



Focus
Ukraine

Scope
Economics

Analysts
Alexander Martynenko
Vitaliy Vavryshchuk
Taras Kotovych
Mykhaylo Demkiv
Dmytro Diachenko, CFA

Macro Review

Ukrainian Economy: Healthier but Too Slow



21 DECEMBER 2021

READ THE DISCLOSURES SECTION FIRST FOR IMPORTANT INFORMATION AND ANALYST CERTIFICATION

Contents

Executive Rundown	3
Global macro: Inflation is new threat	5
Global growth to slow, inflation may stay high.....	5
EMs face tighter financing, subdued growth, and costly energy	6
Prices for fuels look more resilient than for metals.....	7
Economic growth to stay moderate	9
Mixed domestic demand pattern	9
New headwinds for 2022 recovery emerge	10
Inflationary pressures persist	11
External position: Moderately weaker	12
Global energy crisis poses key risks for C/A	12
Net capital flows to be shaped by concessional borrowings.....	14
Fiscal policy: Firm consolidation path	16
Fiscal deficit target outperformed consistently	16
Public debt on a solid downward trend	17
Risks to budget financing in 2022 manageable.....	17
Local debt: Stays attractive for foreigners	19
Eurobonds: Supported by credit profile	20
Yearly forecast 2021–22	21
Quarterly forecast 2021–22	22

Executive Rundown

Ukraine will enter 2022 with a solid safety cushion thanks to sound fiscal and monetary policies, strong external commodity markets, and a resilient banking sector. However, sluggish economic growth and high inflation will be a grain of salt. Russia's aggression toward Ukraine will be the key non-economic factor to closely monitor next year and beyond. Repetitive maneuvers of Russia's troops along Ukraine's borders will continue to disturb business and damage investor sentiment toward Ukraine.

Completion of the first review of the IMF-Ukraine Stand-by Programme came after a significant delay of more than one year, but, still, it was a significant milestone. Ukraine reconfirmed its commitment to reforms, which was received as a much-awaited positive signal to the international community. However, risks are still high that some commitments, like removing the cap on gas prices for households, may be difficult to deliver. Smooth rollover of external debt and the state deficit financing in 2022 critically depend on Ukraine being able to stay firmly on track with the IMF cooperation programme.

Unimpressive economic growth will remain the key concern in 2022 as several new headwinds emerge. Those include high energy prices and decelerating growth of Ukraine's key trading partners. All in all, we expect GDP will increase 3.2% in 2022, below its potential growth rate. Weaker private consumption due to decelerating real salaries will be the key force behind slower economic growth. Meanwhile, investment demand is likely to recover strongly as companies restart their maintenance CAPEX programmes and government continues to increase investment in infrastructure. Ukraine is still lacking powerful growth drivers that could be a game changer for GDP growth in the coming quarters. Faster structural reforms are needed to provide an impetus to long-term economic growth.

Vaccination has gained pace recently and about 35% of the adult population are now inoculated with at least one dose, up from 12% at the end of summer. While lockdowns and quarantine-related restrictions still pose risk to the service sector, they are becoming less painful and are largely treated as the new normal by local businesses. New restrictions are not harsh: all shopping malls and hospitality-industry businesses remain open to vaccinated customers.

Inflation has emerged as a major concern for Ukraine since the spring, and the NBU's response has been consistent so far. The key policy rate was hiked from 6.0% at the beginning of 2021, to 9.0% as of the end of the year. With significant price pressure coming from multiple sources, CPI is unlikely to slip back to the NBU's target band of 5% \pm 1pp in 2022. This implies that any reversal of the tight monetary policy is very unlikely at least until 4Q22.

Ukraine's current account deficit is set to widen in 2022 to about 2.3% of GDP on the back of lower steel and iron ore prices combined with elevated energy prices. This will not present a significant challenge. However, the government and the private sector may still face temporary difficulties in raising debt abroad due to turbulent capital markets and Russia's continued pressure on Ukraine. Our base-case scenario at this point assumes Ukraine will be able to cover its financing needs thanks to concessional loans from IFIs. FDI, net of reinvestments, is likely to remain minimal.

Given balanced external accounts and continued cooperation with the IMF, we expect the FX market will remain largely balanced throughout 2022. However, the hryvnia may see psychological pressure if Russia continues to build up its military presence near Ukraine's

border. As of the beginning of December, NBU reserves totaled US\$30.5bn, above 90% of the IMF composite adequacy criteria, and we expect they will decline only marginally in 2022. This provides sufficient comfort that the NBU has ammunition to counteract FX-market shocks should they occur. NBU maintained its presence in the market and alleviated temporary imbalances when they were material. Yet, the exchange rate continued to be driven broadly by fundamentals.

