ERA, but some questions remain, especially regarding future military assistance in light of how the US's strategy may change. Full confiscation of frozen CBR assets and their provision to Ukraine, which would be crucial for reconstruction funding, is unlikely in the near term. Part of the funds would be used to repay loans provided under the ERA should seizure eventually occur. Additional risks are related to the return of Ukrainian refugees after the end of the full-scale war. According to the latest surveys, people are becoming less inclined to do so—with significant implications for labor supply and productivity during the recovery period. The trajectory of Ukraine's Euro-Atlantic integration is also of utmost importance. The EU is the biggest contributor of financial support and EU accession will lead to important changes in legislation and regulations. Furthermore, Ukraine's European future is a key determinant of foreign businesses' and investors' decisions.

Summary of Forecast

The key takeaway from KSE Institute's January 2025 Ukrainian Macroeconomic Handbook is that the G7's ERA assistance package likely ensures financing of the state budget until 2027 and will allow for sizeable reserve accumulation in the coming years. However, Ukraine will remain heavily dependent on foreign assistance and large amounts of external funding carry the risk of creating a significant financial burden for the future. While budget financing looks favorable, reconstruction funding is a different matter entirely and investment will not be enough to return Ukraine's economy to its pre-war level by the end of the forecast period. Securing significant additional funding for the recovery, thus, must be the key objective for 2025 as damages from Russia's war of aggression stand significantly above $150 billion and reconstruction is expected to cost more than $0.5 trillion.

Additional foreign financial assistance from the ERA will likely be sufficient to finance the budget over 2025-27. We project that Ukraine's budget deficit will amount to a cumulative UAH2.9 trillion over the next three years, largely driven by spending of defense, which will reach its peak in 2025 and remain significantly above pre-2022 levels thereafter despite a noticeable drop after the end of the full-scale war. Revenues performed strongly in 2024 due to the economy's recovery, rising imports driving up VAT receipts, changes to the tax code, a growing tax base due to inflation, and robust foreign grants. They are projected to rise further in the coming years, with grants higher than previously expected due to the ERA. Nevertheless, financing needs will be considerable with the budget deficit expected to reach 17.9% of GDP this year.

Foreign loans covered roughly 80% of the $31.9 billion (UAH1.3 trillion) state budget deficit in 2024 and will continue to play a critical role for fiscal financing over 2025-27 as Ukraine is expected to receive a total of $75 billion (UAH3.3 trillion) in loans with the largest disbursement in 2025 ($41 billion) and the EU's Ukraine Facility as well as the G7's ERA assistance package making up a large share (see Special Feature 1). This means, however, that Ukraine will remain heavily dependent on external financing in the coming years, even after the end of the full-scale invasion, and that there is a serious risk of a significant financial burden emerging in the future if support is extended in the form of loans rather than grants. The remainder of the 2024 deficit was financed through net issuance of domestic debt. While we see limited absorption capacity of Ukraine's banking system in the coming years, a return of foreign investors to the domestic sovereign debt market and renewed ability to issue Eurobonds in 2027 or even earlier means that financing is largely secured.

Table 2. Forecast for key indicators

	2021	2022	2023	2024e	2025f	2026f	2027f
Real GDP growth, %	3.4	-28.8	5.3	3.9	3.6	6.1	6.5
Nominal GDP, UAH billion	5,451	5,239	6,538	7,635	8,954	10,280	11,673
Budget balance, $ billion	-7.1	-28.4	-37.9	-31.9	-37.5	-16.9	-11.5
Foreign grants, $ billion	0.9	17.5	14.1	13.1	4.7	6.6	6.6
Foreign loans, $ billion	2.3	17.4	30.7	28.3	40.7	19.3	14.6
Headline inflation, % avg	9.8	21.7	11.2	7.0	12.1	8.1	6.2
Exchange rate (USD), avg	27.3	32.3	36.6	40.2	42.7	45.9	46.4
Policy rate, % avg	8.7	19.6	20.3	14.0	13.1	12.1	10.9
Current account, $ billion	-3.9	8.0	-9.6	-13.2	-25.9	-19.4	-23.4
Change in reserves, $ billion	2.5	-2.3	11.4	2.9	4.6	3.6	3.4
Unemployment rate, % avg	9.9	20.6	18.2	14.3	13.1	12.1	10.9
Nominal wage, UAH avg	13,973	14,846	17,417	21,177	23,748	26,322	29,098

Inflation rose in H2 2024, which triggered a change in the National Bank of Ukraine's (NBU) monetary policy. Consumer price inflation rose to double-digits in late 2024 and is projected to increase further by mid-2025 before moderating in the second half of the year as a result of the NBU's tighter monetary policy stance. Key drivers of inflationary pressures are a weaker-than-expected harvest last year due to a drought sharply higher electricity prices as a result of Russia's continued attacks on Ukraine's energy infrastructure, which affect consumers directly but also indirectly through producer price inflation, and persistently high wage growth both in nominal and real terms. Current inflation dynamics together with early signs of rising inflation expectations across economic actors prompted the central bank to change course in late 2024.

We believe that the NBU will continue its current policy of monetary tightening, which began in December with the first rate increase since the early days of the full-scale invasion, and increase its key rate further to 15% in the first half of 2025, i.e., an additional 150 basis points. The NBU also intervened quite heavily in the foreign exchange market last year (~$35 billion). This is likely to continue in 2025 to contain inflationary pressures from Hryvnia depreciation and is enabled by substantial inflows from foreign partners. Together with the clearly expressed intention to not allow for double-digit inflation, which will help anchor expectations, and supported by more benign food and energy price dynamics, this will lead to inflation moderating in the second half of the year and reaching around 9% y-o-y by end-2025—and close to 5% y-o-y in 2027.

External conditions will be supportive in 2025-27 due to foreign assistance and an end of the war. Despite ongoing challenges due to Russian attacks as well as the NBU's significant interventions in the foreign currency market, we believe that Ukraine will be able to grow macroeconomic buffers this year and beyond. Over 2025-27, Ukraine is expected to receive more than $90 billion in grants and loans from its international partners, which will offset wider goods and services deficits as well as lower foreign investment during the war and persistent outflows of resident capital, altogether allowing for reserve accumulation of ~$12 billion by 2027 (vs. 2024). After the end of the full-scale invasion, external dynamics will become much more positive, with strong growth of goods exports, an improved services balance due to smaller payments by Ukrainians, significantly higher foreign direct and portfolio investment, and a reduction in resident outflows.

Ukraine's economy is forecasted to grow at ~4% annually during the war and at ~6% thereafter. This shows an impressive resilience in light of the current challenges, including continued Russian attacks, electricity shortages, and labor market constraints, which have negatively affected economic activity and economic actors' expectations regarding the economy in 2024. Private and government consumption will boost growth in 2025, while investment will become the key driver of the post-war recovery. Net exports will shift from negative to positive contributions by 2026, further supporting growth, while government spending will drop sharply and private consumption will contribute less due to the high war-period base.

Despite the relatively positive outlook, which is supported by sizeable foreign assistance, including through ERA funding from the G7, and productivity gains from recovery-related investments, the Ukrainian economy will be roughly 10% smaller in real terms by the end of the forecast period (i.e., in 2027) than before the start of the full-scale invasion. This will hinder convergence to average EU living standards significantly. Insufficient funding for reconstruction is the key challenge as damages due to the war stand significantly above $150 billion and reconstruction costs now amount to ~$0.5 trillion (see Special Feature 2). At the same time, gross fixed capital formation (i.e., investment) over 2025-27 is projected to reach only $100 billion (in 2023 $). After having secured sufficient and predictable funding for Ukraine's state budget through the ERA, the key objective for 2025 is, thus, to attract additional investments to fill this $400 billion gap. Both public and private sources must be mobilized, but Russian sovereign assets should also be confiscated for this purpose.

Serious labor market constraints persist and the electricity situation remains challenging. In this edition of the Ukrainian Macroeconomic Handbook, we discuss specific areas that are of critical importance for the macroeconomic outlook, including labor market constraints and the situation regarding electricity supply. While the persistent decline in the unemployment rate and improving labor market integration of internally displaced persons are encouraging, businesses encounter growing difficulties finding workers with the right skills—a dynamic that will persist in our view at least until the end of the full-scale war and the return of a significant number of Ukrainian refugees from abroad, which represents a major challenge.

Renewed Russian attacks on Ukraine's energy infrastructure towards the end of 2024 have exacerbated electricity shortages, which represent a key challenge for households and businesses alike. Nevertheless, significant progress has been made regarding the restoration of previously destroyed power generation capacity. While electricity imports reached an all-time high in 2024 at 4.1 TWh (five times their 2023 level), we expect them to decrease in 2025-26 as the situation with power generation and distribution in Ukraine improves further. For the time being, electricity imports have not only weighed on the external balance but also led to higher prices, which, in turn, have increased inflationary pressures significantly.

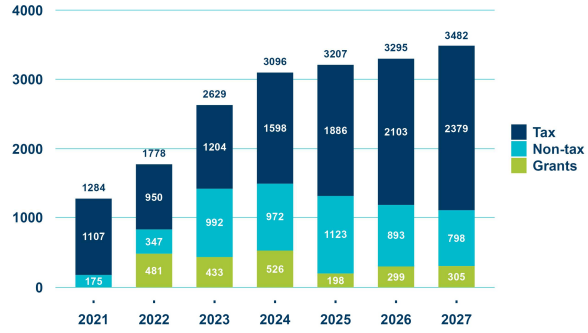
Altogether, macroeconomic fundamentals have improved since our last forecast due to the additional foreign assistance now being provided through the G7's ERA mechanism, but key challenges remain with regard to Ukraine's economic recovery and more investment is needed.

Budget and Financing

The budget is largely financed over 2025-27 due to additional financial assistance from partners. Ukraine is expected to receive a total of $75 billion in foreign loans over this period, which corresponds to roughly UAH3.3 trillion, while repayments amount to UAH400 billion. Such assistance will fulfill a significant share of Ukraine's overall fiscal financing needs, as the cumulative budget deficit over 2025-27 is estimated at UAH2.9 trillion (~$66 billion). The remainder is being secured through the issuance of domestic debt and a likely return to the Eurobond market toward the end of the forecast horizon, i.e., in 2026-27.