The government has consistently outperformed its fiscal-deficit targets in recent years and has kept its expenditure appetite in check. The government's intent to keep the fiscal gap at 3.5% of GDP in 2022 and below 3% into 2023 looks totally feasible. We believe Ukraine will continue to grow its fiscal space and significant negative surprises are unlikely in the fiscal area. The debt-to-GDP ratio will slip below 50% by the end of 2021, which is a significant comforting factor for domestic and foreign investors. Despite rapid deleveraging, Ukraine is still facing challenges as far as public debt is concerned. Those are a high share of FX in total public debt stock and still high cost of debt.

The outlook for 2022 is a mixed bag for investors in Ukrainian debt. Global capital market jitters and slowing economic growth across EMs imply investors will require a higher premium. Yet, Ukraine's solvency profile is likely to further improve thanks to continued fiscal consolidation. Also, an upgrade of Ukraine's sovereign debt by rating agencies after a two-year pause is a real possibility in 2022. High interest rates on local securities on the back of the NBU's tight monetary policy imply attractive yields for investors into local government bonds. The outlook is, however, much less encouraging for the VRI holders. They are unlikely to benefit from economic growth and general EM debt sentiment in 2022.

Global macro: Inflation is new threat

- **Global recovery will significantly slow due to lingering supply shortages and persistently high inflation**
- **Persistent inflation may force central banks to accelerate tapering and rate hiking**
- **Emerging markets (EMs) will face growing headwinds from tighter financial conditions and high energy prices; EM USD-denominated and local currency yields will rise**
- **Tight energy markets will prevent a decline of prices toward their fair long-term levels. We expect energy prices to outperform prices for metals and crops in 2022**

Global growth to slow, inflation may stay high

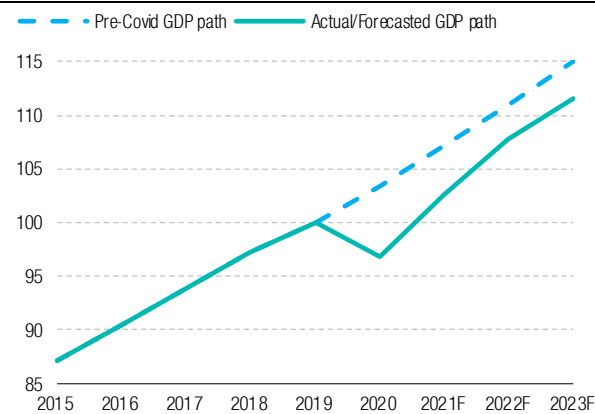
The global economy will slow in the coming quarters and may miss expectations due to hurdles from the supply side and heightened inflation

The global economy has been quickly recovering from the COVID-19-caused recession. Bloomberg consensus implies the world GDP surpassed its pre-COVID level in 2021. Some economies still remain well below their pre-COVID outputs, yet GDP of a number of large economies such as China, S. Korea, US, and Brazil have already climbed above their pre-virus peak, and most others are only 0-2% below.

However, as soon as the initial post-lockdown rebound weakens and many countries gradually reduce their policy support, global economic growth will slow. Downside risks continue to prevail as virus-related restrictions are still in place in many countries and may be further enhanced. This results in continuing supply shortages, which are likely to persist well into 2022, particularly in developed markets (DM). They may subside only with weakening of quarantine regimes.

Chart 1. World real GDP growth in 2016-2022E, 2019=100%

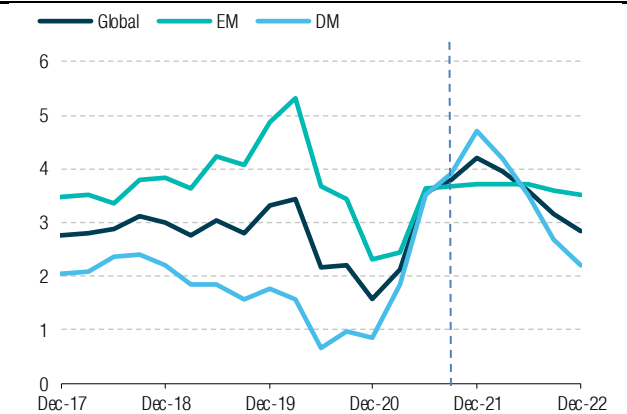
World GDP is likely to surpass its pre-COVID level of 2019 already in 2021



Source: Bloomberg, ICU.

Chart 2. Global CPI inflation, %YoY

There is a significant risk of more sustained and higher inflation in both DM and EM than current consensus forecast implies



Source: Bloomberg, ICU.

The risk of high global inflation emerging as a longer-term phenomenon rather than as a transitory spike is growing due to massive stimulus funding, the energy crunch and persistent supply shortages. Furthermore, inflationary pressure is coming from labour shortages in some countries, particularly the US, Canada, and the UK.