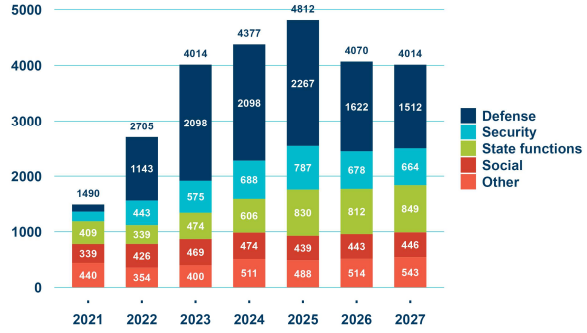
Revenues will rise at a moderate pace in the coming years on the back of stronger tax receipts. Total revenues are estimated to have reached UAH3.1 trillion in 2024 with UAH1.6 trillion in taxes and more than UAH500 billion in grants from partners (see Figure 1). As far as taxes are concerned, this represents a 33% increase vs. 2024, driven by the economy's recovery, higher imports, changes to the tax code, and a growing tax base due to inflation. We project tax revenues to continue to grow at a robust pace in 2025-27 and reach UAH2.4 trillion in 2027 (+49% vs. 2024). Grants from foreign partners are set to decrease after reaching a $13.1 billion (or roughly UAH530 billion) in 2024 but will remain an important source of revenues. Disbursements under the ERA mechanism play the most important role and help limit the budget deficit. After rising an estimated 18% in 2024, total revenues (incl. grants) will increase another 13% by 2027.

Figure 1: Budget revenues, UAH billion



Source: Ukrstat, KSE Institute

Figure 2: Budget expenditures, UAH billion

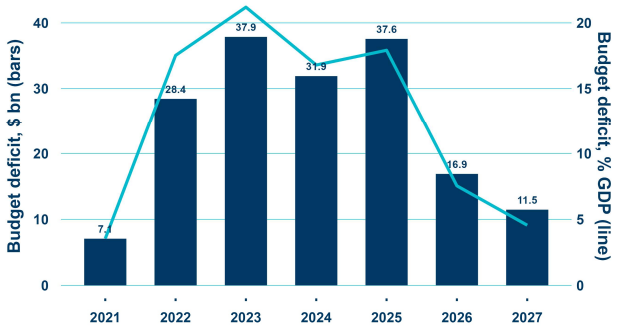


Source: Ukrstat, KSE Institute

Expenditures will rise significantly in 2025 before declining in the post-full scale war period. Spending on defense and security is the key driver of this dynamic and expenditures are projected to increase by 8% and 14%, respectively as uncertainty regarding future military assistance from Ukraine's allies requires the allocation of additional domestic resources to these areas (see Figure 2). Altogether, we project roughly $72 billion in spending on defense and security in 2025. Higher expenditures are also expected regarding state functions and interbudgetary transfers (+37%) driven by a significant increase in interest payments (+54%), while the social sector (including education, healthcare, and housing) is facing meaningful cuts (-8%). Despite this reduction in spending, the provision of social services to the population will be ensured. Overall, expenditures are set to decline by around 15% in 2026 (to UAH4.1 trillion) and remain at this level in 2027 after an increase of 10% in 2025, which comes at the heels of an estimated 9% rise in 2024. After the end of the full-scale war, it will be possible to reduce defense and security spending—by 25% in 2026 and an additional 5% in 2027—but Ukraine's security needs will still require spending significantly above average NATO levels—22% of GDP in 2026 and 19% of GDP in 2027. However, total expenditures are expected to decline significantly by 2027—a minus of 17% vs. their 2025 peak and 8% vs. the level in 2024.

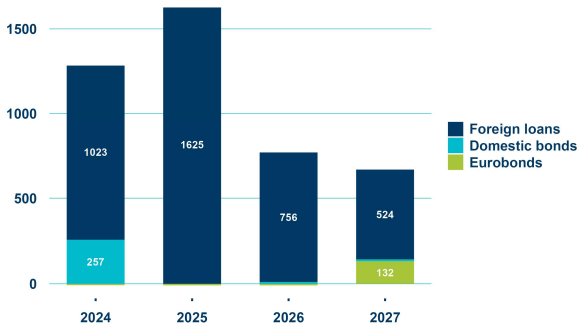
The budget deficit will reach 17.9% of GDP in 2025 before narrowing markedly thereafter. As a result of the aforementioned revenue and expenditure dynamics, the state budget deficit is expected to rise from UAH1.3 trillion ($31.9 billion, 16.8% of GDP) in 2024 to UAH1.6 trillion ($37.5 billion, 17.9% of GDP) in 2025 before declining to UAH775 billion ($16.9 billion, 7.5% of GDP) and UAH 532 billion ($11.5 billion, 4.6% of GDP) in 2026-27, respectively (see Figure 3). This represents a substantial adjustment compared to the 21.2% of GDP ($37.9 billion) deficit that Ukraine registered in 2023, although it was smaller in absolute UAH terms (UAH1.4 trillion). Financing needs will remain sizeable over the forecast period, however, with a cumulative budget deficit of UAH2.9 trillion in 2025-27, which is equivalent to $66 billion.

Figure 3: Budget defcit



Source: Ukrstat, KSE Institute

Figure 4: Financing, UAH billion



Source: Ukrstat, KSE Institute

Disbursements of foreign assistance and domestic debt financed deficit in 2024. Ukraine received a total of $13.1 billion in grants and $28.3 billion in loans from its partners in the past year, with more than one-third of the funds disbursed in November-December. While grants are recorded as revenues and reduce the deficit, loans represent budget financing. In local currency-terms, foreign loans amounted to UAH1.1 trillion and, taking into account repayments of ~UAH100 billion, financed roughly 80% of the deficit (see Table 3). The remainder was fulfilled through the issuance of domestic debt. The Ministry of Finance issued a total of UAH640 billion, while repayments were only UAH380 billion—a rollover rate of 167% (see Figure 4).

Budget financing is likely secured through 2027 due to additional foreign assistance. While we believe that the capacity of the Ukrainian banking system to absorb further net issuance of domestic debt is limited, foreign assistance, largely through the EU's Ukraine Facility and ERA-based loans will allow Ukraine to finance its budget throughout the forecast period. Foreign investors' anticipated return to the market for domestic debt after the end of the full-scale war (i.e., in 2026-27) and Ukraine's ability to issue Eurobonds again in 2027 (or even earlier) will also help to secure sufficient funds for the budget. It is worth emphasizing that this conclusion is based on the assumption of an end to the war during 2025. A continuation of Russia's full-scale invasion represents the key downside risk to the forecast. In addition, it means that Ukraine will remain heavily dependent on external support, which will also negatively impact debt dynamics.

Table 3. Fiscal sector forecast

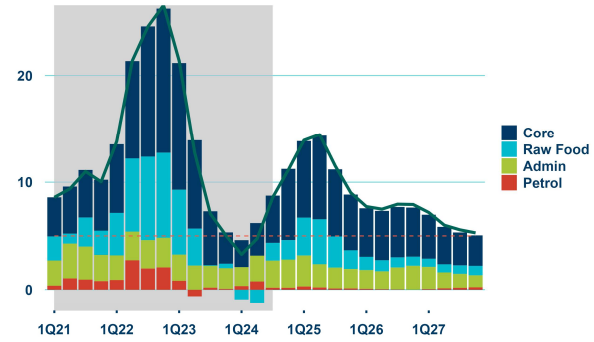
	2021	2022	2023	2024e	2025f	2026f	2027f
Total revenues, UAH bn	1,297	1,788	2,629	3,095	3,207	3,295	3,481
in % of GDP	23.8	34.1	40.2	40.5	35.8	32.1	29.8
Tax revenues, UAH bn	1,107	950	1,204	1,598	1,886	2,103	2,379
Foreign grants, UAH bn	1	481	433	526	198	299	305
Total Expenditures, UAH bn	1,490	2,705	4,014	4,377	4,812	4,070	4,014
in % of GDP	27.3	51.6	61.4	57.3	53.7	39.6	34.4
Defense, UAH bn	128	1,143	2,098	2,098	2,267	1,623	1,512
Overall balance, UAH bn	-193	-918	-1,386	-1,282	-1,604	-775	-532
in % of GDP	-3.5	-17.5	-21.2	-16.8	-17.9	-7.5	-4.6
Balance excl. grants, UAH bn	-195	-1,399	-1,819	-1,808	-1,803	-1,074	-837
in % of GDP	-3.6	-26.7	-27.8	-23.7	-20.1	-10.4	-7.2
Financing, UAH bn							
Domestic bonds				257	0	11	11
Issuance				640	502	258	239
Amortization				383	502	247	229
Eurobonds				-8	-9	-9	132
Issuance				606*	…	…	139
Amortization				614*	9	9	7
Foreign loans				1,023	1,625	756	524
Disbursement				1,136	1,739	887	678
Repayments				113	114	131	154

**Numbers do not show actual repayments and issuance but rather reflect debt restructuring.*

Price Dynamics

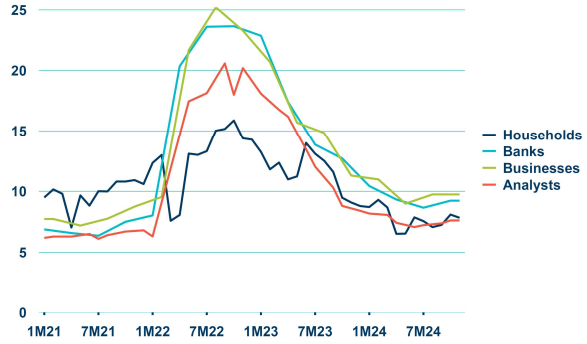
Inflation rose to double-digits at 11.2% in November 2024 and will remain elevated in H1 2025. The bad harvest, high electricity prices, and a rapid increase in wages are the key factors behind inflation dynamics, yet the former two will moderate significantly by the summer of 2025 (see Figure 5). The risk of an inflation spiral has subsided due to the NBU's policy response and its communication. A weaker-than-expected harvest has driven up raw food inflation, especially for vegetables, but we expect the agricultural sector to adapt and these effects to moderate in the coming years. Electricity prices have contributed significantly to higher inflation via administratively regulated prices as they have risen by 170% in two years due to the large-scale destruction of the electricity generation and distribution infrastructure. Other tariffs will also be further aligned with market prices going forward, which will increase prices. Importantly, electricity prices drive up producer price inflation (PPI), which has important second-round effects.

Figure 5: Inflation and contributions, %/pp y-o-y



Source: Ukrstat, KSE Institute

Figure 6: Inflation expectations, 12M ahead, % y-o-y



Source: NBU, KSE Institute

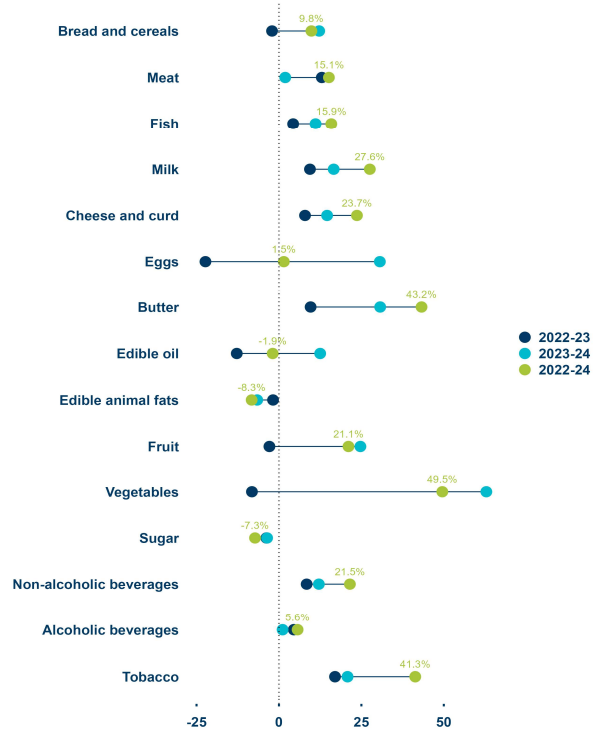
Inflation expectations remained broadly stable despite higher actual inflation, with only a marginal deteriorating in H2 2024. This is the case for all economic agents (see Figure 6) and will help to get inflationary pressures under control in the coming months. Stable inflation expectations also illustrate the credibility that the NBU has built and will allow for a continuation of monetary policy normalization.

The majority of food items, around 43% of the total consumer goods basket, saw an 18% price increase in two years (see Figure 7). Grocery prices are famously volatile and allow for speculation about overall inflation dynamics based on different sub-baskets. As they are also a key driver of household inflation expectations, this creates serious challenges for monetary policy.

Prices of vegetables and fruits increased by 50% and 20%, respectively, over two years. Among the key drivers of this development was a bad harvest of vegetables during the summer of 2024 as well as a favorable base in 2023. As of November, prices for the two categories increased by 63% and 25%, respectively, year-over-year, which creates second-round effects for some products made from raw vegetables and fruits. For 2025, we expect marginally lower prices for both.

Milk and tobacco goods have shown stable price increases of around 15-20% over two years. The former were affected by higher energy prices while the latter grew mostly due to higher tariffs and measures against illegal tobacco goods.

Figure 7: Inflation for specific goods, % y-o-y



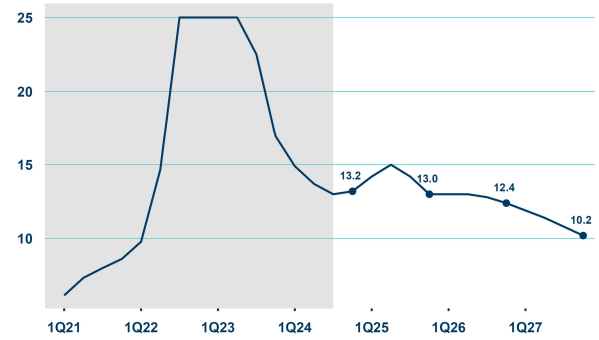
Source: Ukrstat, KSE Institute

Monetary Policy

Ukraine's central bank shows a strong commitment to return inflation to its target. To this end, the NBU increased its policy rate by 50 bps in December to 13.5%, the first hike since the early days of the full-scale invasion and a clear departure from the previously indicated stable interest rate of 13% into 2025. The reason for this change in policy was an increase of inflation to almost 10% y-o-y in October and 11.2% in November of last year. The NBU's response, including its clear statement that it will not tolerate double-digit inflation, sends an important and clear signal to economic actors, thereby improving inflation expectations and weakening future inflationary pressures. We believe that the policy rate will be increased to 15% by mid-2025 (see Figure 8) before inflation moderates and moves below 10% sometime in the fall of 2025.

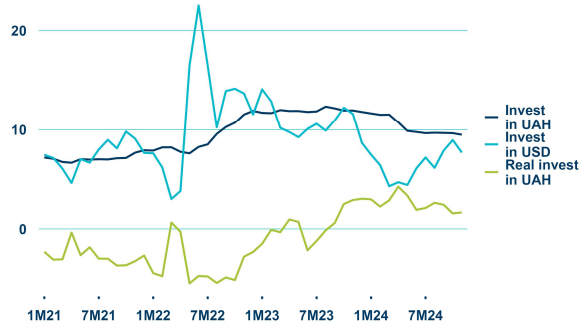
Banking rates and bond yields are unlikely to decline further until monetary conditions are loosened. We do not expect a full reversal of the recent trend of declining interest rates. This means that the effect of a higher policy rate through the traditional transmission channel will be limited, while the signaling effect and the reduction of inflationary pressures through smaller exchange rate depreciation will be key. Temporarily higher inflation and continued, albeit moderate, Hryvnia depreciation, together with an increased income tax rate, mean that deposits in local currency will continue to be less profitable than those in $ (see Figure 9).

Figure 8: Policy rate, quarterly average %



Source: NBU, KSE Institute

Figure 9: Profitability of UAH vs USD deposits, %

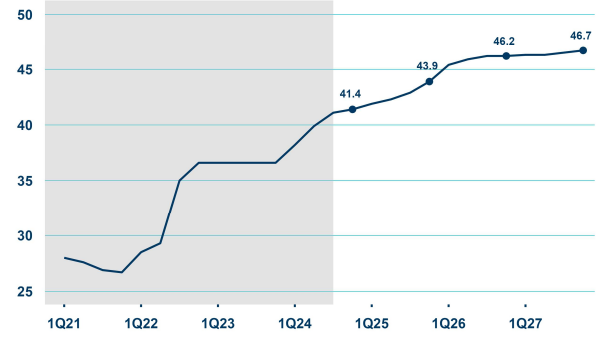


Source: Ukrstat, KSE Institute

The NBU managed to contain Hryvnia depreciation in H2 2024 through extensive interventions. In the second half of last year, Ukraine's currency lost 4% of its value against the U.S. dollar and 1% against the Euro—compared to 6% and 3%, respectively, in H1 2024 (see Figure 10). This was driven by higher inflows of foreign assistance and also supported by the NBU's interventions in the foreign exchange market totaling $20.7 billion in H2 (vs. $14.2 billion in H1). Such interventions will most likely continue in 2025 to prevent additional inflationary pressures from Hryvnia depreciation and are enabled by the significant support Ukraine is expected to receive from foreign partners, including through the ERA mechanism.

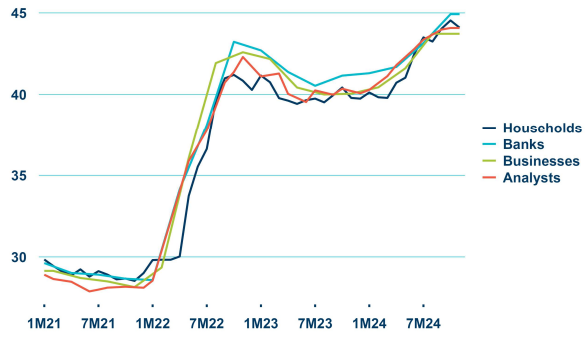
Exchange rate expectations continue to worsen for all economic agents. The transition from a fixed exchange rate to a managed floating regime in H1 2024 and subsequent depreciation have clearly impacted assessments, with an exchange rate of UAH45/$ expected for end-2025 (see Figure 11). We believe that overall external dynamics are more supportive and will lead to a rate slightly above UAH43/$.

Figure 10: Exchange rate, UAH/USD



Source: Ukrstat, KSE Institute

Figure 11: Exchange rate expectations, 12M ahead



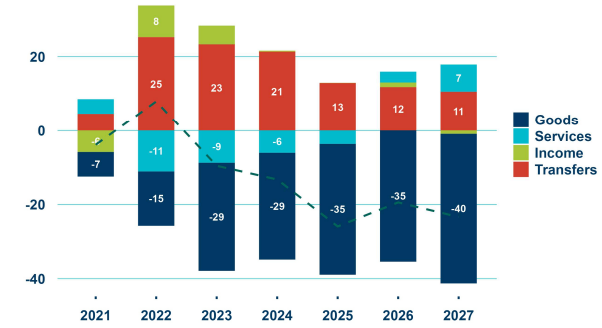
Source: NBU, KSE Institute

External Sector

The outlook for Ukraine's external accounts is quite positive, largely as a result of the $50 billion ERA-based macro-financial assistance package from G7 partners (see Special Feature 1) and despite ongoing balance of payments challenges due to Russia's ongoing full-scale war. Foreign assistance of more than $90 billion in grants and loans over 2025-27 will offset wider goods and services deficits as well as the decline in foreign investment and persistent outflows of resident capital, altogether allowing for reserve accumulation of close to $12 billion between 2024 and 2027. In our scenario, Ukraine will possess foreign reserves of more than $50 billion by the end of the forecast period, which corresponds to more than six months of imports of goods and services and represents a comfortable level (see Table 4).