More persistent inflation has already forced the Fed and other DM central banks to accelerate monetary tightening in December. In particular, the US Fed plans to end the QE purchases already by March 2022 and is expected to make three rate hikes next year by total 50-75bps. Such a response implies higher US yields and a stronger USD. Even after DM central banks turned more hawkish, there is a risk of faster and more pronounced monetary policy tightening than currently expected.

EMs face tighter financing, subdued growth, and costly energy

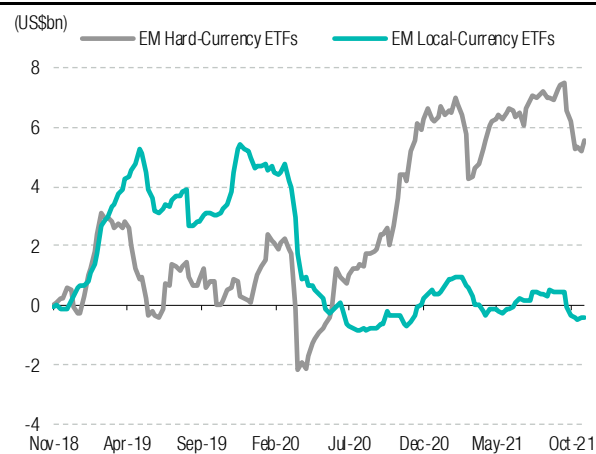
Central bank policy tightening will boost US treasury yields and USD, which should cause capital outflows from EMs

Higher US rates and a stronger USD should result in net capital outflows from EMs in 2022, although these outflows should be moderate compared with the tapering in 2013 or 2018. EMs may significantly underperform DMs in terms of economic growth in 2022, and face downside risks due to high energy prices, low vaccination coverage, and exposure to China. Expected EM underperformance will lead investors to require higher risk premia for EM equities and fixed income.

As a result, EM sovereign USD-denominated and local-currency yields may rise in 2022. EM USD bond yields will be driven mostly by Fed rate hikes and growing US long-term treasury yields and could thus end 2022 at least 50-75bps higher. EM long-term local-currency yields have already grown 100-150bps this year on the back of weak investor demand and accelerated capital outflows from EM local-currency ETFs in September-November. Their growth in 2022 may thus be less pronounced compared with EM USD bonds. However, there is a growing risk that the Fed and other DM central banks will be forced to accelerate rate hiking and asset-purchase tapering faster than markets currently expect. Under this scenario, EM spreads and yields may grow significantly above our expectations, particularly for EM local-currency bonds.

Chart 3. Emerging market ETF fund flows since Nov.2018, US\$bn

EM local-currency debt outflows accelerated since September due to investors' reluctance to add soft-currency and macroeconomic risks



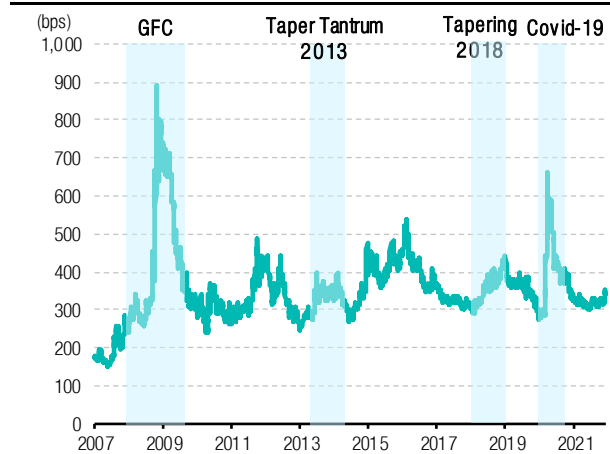
Source: Bloomberg, IMF, ICU.

Persistently high energy prices or new spikes add more risks for the majority of EMs

Most EMs are vulnerable to high oil, natural gas, and coal prices, which may further undermine already shaky positions of their current accounts. Approximately half of EM countries run C/A deficits, with most of them being net importers of fossil fuels. There is a high risk that fuel prices will stay elevated or experience new spikes in 1H22. This may put additional strain on external accounts and national currencies of energy-dependent EM countries. Even countries that are net exporters of other commodities like agri or metals may face deteriorating C/A balances since their export prices may significantly underperform energy prices. Ukraine is one of the EM countries with the highest dependence on imports of fuels and, therefore, it looks to be one of the most vulnerable to tight energy markets and weakening metals markets.