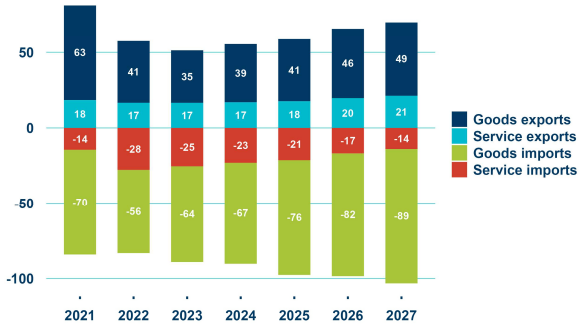
Ukraine's current account deficit is projected to widen considerably the coming years—from $9.6 billion in 2023 to $13.2 billion in 2024 and $25.9 billion in 2025 before narrowing in 2026-27 (see Figure 12). Developments towards the end of the forecast horizon are driven by two key factors: external conditions will become more favorable following the end of the full-scale war, leading to increased trade in goods, an improved services balance, and higher remittances. At the same time, the level of financial assistance from international partners in the form of grants is expected to decline significantly.

Figure 12: Current account and components, $ billion



Source: Ukrstat, KSE Institute

Figure 13: Exports and imports, $ billion



Source: Ukrstat, KSE Institute

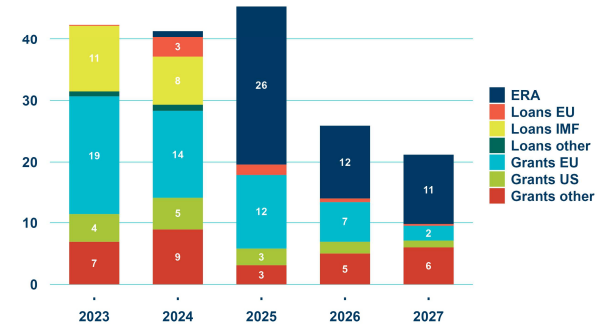
A noticeable recovery in goods exports and imports is anticipated during the forecast period. Ukraine's goods exports are projected to increase by a cumulative 41% by 2027 ($49.0 billion) vs. 2023 ($34.7 billion, see Figure 13). Key drivers are the continued adaptation of the export-oriented part of Ukraine's economy during the war, a bounce back in production after the end of hostilities, and the removal of logistical barriers (e.g., grain corridor, border disputes). Compared to our last prediction, goods exports will be somewhat lower throughout the forecast period due to an unexpected decrease in harvest activity, the steel industry's significant vulnerability (especially in regions close to the frontline such as Pokrovsk), and energy-related restrictions. Import growth will be marginally lower in percentage terms than export growth—a cumulative 40% by 2027 ($89.3 billion) vs. 2023 ($63.8 billion)—but the change in U.S. dollars will be bigger due to the higher base, leading to a somewhat bigger trade deficit, especially in 2027.

Ukraine's services balance is expected to improve significantly in the coming years—from a $8.7 billion deficit in 2023 to deficits of $6.1 billion and $3.6 billion in 2024-25 and surpluses of $2.9 billion and $7.3 billion in 2026-27. This is markedly stronger than previously expected, especially towards the end of the forecast period, due to already-observable positive dynamics in terms of service providers' adaptation. A reduction in payments related to travel services, which have been a major factor since 2022 as a result of the increased number of Ukrainians living abroad, plays a key role for Ukraine's services balance. Total services imports are projected to gradually decrease from a peak of $27.7 billion in 2022 to $13.9 billion in 2027. A faster adjustment is unlikely as the return of Ukrainian refugees will take time. Services exports have registered a smaller decline vs. goods but are nevertheless set to rise by 28% in 2027 vs. 2023.

The primary income account is expected to be roughly balanced throughout the forecast period after registering substantial surpluses in 2022-23, with markedly lower remittances weighing on inflows until the end of the full-scale war. In 2024, compensation of Ukrainians working abroad weakened considerably after holding broadly stable in the first two years of the war. Such flows are expected to

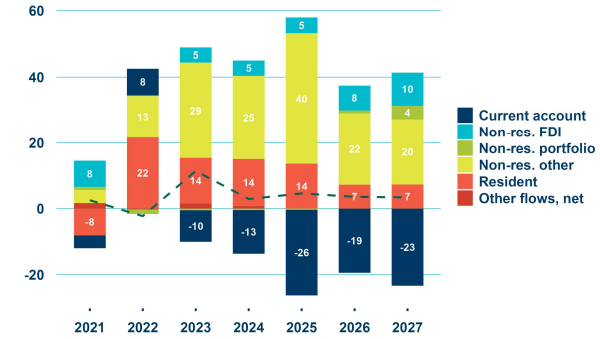
rebound only in 2026-27. Ukraine continues to benefit from a pause in some interest payments on external debt, which reduced debits significantly. At the same time, **a noticeable decline in foreign grants is already reducing the secondary income surplus** and is projected to continue doing so in the coming years as partners increasingly shift their support to loans (see Figure 14). Grants are projected to fall from $13.1 billion in 2024 to $4.7 billion in 2025 before increasing to $6.6 billion each in 2026-27, respectively, largely due to the ERA-linked support package. Strong private transfers from abroad will provide additional support, keeping the secondary income surplus elevated vs. pre-2022 around or above $10 billion in 2025-27, which, nevertheless, is a clear drop from above $20-25 billion per year in 2022-24.

Figure 14: Grants and loans, $ billion



Source: Ukrstat, KSE Institute

Figure 15: Drivers of change in reserves, $ billion



Source: Ukrstat, KSE Institute

Non-resident capital flows are projected to perform very well over the forecast period, largely due to the ERA-based loans from foreign partners but also supported by stronger foreign direct investment after the end of the full-scale war and the return of foreign portfolio investors towards the end of the forecast period (see Figure 15). Foreign direct investment will remain broadly stable at $5.0 billion per year in 2024-25 as the full-scale war continues, but improve meaningfully in 2026-27 to $7.5 billion and $10.0 billion, respectively. Foreign investors are likely to re-enter the Ukrainian domestic sovereign debt market by 2026-2027 and a return to the Eurobond market is anticipated for 2027 (or even earlier). As a result, portfolio inflows will return in 2026-27 at $0.9 billion and $4.2 billion, respectively, after four years of continued outflows. The most important driver of capital flows are foreign loans, which have financed a significant share of external and budget needs since the start of the full-scale invasion. They are projected to remain strong due to the ERA mechanism, especially in 2024-25, reaching $28.3 billion and $40.7 billion, respectively, before declining to $19.3 billion in 2026 and $14.6 billion in 2027. Resident capital outflows will moderate as the intensity of the war subsides—from $21.6 billion in 2022 to $7.3 billion in 2027.

Table 4. External sector forecast

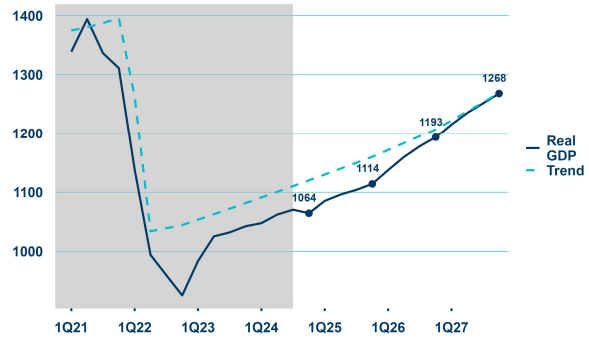
$ billion	2021	2022	2023	2024e	2025f	2026f	2027f
Current account balance	-3.9	8.0	-9.6	-13.2	-25.9	-19.4	-23.4
Goods balance	-6.6	-14.7	-29.1	-28.8	-35.3	-35.4	-40.3
Exports	63.1	40.9	34.7	38.5	41.1	46.3	49.0
Imports	69.8	55.6	63.8	67.3	76.4	81.7	89.3
Services balance	4.0	-11.1	-8.7	-6.1	-3.6	2.9	7.3
Primary income balance	-5.8	8.5	5.0	0.3	0.1	1.2	-0.9
Foreign grants	0.9	17.5	14.1	13.1	4.7	6.6	6.6
Secondary income balance	4.6	25.2	23.3	21.3	12.9	11.8	10.6
Non-resident capital flows	12.9	11.5	33.1	29.5	44.0	30.2	34.1
o/w direct investment	8.0	0.2	4.6	4.6	4.8	7.5	10.0
o/w portfolio investment	1.0	-1.4	-0.5	-0.4	-0.4	0.9	4.2
o/w other investment	3.9	12.7	29.0	25.3	39.6	21.8	19.9
Resident capital flows	8.1	21.6	13.8	14.3	13.6	7.2	7.3
Change in reserves	2.5	-2.3	11.4	2.9	4.6	3.6	3.4
Total reserves	30.6	28.0	38.8	41.7	46.3	49.9	53.3
in months of imports	4.4	4.0	5.2	5.5	5.7	6.1	6.2

Economic Activity

Ukraine's real GDP is projected to grow at ~4% per year during the war and ~6% per year thereafter. This means that the economy's robust recovery is continuing despite relentless Russian attacks, including on energy infrastructure (see Figure 16). Our forecast is broadly unchanged from October with positive and negative developments offsetting each other. These include better adaptability of businesses, weather effects on the harvest, and lower exports. Productivity gains from recovery-related investments and more predictable financial support due to the ERA will allow for a relatively strong pace of economic growth. However, while the budget is likely financed throughout the forecast period, current investment levels will be insufficient for a full recovery of Ukraine's economy by 2027. We forecast real GDP to be 9% below its 2021 level in 2027, which means that additional investment is urgently needed. Cumulative gross fixed capital formation over 2025-27 of ~$100 billion (in 2023 $) is significantly less than reconstruction needs (of at least $0.5 trillion).

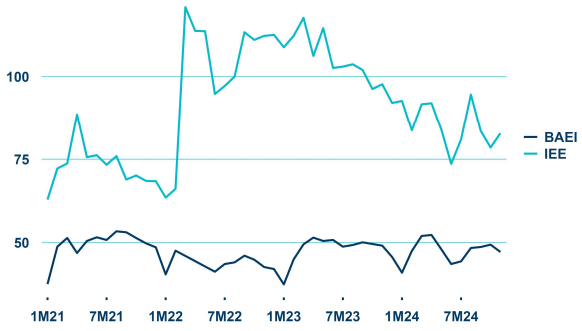
Intensifying economic challenges in the second half of 2024 worsened economic expectations. While the finalization of the ERA-based loans provide critical support to Ukraine's budget and results in quite positive external dynamics, including significant reserve accumulation, multiple factors are impacting the outlook of economic actors negatively (see Figure 17): continued Russian air attacks, including on Ukraine's energy infrastructure, persistent labor market challenges with no progress visible and no clear solutions in sight, and uncertainty due to the political cycle in partner countries (e.g., US elections).