Chart 4. EMBI Global Index spread of EM USD-denominated debt, bps

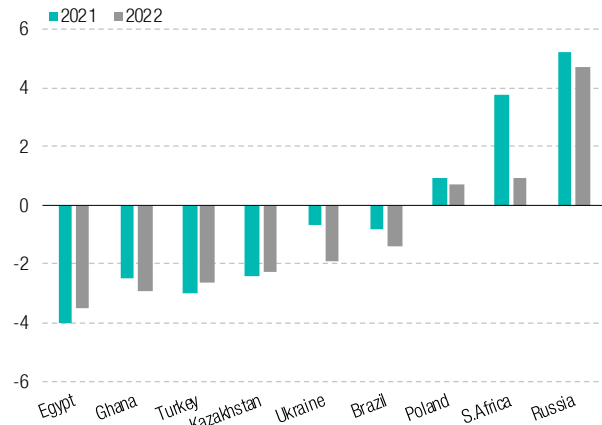
EM spreads have seen the worst of the COVID-19 crisis, their further upside should be limited compared with the Taper Tantrum in 2013 and tapering in 2018



Source: Bloomberg, ICU.

Chart 5. Projected C/A balances in selected EMs in 2021-22, % of GDP

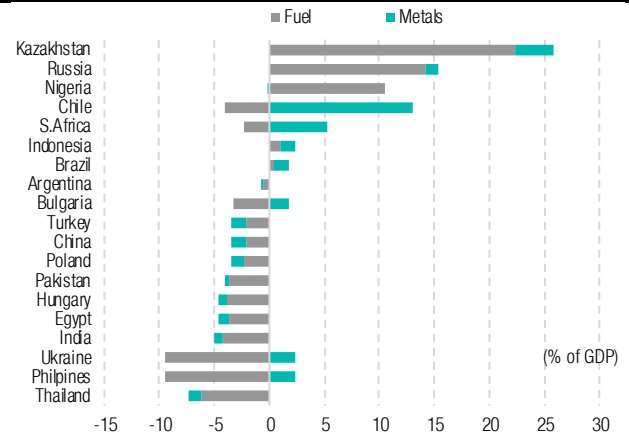
Many EMs run C/A deficits and for most of them the external position is likely to become more fragile because of rising fuel prices



Source: Bloomberg, IMF, ICU.

Chart 6. Net fuel and metal exports in selected EMs, % of GDP

Most EMs are vulnerable to high fuel prices, particularly given weaker metals outlook



Source: Bloomberg, ICU.

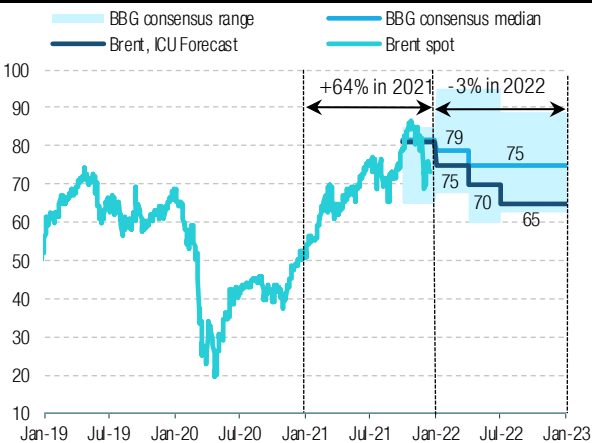
Prices for fuels look more resilient than for metals

Oil, natural gas, and coal prices may stay elevated in 1H22 or even experience new spikes due to tight markets

Global energy markets should remain tight at least until the end of 1Q22, as limited supply struggles to meet high winter-season demand. The largest suppliers of natural gas to Europe seem reluctant to increase production and aim to benefit from high prices, while the region's gas inventories remain low and global gas demand is surging thanks to Asia and particularly China. The global crude oil market is facing similar challenges from the supply side as OPEC+ is likely to substantially underperform its own production growth targets. Non-OPEC supply response is also sluggish, as the US shale producers, the key non-OPEC suppliers, are focused more on profitability rather than on boosting production. World coal prices stay supported by elevated prices for gas, as well as virus-related supply disruptions. The supply response will be slow but imminent, and prices for all these fuels should subside in 2022. However, we expect average prices for Brent oil and natural gas in Europe to decline only marginally by 3% YoY and 6% YoY in 2022, respectively, with risks tilted to the upside.

Chart 7. Oil prices, US\$/bbl

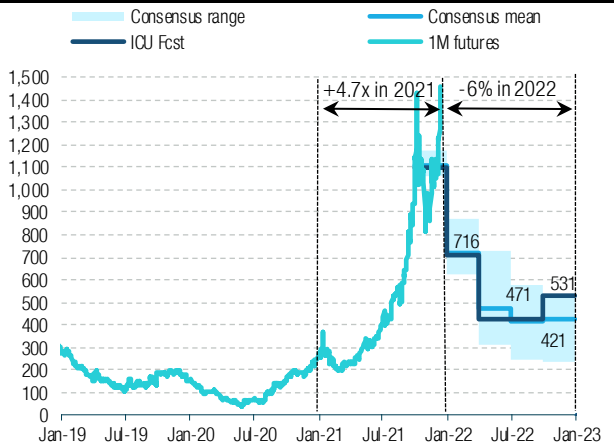
Significant recovery of world oil demand and reluctance of key exporters to equally boost supply will allow oil prices to retain most of 2021's gains in 2022



Source: Bloomberg, Refinitiv, ICU.