Figure 16: Real GDP and trend, level



Source: Ukrstat, KSE Institute

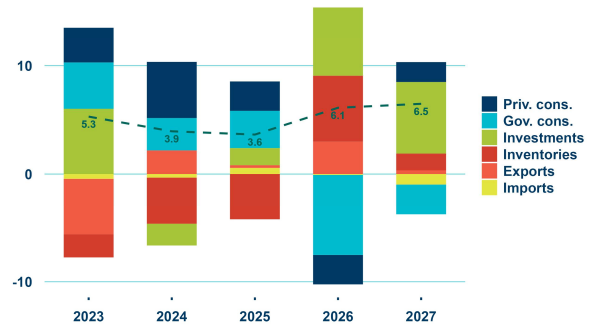
Figure 17: Economic expectations, index



Source: NBU, Info Sapiens, KSE Institute

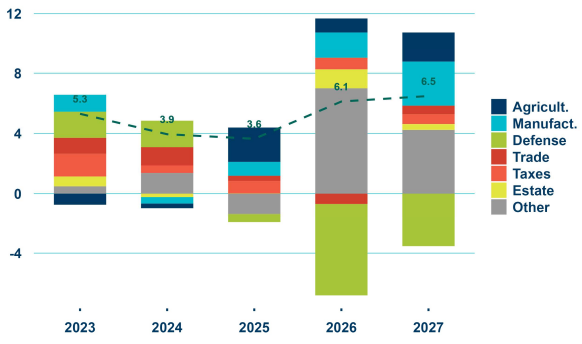
As the full-scale war comes to an end, the drivers of economic growth are expected to change (see Figures 18 & 19)**.** Government spending, which will sustain activity through 2025, will become a net negative contributor as war-related expenditures decline significantly in 2026-27. Meanwhile, the impact of private consumption, which is estimated to have contributed 5.2 pp to real GDP growth in 2024, will decline in the future. Current consumption trends are heavily influenced by high real wage growth due to labor market constraints such as emigration and mobilization. Although investment is expected to weigh on growth in the near term as the war presents serious challenges, it will become the primary engine of the recovery, bolstered by domestic capital spending and increasing foreign direct investment. Net exports, which have been a drag on economic activity in 2022-23, are projected to contribute positively throughout the forecast period.

Figure 18: Real GDP growth and contributions, in %/pp



Source: Ukrstat, KSE Institute

Figure 19: Real GDP growth and contributions, in %/pp



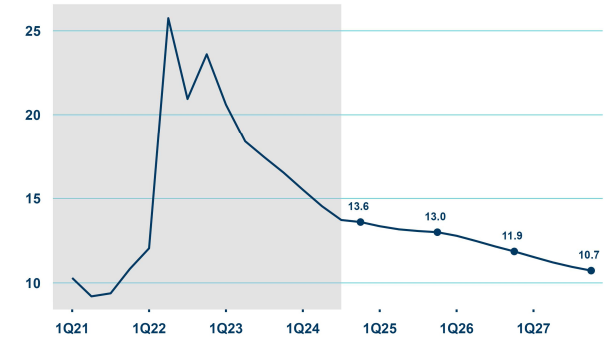
Source: Ukrstat, KSE Institute

Labor Market

The unemployment rate will continue to decline, but fundamental labor market challenges persist. Having fallen markedly from its peak of ~25% in mid-2022 (see Figure 20), we project the unemployment rate to approach 10% by the end of the forecast period in 2027. However, headline numbers conceal key challenges in the labor market, including difficulties finding qualified labor and a skills mismatch. Ukraine's labor market is fundamentally imbalanced due to the impact of the full-scale war, including via emigration and mobilization. These problems are unlikely to disappear in the medium term, even after the war ends.

The labor market sees a persistent mismatch, illustrated by the gap between vacancies and CVs. Date from work.ua, one of the largest job aggregators with over 4.5 million CVs (resumes) recorded in 2024, indicates that the number of job vacancies started to decline slightly in the second half of last year (see Figure 21). However, after steady growth over the past two-and-a-half years, the level is still quite robust. The number of CVs remains below its pre-war level, indicating significant challenges of companies hiring personnel, often resulting in a restructuring of existing teams or the decrease in economic activity.

Figure 20: Unemployment rate, %



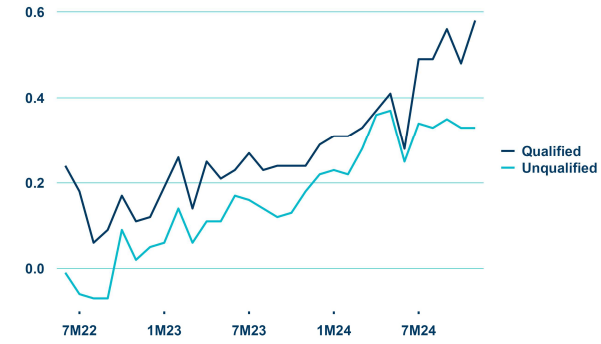
Source: Ukrstat, Info Sapiens, KSE Institute

Figure 21: Job vacancies and CVs, thousand

Source: Work.ua, KSE Institute

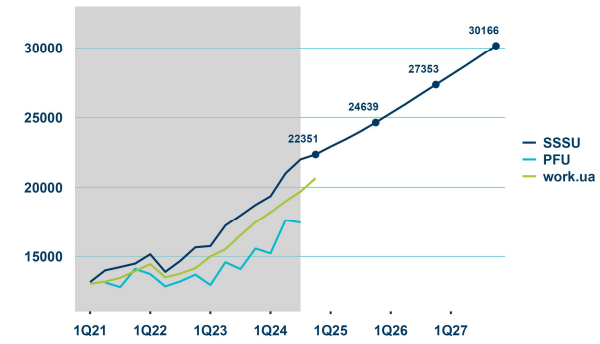
Labor market continues to tighten and companies face serious recruitment difficulties. The Institute of Economic Research's worker availability index tracks recruitment challenges for both skilled and unskilled workers (see Figure 22). Shortages of the former have consistently been higher than of the latter in recent months. Labor market constraints have intensified since October 2023, with businesses reporting growing recruitment challenges across skill levels, while the implementation of new mobilization legislation in May 2024 introduced additional uncertainty. Recruitment difficulties have now risen to peak levels, especially as far as skilled workers are concerned. Data from the State Employment Service (SES) captures similar dynamics: vacancies dropped by almost half from end-2021 (158k) to end-2022 (84k) but recovered to pre-war levels by end-2023 (151k) and have remained there in 2024 (150k). The tight labor market that is illustrated by these dynamics is generating significant upward pressure on wages.

Figure 22: Index of recruitment challenges



Source: IER, KSE Institute

Figure 23: Nominal wage, UAH



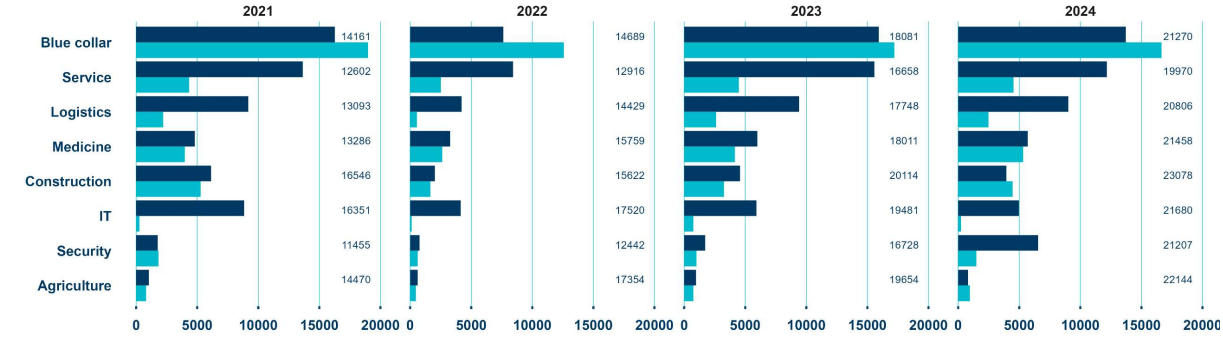
Source: Ukrstat, work.ua, PFU, KSE Institute

Data from SES and work.ua captures different (albeit overlapping) segments of the labor market, with blue-collar jobs making up a much larger share of positions in the former (one-third in 2024) than the latter (maximum 15%). Work.ua (see Figure 24) includes a much higher proportion of service sector positions, including retail trade and IT, while these are underrepresented in the SES data. The platform now also

reflects the rising importance of the security sector, accounting for 7% of all vacancies in 2024 (vs. 2% in 2021). Most job aggregators have begun to work with different branches of the Armed Forces of Ukraine, which use these platforms as an alternative way of recruiting specialists for positions in the military.

Wages continue to rise quickly and this is unlikely to change over the course of the forecast period. As of Q4 2024, the average nominal wage in Ukraine is estimated to have reached UAH22,351—a 21.5% increase year over year vs. a ~7% inflation rate (see Figure 23). The scarcity of workers is forcing companies to increase salaries, which creates inflationary pressures, including through expectations of higher wages. We project that wages will rise by another 35% by end-2027 (to over UAH30,000).

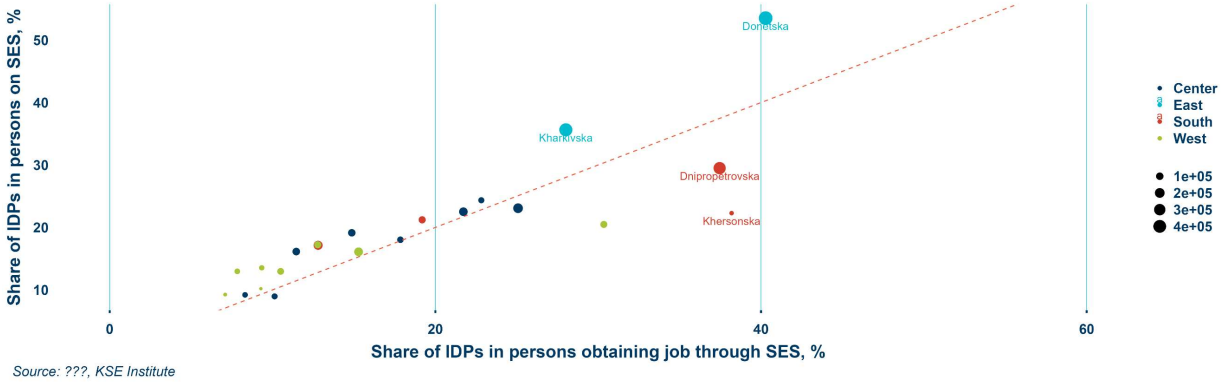
Figure 24: Vacancies, amount for work.ua and SES; Average wage, UAH for work.ua



Source: SES, Work.ua, KSE Institute

Ukraine's internally displaced population continues to represent a challenge for the labor market. Several oblasts, including Donetska, Dnipropetrovska, and Charkiwska, clearly stand out in terms of the rate of IDPs captured by the SES (see Figure 25). In these regions (plus Chersonska), the rate of IDPs in job placements is also much higher than in the rest of the country. This also suggests that despite significant challenges, IDPs continue to be successfully integrated into local labor markets. Unsurprisingly, Western Ukrainian oblasts see the smallest share of IDPs in the SES data.

Figure 25: Internally displaced persons (IDPs) in oblasts



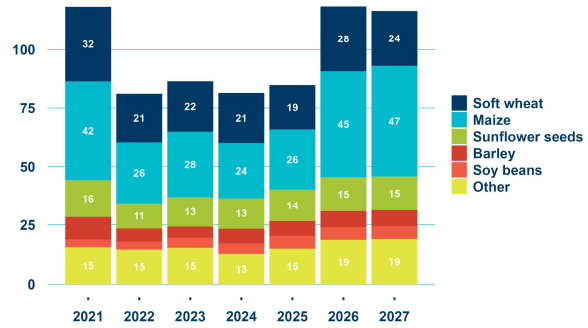
Source: ???, KSE Institute

Agriculture

The agricultural sector's recovery is closely tied to the anticipated end of the full-scale war in 2025. The return of occupied and mined arable land to cultivation, together with the elimination of military risks to Ukrainian seaports and the ensuring of safe transportation to and from these ports, will be crucial for the agricultural sector. During the war, approximately 20% of Ukraine's arable land has been unavailable or unsuitable for agricultural purposes according to KSE's Agrocenter, while security risks related to the war have driven up freight and transportation costs, including insurance. This is particularly important as maritime transport remains the most cost-effective way for exporting agricultural products. The sector's recovery will be fostered by advancements in production technologies aimed at improving crop yields and optimizing the use of production factors such as precision agricultural technologies and improved seed varieties. This trend, which had gained momentum before the full-scale invasion but has been disrupted, will also be driven by the need to further align with EU agricultural regulations.

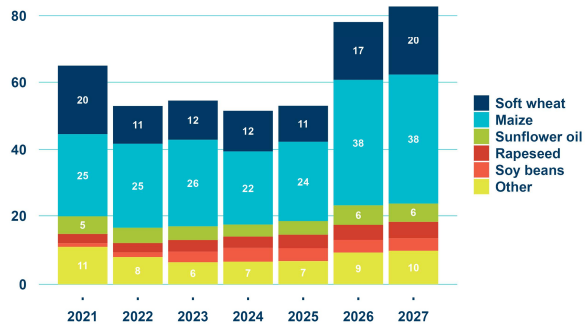
A structural shift in Ukraine's crop production is underway and will deepen in coming years (see Figures 26). Maize has overtaken soft wheat due to adaptation to climate change as well as profitability considerations. The former is also expected to rebound significantly after the end of the war, while the latter will remain markedly lower (approximately one-third of the 2021 level). Oilseed crops, particularly sunflower and rapeseed, will see substantial growth, supported by strong global demand according to FAO projections. In contrast, barley and oats are likely to grow modestly, constrained by competition for cultivated land.

Figure 26: Crop production, mln tonnes



Source: SSSU, Ministry of the Agrarian Policy, KSE Institute

Figure 27: Crop exports, mln tonnes



Source: SSSU, Ministry of the Agrarian Policy, KSE Institute

Shifts are also ongoing with regard to other foodstuffs. Beef and pork production continue to decline due to cost pressures and falling rural household activity. At the same time, poultry and egg production is on the rise driven by operations of enterprises. By 2027, poultry will surpass pre-war levels, partially offsetting the decline in other livestock categories and meeting domestic demand as well as allowing for considerable growth in exports.

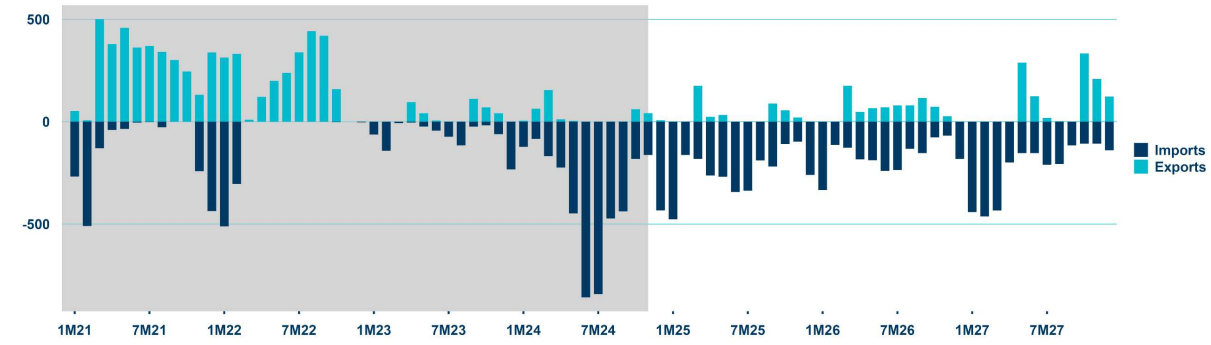
Exports are set to rise alongside production as improved logistics will reinforce Ukraine's position. As mentioned above, the restoration of full seaport operations will ensure the country's position as a key supplier of agricultural commodities to global markets. Maize, sunflower oil, and soft wheat are expected to drive the bounce back in exports volumes (see Figure 27). Soybeans and rapeseed will gain larger shares as well. These developments will contribute to macroeconomic stability by generating export earnings and will support the broader recovery.

Electricity

Russia has launched a new round of attacks on Ukraine's energy infrastructure at the end of 2024. Altogether, in 2024, Russian conducted 13 large-scale attacks of this kind, with the latest round targeting maneuverable generating capacities, high-voltage substations (especially those linked to nuclear power stations), and local distribution equipment. These strikes exacerbated existing issues as the government had already expected a deficit of 3-4 GW during the winter due to the significant damage sustained earlier in the year and the fact that the capacity of Ukraine's nuclear reactors was significantly reduced for periods of time.

Despite the challenging situation, we expect smaller electricity imports in the coming months. Due to the damage to the energy system, Ukraine had to rely heavily on electricity imports in the second half of last year (see Figure 28). In 2024, the country imported a record-high 4.1 TWh of electricity—five times the amount in 2023. However, we already observed falling imports in late-2024—despite worsening power shortages—due to high prices in neighboring countries and price caps on the domestic spot market. Only in December did imports rise somewhat as demand rose and prices in the EU fell. The government had also decreased the minimum share of imported electricity to qualify for interruption-free supply from 80% to 60% in late November, which increased imports. Overall, they never reached the maximum capacity (of 1.7 GW until late October and 2.1 GW thereafter) and did not exceed 10% of daily consumption at any time. We expect imports to decline to 2.7 TWh in 2025 and 1.9 TWh in 2026 as damaged capacities are restored and additional decentralized capacities commissioned. As of early November 2024, three GW of previously damaged nine GW of generation capacity had already been restored and almost 1GW of new capacity connected to the grid. An additional one GW of new capacity is expected to come online before spring.

Figure 28: Electricity trade, MWh



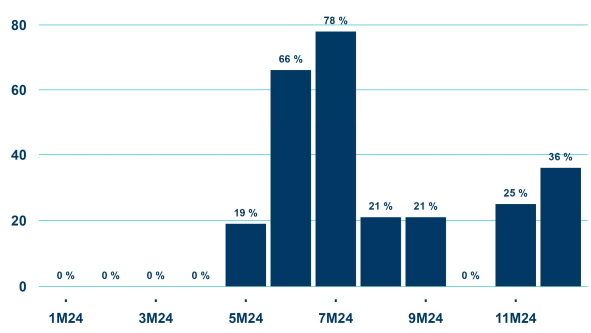
Source: Ukrenergo, KSE Institute

Improvements notwithstanding, the energy situation has placed a heavy burden on the country as imports of electricity and energy equipment for energy infrastructure reconstruction and backup supply are driving up prices (see Figure 29), which contributed to an increase in inflation from 4.8% y-o-y in June to 11.2% in November. They also exert pressure on the currency by increasing payments to the outside world. The significant increase in power outages since Q2 2024 has also hindered the recovery (see Figure 30). Real GDP growth slowed from 4.0% y-o-y in September to 1.1% in October and 0.7% in November.