Chart 8. Natural gas prices in Europe, US\$/tcm

Limited growth in global supply, low European inventories, surging gas consumption in Asia may leave prices for gas in Europe elevated in 2022



Source: Bloomberg, Refinitiv, ICU.

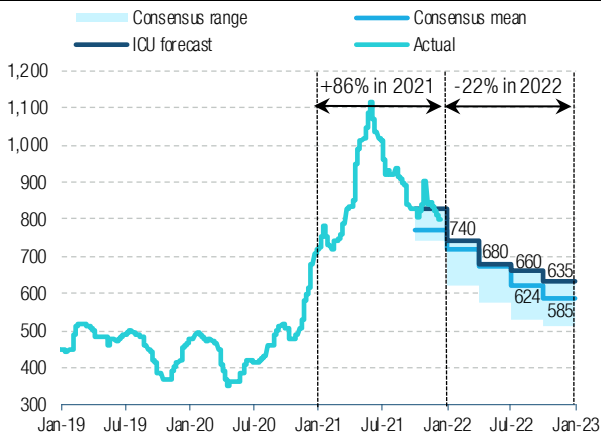
High energy prices are propping up prices for industrial metals. However, slowdown in the key metal-consuming economies, China and Europe, will outweigh this support. The ferrous metal segment is particularly vulnerable to the likely downturn in Chinese real estate sector.

Prices for iron ore and steel are likely to substantially underperform prices for fuels in 2022

Additional headwinds for steel demand in the European and MENA regions—key markets for Ukrainian steel—come from expected economic slowdown in the EU and Turkey. Furthermore, these regions are unlikely to face tight supply similar to energy markets, as the steel industry is less consolidated and capacity utilization has almost recovered to pre-pandemic levels. Elevated energy prices may weigh on European steel production in 1Q22; however, this factor will fade over 2022. At the same time, iron ore prices should remain low after the 2H21 sell-off, much more influenced by China’s slowdown and steel production curbs. This in turn supports global ex-China steelmaking margins at current price levels and encourages more production. Overall, we expect average steel and iron ore prices should decline 22% YoY and 31% YoY, respectively, in 2022 – thus significantly underperforming fuel prices.

Chart 9. Steel HRC price in Black Sea region, US\$/t

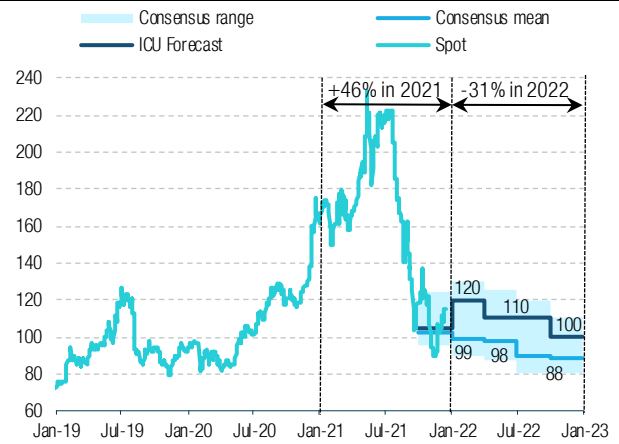
European steel prices will continue declining in 2022 under the pressure of economic slowdown in China, EU, and Turkey and strong steel supply



Source: Bloomberg, Refinitiv, ICU.

Chart 10. Benchmark iron ore prices, US\$/t

Iron ore prices should stay low in 2022 after 2H21 sell-off, weighed by construction slowdown and steel production curbs in China

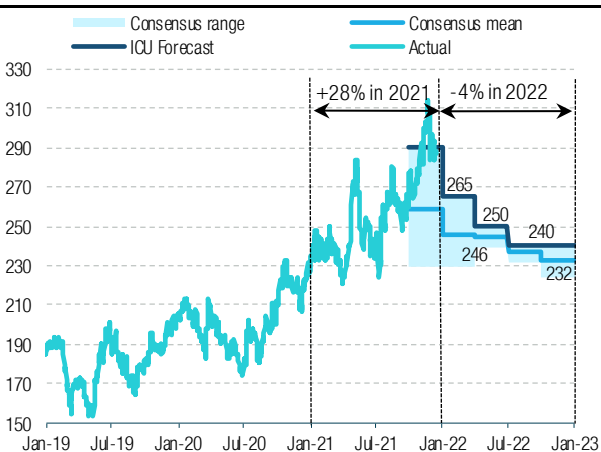


Source: Bloomberg, Refinitiv, ICU.

Poor harvests in a number of key producing countries, rising energy costs, and labour shortages may support prices for the two key exported agri commodities of Ukraine—wheat and corn—in 1Q22. Nevertheless, improved supplies and rising stocks will weigh on prices for both products toward the end of 2022. We expect average prices to decline 4% YoY for wheat and 11% YoY for corn in 2022.

Chart 11. Wheat prices, US\$/t

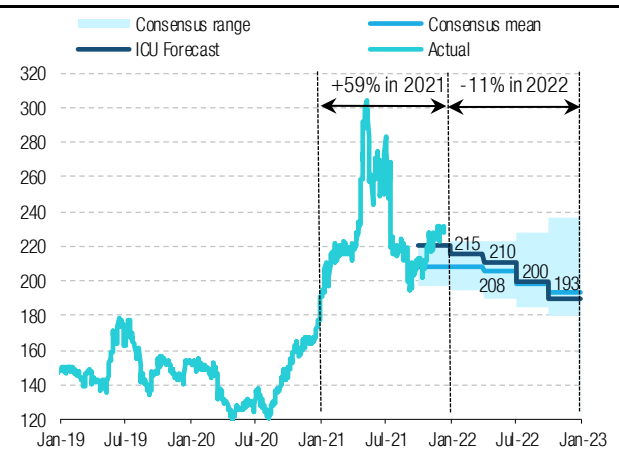
Wheat prices have been boosted by adverse weather and poor harvests in some key exporting countries in 2021, but better output will weigh on prices in 2022



Source: Bloomberg, Refinitiv, ICU.

Chart 12. Corn prices, US\$/t

After the record-high crop in China and weak demand from US producers of ethanol, corn prices may decline a bit further in 2022



Source: Bloomberg, Refinitiv, ICU.

Economic growth to stay moderate

- Economic growth decelerated in 2H21, and will remain relatively moderate at least in 1H22. We project GDP will increase 3.2% next year
- Private household demand will weaken while investment demand is picking up pace on maintenance CAPEX and infrastructure projects
- The key challenges ahead are surging energy prices and weakening growth in Ukraine's key trading partners

Mixed domestic demand pattern

Domestic household demand will decelerate in 2022 due to slowdown in real salaries

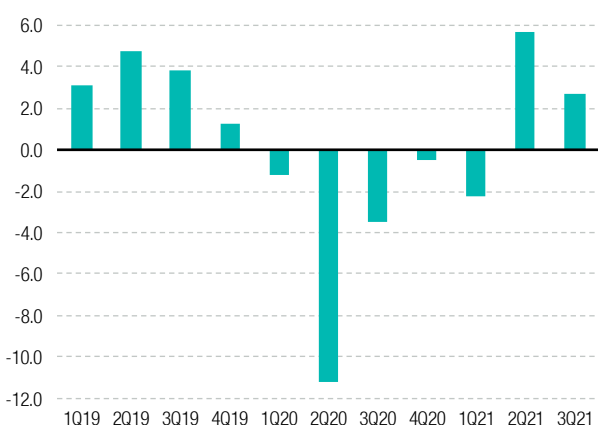
Ukraine's economic growth is set to remain sluggish, and we project the 2022 GDP will increase by 3.2%. A boost in post-crisis recovery was short-lived, and the economy slowed significantly in 2H21. We estimate 2021 economic growth just below 3.0%, despite a record high crop harvest in 2021, which alone contributed at least 1pp to growth via direct and indirect effects. Also, the government boosted its road infrastructure expenditures by allocating direct outlays and via Ukravtodor raising more than US\$1bn in debt.

Domestic household demand was the key contributor to economic growth in 2020 and 2021, even though it also benefited imports to a significant extent. Presently, it is showing worrying signs of weakening. The key economic sectors that serve a good proxy for the strength of domestic demand—retail trade and services—are slowing. The key issue at the moment is elevated inflation that is eating away a significant part of household income.

The average salary in Ukraine increased cumulatively by 86% in real terms since 2015, while real GDP only added 11%. We thus believe the slowdown in real salaries is inevitable. While in the long term this may improve cash-generating capacity of businesses, in the short term, it will be a drag on domestic demand. The public sector will also see smaller growth in salaries since the IMF-Ukraine memorandum caps the increase by inflation at + 2pp.