Figure 29: Electricity wholesale, USD for MWH

Source: SOE "Market operator", KSE Institute

Figure 30: Share of time with power outages, %

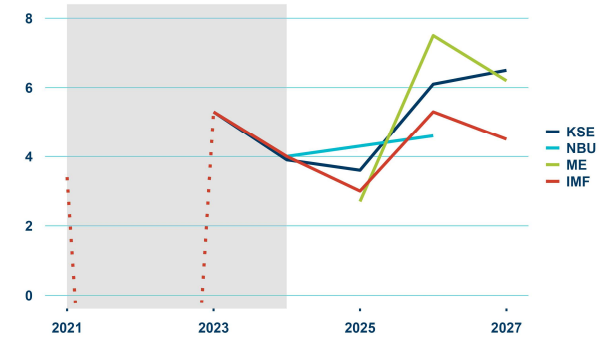


Source: NERC, KSE Institute

Forecast Comparison

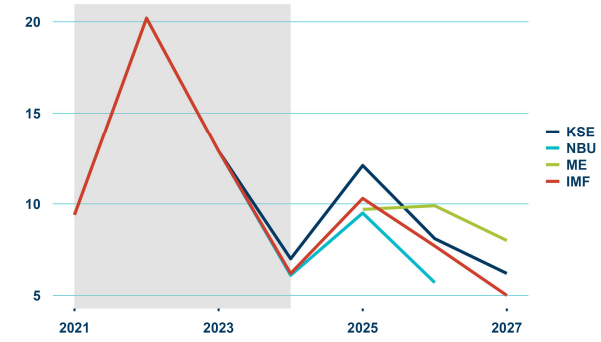
Most institutions broadly agree on the recovery path. KSE Institute's forecast of Ukrainian real GDP returning to within 10% of its 2021 level is shared by the Ministry of Economy (see Figure 31). The NBU's and IMF's projections are broadly aligned. This means a consistent picture of robust economic recovery, but also shows that a full return to pre-war levels will take several additional years. Insufficient investment and funding of the post-war reconstruction are key hurdles for a quicker bounce back.

Figure 31: Real GDP, % y-o-y



Source: NBU, Ministry of Economy, IMF, KSE Institute

Figure 32: Inflation, % avg

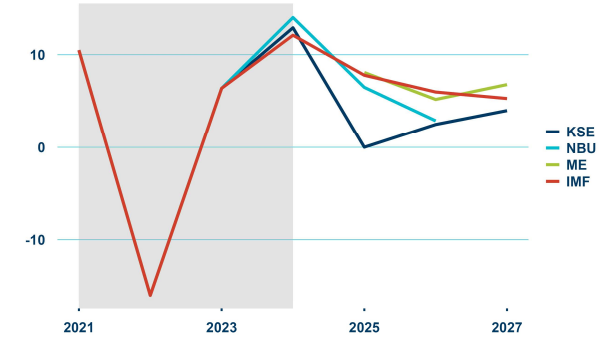


Source: NBU, Ministry of Economy, IMF, KSE Institute

Views on inflation differ somewhat among forecasters (see Figure 32). The National Bank of Ukraine projects the most optimistic outlook with a decline of headline inflation to 5.7% by 2026. This forecast is consistent with the central bank's current policy of monetary tightening in order to reduce inflationary pressures and anchor inflation expectations. KSE Institute's forecast assumes higher inflation, especially in 2025, and expects a return to around 5% only in 2027. The IMF's outlook for 2026-27 is consistent with our assessment, but the Fund expects inflation to peak at a lower level (of 10.3%) in 2025. Ukraine's Ministry of the Economy differs from other forecasts as it sees inflation to remain around 10% in 2026 as well.

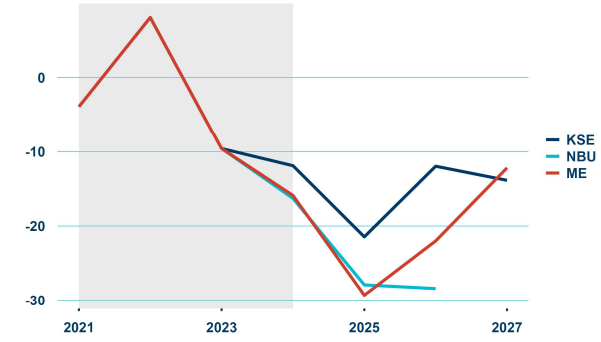
Consistent view of a widening current account surplus. KSE Institute's forecast of a growing current account deficit in 2025 is in line with the IMF's projection of a $29.3 billion deficit, which it characterizes as "sizable but financable" in its last review of the ongoing EFF program. However, the Fund is somewhat more optimistic about 2026-27, when it sees the deficit shrink to $22 billion and $12.2 billion, respectively, while we believe that the gap will remain at or above $20 billion (see Figure 33). The difference is largely driven by the IMF's more optimistic view of goods and services exports. The NBU warns of sustained risks from reduced external financing and expects the deficit to remain broadly unchanged in 2026.

Figure 33: Real wage, % avg



Source: NBU, Ministry of Economy, IMF, KSE Institute

Figure 34: Current account, USD billion



Source: NBU, Ministry of Economy, IMF, KSE Institute

Estimates of real wage growth vary considerably. KSE Institue expects real wage growth to slow markedly in 2025 due to higher inflation before rising once again as inflationary pressures subside, with a cumulative increase of 6.6% by 2027 vs. 2024 (see Figure 34). The NBU also proiects a decline but expects it to occur over two years (i.e., by 2026). Both the IMF and Ukraine's Ministry of the Economy are significantly more optimistic, especially for 2025-26. All forecasters agree, however, that rising demand and labor shortages due to emigration and mobilization will continue to exert upward pressure on salaries.

Special Feature 1: ERA

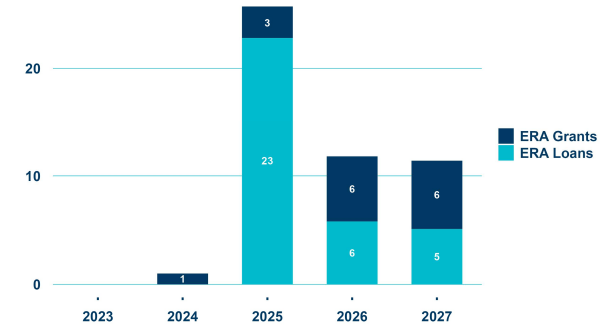
The G7's *Extraordinary Revenue Acceleration Loans for Ukraine (ERA)* mechanism is designed to provide Ukraine with additional $50 billion in financial assistance over 2024-27, guaranteed by profits from frozen Russian sovereign assets and structured to prevent fiscal liability by Ukraine. Under the ERA, the European Union is providing $19.9 billion in exceptional macrofinancial assistance (MFA) in the form of loans to be disbursed in 2025. This comes on top of the EU's €50 billion *Ukraine Facility*, which is also being provided over 2024-27. The United States are committing $20 billion under the ERA mechanism—$15 billion in grants and $5 billion in loans—and the remaining members of the G7—the United Kingdom, Japan, and Canada—will contribute an additional $10.1 billion. For our assessment of the distribution of the ERA funds by type and partners, please see Table 5 and Figures 35 and 36).

Table 5. Exceptional Revenue Acceleration Loans for Ukraine (ERA)

	Total	Grants					Loans				
		2024	2025	2026	2027	Total	2024	2025	2026	2027	Total
European Union	**19.9**					**0.0**		19.9			**19.9**
United States	**20.0**	1.0	3.0	6.0	5.0	**15.0**			2.0	3.0	**5.0**
United Kingdom	**2.9**					**0.0**		2.9			**2.9**
Japan	**3.4**				1.3	**1.3**				2.1	**2.1**
Canada	**3.8**					**0.0**			3.8		**3.8**
Total	**50.0**	**1.0**	**3.0**	**6.0**	**6.3**	**16.3**	**0.0**	**22.8**	**5.8**	**5.1**	**33.7**

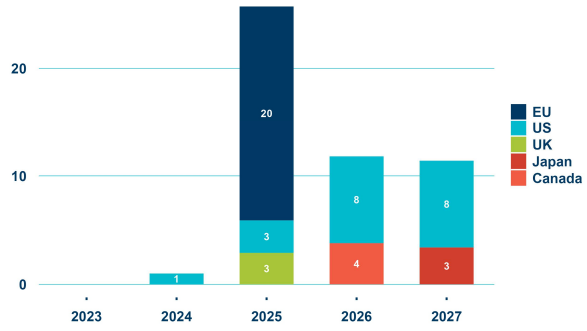
With the ERA, Ukraine's international partners are leveraging Russian funds to provide support. Specifically, they use profits derived from immobilized Russian central bank reserves. In the immediate aftermath of Russia's full-scale invasion, several countries imposed sanctions on the CBR and, therby, immobilized a significant amount of reserves that the bank was holding abroad. While a full accounting has still not been undertaken, the total is estimated to be above $300 billion, of which more than €190 billion are held at Euroclear, a central securities depository headquartered in Berlgium. While Ukraine has long argued for full confiscation, the G7 opted to leverage profits derived from them to provide financial assistance under the ERA. In essence, as the principal of maturing bonds and any accumulated interest cannot be transferred to the CBR due to sanctions, they generate additional profits, which do not belong to the owner of the assets but to Euroclear and can be taxed. The EU estimates that these profits amount to €2.5-3.0 billion per year.

Figure 35: ERA funds by type



Source: KSE Institute

Figure 36: ERA funds by country



Source: KSE Institute

The ERA funds are structured to prevent any fiscal liability for Ukraine's government, ensuring that they serve as a non-repayable financial resource, and they can be used for a variety of purposes. In order to not burden Ukraine's financial future with additional debt, ERA loans are set up as contingent liabilities, which means that they need to be repaid only under certain conditions, e.g., Ukraine receiving reparations from Russia. Should this not materialize, they will be repaid by other parties and, for Ukraine, will effectively be a non-payable contribution. Given the amount of external loans that Ukraine has already received, this is of critical important to keep debt dynamics from deteriorating further. Political conditions and transparency/accountability requirements related to the disbursement will be aligned with the terms of existing programs, with each creditor also determining the specific use of the funds. Importantly, while money provided under the ERA largely consist of budgetary support, some funds can also be used for purchases of weapons.