Chart 13. Quarterly real GDP, chg, % YoY

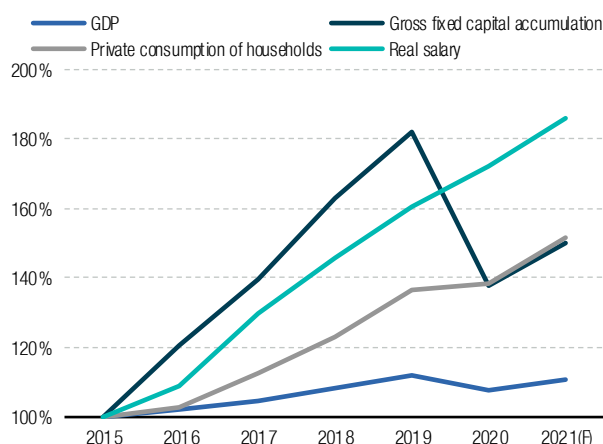
GDP growth decelerated notably in 3Q21



Source: UkrStat.

Chart 14. Change in GDP components and real salary, 2015=100%

Real salaries significantly outgrew GDP since 2015



Source: Ukrstat, ICU.

COVID-related restrictions do not presently have a significant impact on economic activity. The government and local authorities clearly prefer a flexible approach whereas fully vaccinated customers are free to attend public events and consume all types of services offline. Shopping malls and hospitality-sector businesses remained opened at all times since January 2021. Toughening of restrictions is very unlikely given that the vaccination

pace sped up significantly since September and currently 35% of population have at least one job.

Capital expenditures of private and government sectors are gaining pace

Private investment demand is set to remain strong. It took off since 2H21 as businesses, both private and state-owned, restarted their maintenance CAPEX projects following a long COVID-related pause in 2020-1H21. A recovery in corporate lending by banks (+40% YoY for hryvnia portfolio) is emerging as a significant supporting factor. Large scale infrastructure projects played a noticeable role in supporting the economy in 2020 and 2021. Yet, maintaining the current pace of CAPEX on road construction and other related sectors is challenging since it heavily depends on availability of loans from both domestic banks and foreign investors.

External markets provided a helping hand to the Ukrainian economy in 2021, thanks to surging prices. However, despite strong prices, the real volumes of commodity exports declined in 9M21.

New headwinds for 2022 recovery emerge

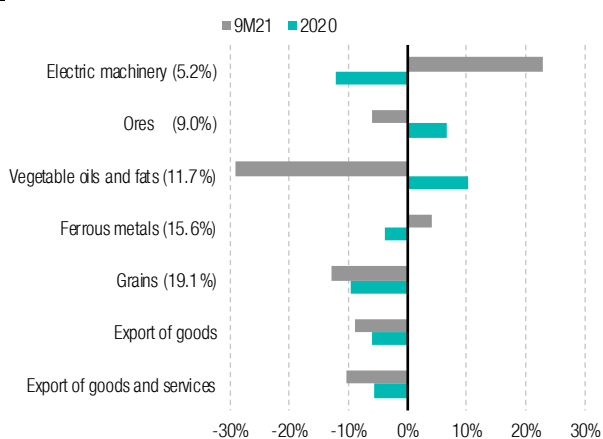
High energy prices will be a significant challenge for economic recovery in 2022

There are a number of headwinds that will impede economic growth in 2022:

- Ukraine has one of the most energy-intensive economies globally and the competitiveness of several industries, including chemicals, transportation, and utilities will be undermined. While energy is a significant input for the agriculture and steel industries, they can pass higher input costs onto customers in international markets and are thus relatively protected.
- The external markets outlook for 2022 is less favourable. The economies of Ukraine's key trading partners are projected to decelerate noticeably on tighter monetary and fiscal policies. Ukraine is again unlikely to see growth in real exports in 2022.
- Tighter capital markets may discourage local borrowers from raising funds either due to the higher cost of debt or lack of investor appetite for Ukraine. Needless to say, Russia's military power build-up along Ukraine's border adds more stress and implies higher risk premiums on debt to local issuers.

Chart 15. Change in real export in 2020 and 9M21, % YoY

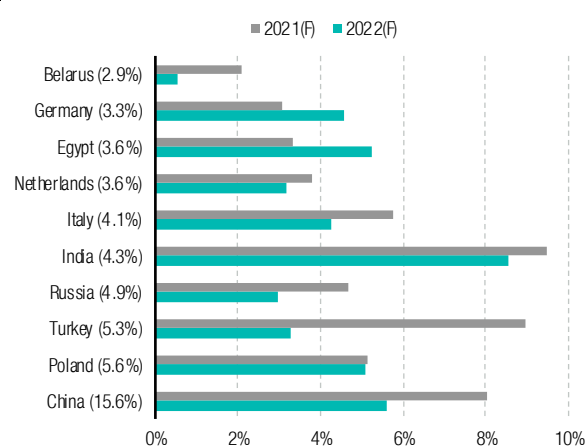
Commodity exports declined in real terms



Source: UkrStat, NBU, ICU.