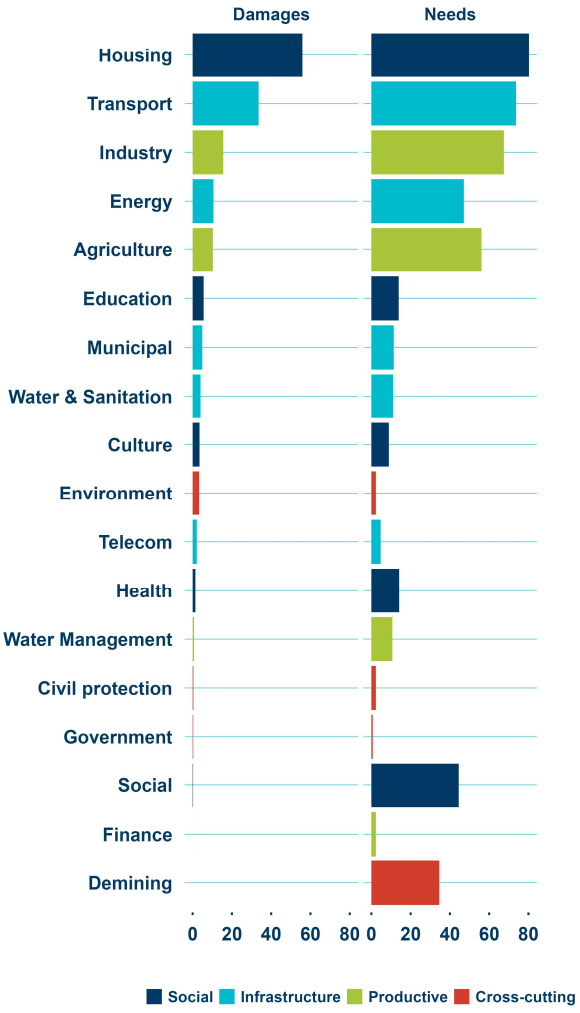
Special Feature 2: Reconstruction

Russia's full-scale invasion of Ukraine has caused massive destruction of civilian infrastructure. This includes a wide variety of assets and sectors, including housing, roads, ports and airports, power plans, businesses, as well as social infrastructure such as schools and hospitals. While some assets were targeted deliberately such as Ukraine's energy infrastructure, others were collateral damage or stolen by the aggressor. As of January 1, 2024, according to the World Bank's third Rapid Damage and Needs Assessment (RDNA3), for which KSE Institute provided important inputs, total damages stood at $152.5 billion. An updated full assessment will only be available with RDNA4 but we believe that damages have likely risen by around 10% over the past 12 months. Damages are highest in the housing and transportation sectors (see Figure 37), but the sector that suffered the largest damages in 2024 was energy, where the total rose from $10.6 billion to $16.1 billion H1 alone, and is now likely even higher due to persistent Russian airstrikes.

The war has also led to significant losses due to its impact on business activity. As of January 1, 2024, total economic losses amounted to $499.3 billion according to the World Bank. They are heavily concentrated in productive sectors such as industry, commerce, and agriculture. While a large share of direct damages occurred during the first months of the full-scale invasion, losses are proportional to the time passed and their accumulation has not slowed down. We estimate that total losses could reach more than $1 trillion by the end of 2025.

The cost of reconstruction and recovery was estimated at $486 billion in the RDNA3. This estimate includes the reconstruction of damaged and destroyed assets, which is assessed using a so-called *Build Back Better* principle, meaning that assets should not be restored to their previous, often outdated state, but in compliance with contemporary standards regarding security, energy efficiency, and accessibility. In addition, it includes the costs of recovering economic activity due to liquidity needs arising from losses, additional social payments, as well as expenses for demolition, debris removal, and demining. Reconstruction makes up roughly 60% of the total and recovery 40%. Housing, transport, industry and commerce, agriculture, energy, social protection, and demining have the highest needs (see Figure 37). It is reasonable to assume based on the trajectory of needs in 2023 that the total has now risen significantly above $500 billion.

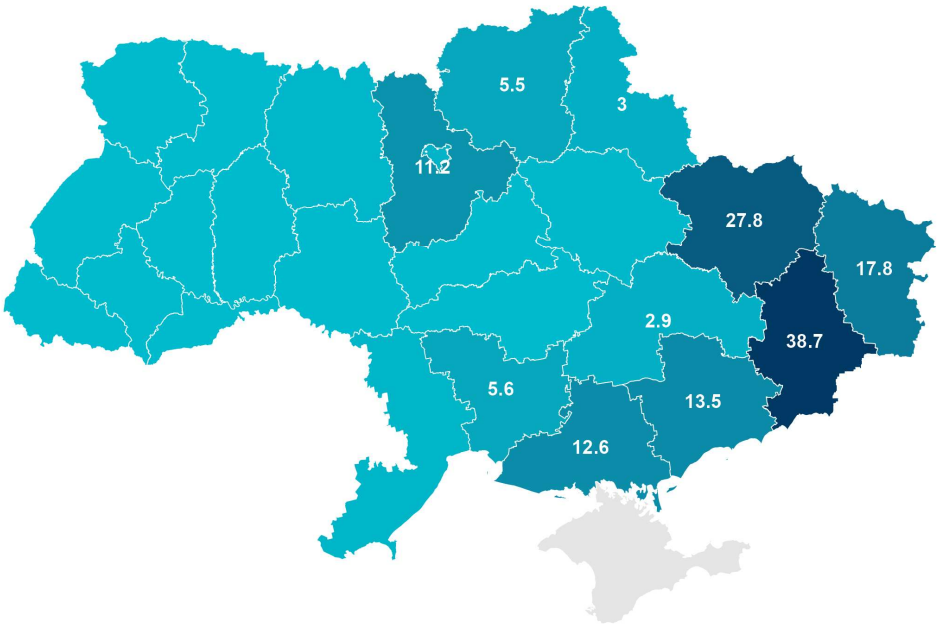
Figure 37: Damages and needs, $ bn



Source: RDNA3 by WB, KSE Institute

Investment over 2025-27 will be insufficient to address reconstruction and recovery needs. Total gross fixed capital formation (in 2023 $) is estimated at $100 billion over the three years of the forecast period. This amount will not allow Ukraine to fully recover economically and real GDP will remain almost 10% below its 2021 level in 2027. The key objective for 2025 and beyond is to secure additional funding from domestic as well as external sources—and the confiscation of Russian sovereign assets should play a key role.

Figure 38: Damages by oblasts, $ bn



Source: RDNA3 by WB, KSE Institute

Damages tend to be concentrated in regions close to the frontline or in liberated areas. The former includes oblasts in the East at the Russian border and the South close to Crimea and Russian naval forces, while the latter includes Kyivska, Chernihivska and Sumska (see Figure 38). More than 90% of total damages are accounted for by ten oblasts, with Donetska, Luhanska, and Charkiwska seeing the highest numbers, followed by Saporiska and Chersonska. Indirect economic losses are more evenly distributed geographically as many indirect effects from the war contribute to demand, logistics, and labor force constraints across Ukraine. Reconstruction and recovery needs, due to the fact that they are based more on damages than losses, are relatively concentrated, with more than 70% falling onto ten oblasts. The geographical distribution of actual needs may differ significantly in the end, however, as the building of new enterprises could be more feasible in a different location than the initially destroyed assets. For instance, new processing facilities in the metallurgy sector may be better placed closer to iron deposits in Dnipropetrovska rather than Donetska. The restoration of housing and social infrastructure is heavily dependent on the post-war social and economic landscape as well as migration patterns. Other infrastructure such as transportation will align with population dynamics and the development of productive sectors.

Special Feature 3: Migration

Ukrainian refugees are predominantly located in European countries according to the UNHCR. Approximately 92% of the total refugee population fled to the EU or other countries in Europe, including Belarus and Russia. Canada and the US are the largest destination for refugees outside of Europe.[1] Altogether, 6.8 million Ukrainian are estimated to have fled the country since the start of the full-scale invasion according to the UN, which is consistent with border crossing statistics, although these do not cover flows into and out of Belarus and Russia. Three countries account for the highest number of Ukrainian refugees by far: Germany (1.2 million), Russia (1.2 million), and Poland (1.0 million).

The return of displaced persons represents a crucial determinant for Ukraine's economic recovery due to their impact on human capital formation and reconstruction capacity. Empirical evidence, however, suggests complex patterns of return intentions and potential outcomes. While initial survey data indicated a strong preference for an eventual repatriation among refugees, the propensity for a permanent resettlement in host countries is increasing. Adema et al. (2024) documented through panel data collected starting in June 2022. The authors find that the share of refugees indicating an intention to permanent resettle abroad to 25% by mid-2024, 12% of the initial refugee population had returned by that time, and secondary migration to alternative host countries was observed for 7% of the 2022 refugee population.

A longer war is correlated with diminishing intentions to return. An analysis by the Center for Economic Strategy[2] shows that, from November 2022 to January 2024, the share of people who definitely plan or rather plan to return shrunk from 64% to 53%. A similar survey by Factum Group[3], conducted in July-August 2023 and presented in VoxUkraine, revealed that, at the time, 64% of refugees planned to return. IRI[4], in February 2024, found 40% willing to return, most of which (34%) indicated that they would only do so after the end of the war. Finally, Voice in Europe[5] documented based on research carried out by SAM in February-September that 53% of respondents were likely to return, with a higher share (64%) of refugees without a partner saying so. Overall, these surveys show that the willingness to return has fallen, largely due to increasing integration in the respective host countries. It is also worth emphasizing that some social desirability bias may be at play in terms of the responses as it is more socially acceptable to indicate a willingness to return.

Several factors have a demonstrable impact on return intentions. First, the geographic variation in conflict intensity plays a key role. The cessation of hostilities in specific regions in late 2022 accounted for a 5 pp increase in the probability to return among persons originating from these areas. Second, demographic and socioeconomic factors show significant correlations with return intentions according to an analysis by the Center for Economic Strategy. Female refugees exhibit a 55% higher probability vs. males and each additional year in age is associated with a 3% increase in the probability of return. The latter is likely a function of integration levels abroad as well as the existence of fixed assets and established social networks at home. Return intentions were also found to be negatively correlated with the following activities abroad: enrollment in higher education (-57%), employment (-31%), business ownership (-70%), and active job search (-47%). These differentials are measured relative to economically inactive individuals.

[1] https://data.unhcr.org/en/situations/ukraine
[2] https://ces.org.ua/en/refugees-from-ukraine-final-report/
[3] https://voxukraine.org/en/return-or-stay-what-factors-impact-the-decisions-of-ukrainian-refugees
[4] https://www.iri.org/wp-content/uploads/2024/04/Ukraine-February-2024-National-Survey_Public.pdf
[5] https://euaa.europa.eu/sites/default/files/publications/2024-03/2024_03_05_Voices_in_Europe.pdf