Chart 16. Growth in Ukraine's key export markets*, %

Economies of Ukraine's key trading partners are decelerating



Source: IMF, UkrStat.

* numbers in parenthesis indicate share of a country in Ukraine's commodity exports in 2020.

Inflationary pressures persist

- Inflation accelerated significantly in 2021, and remains in low double-digits
- NBU responded to inflationary pressure by raising its key policy rate from 6.0% to 9.0% during 2021
- Inflation unlikely to return to the target range of 5±1% in 2022, implying the key policy rate will remain at the current level at least until the end of 3Q22

Inflation remains above the NBU target due to a combination of supply and demand-side factors

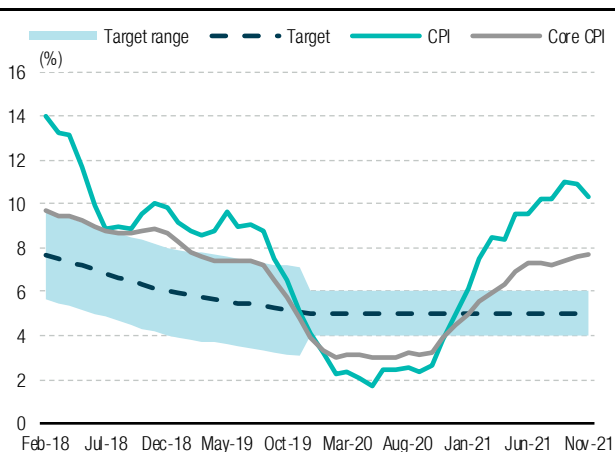
Inflation remained elevated at 10.3% YoY in November. Price pressures stem from numerous sources on both the demand and supply sides. While price growth is past its peak of 11.0% YoY as of September, it will take some time before deceleration becomes a robust trend. Core CPI continues to accelerate, and we expect it may peak at close to 9.0% by the end of 1Q22. Food prices—up 13.9% YoY in November—remain the key CPI driver, and, to a large extent, they are a reflection of global trends. Prices for grains and oilseeds are 20-30% above last year's levels, which also feeds into prices of meat and dairy products.

Another significant CPI driver is surging producer prices, including energy prices, which are spilling into prices of consumer goods and transportation services. The tight labour market is also a pro-inflationary force. Companies were forced to revise salaries up repeatedly to keep workers in place and motivated. Rapidly growing salaries have so far added demand-side pressures on prices for consumer staples and discretionary goods.

The growth in headline CPI was significantly contained by administrative regulation of utility tariffs, which make up 8% of the consumer basket. They have been capped for electricity and gas until May 2022. The expected increase in utility tariffs in May is very likely since removing the caps is a commitment of Ukraine under the IMF programme. Lifting the gas and electricity caps will have a substantial impact on CPI when the heating season starts.

Chart 17. CPI, core CPI, and target, % YoY

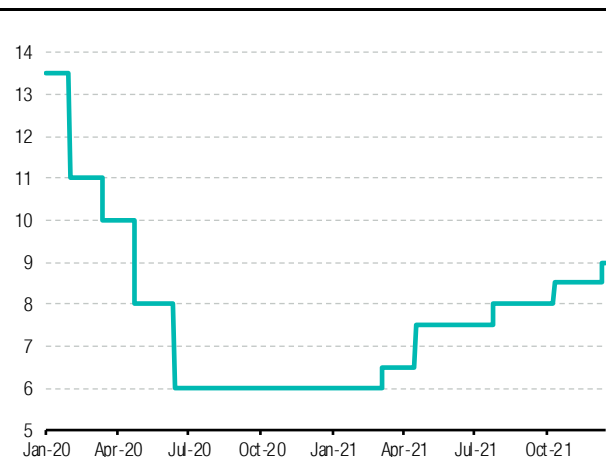
Inflation accelerated and remains in low double-digits



Source: UkrStat, NBU, ICU.

Chart 18. NBU key policy rate, %

NBU hiked its key policy rate significantly since the start of 2021



Source: NBU.

All in all, we think CPI is unlikely to return to the NBU's target band of 5% ±1pp next year, and we project end-2022 inflation at 7.2%. Higher inflationary pressures have very clear implications for monetary policy, and we see little chance for meaningful easing through the end of 2022. The current key policy rate of 9.0% is likely to remain intact at least until the end of September before the NBU is prepared to consider a gradual softening of its stance. Even so, risks are now tilted to the upside, and we may see elevated policy rates even longer.

External position: Moderately weaker

- **Current account balance turned to moderate deficit in 2021, and the gap will widen to 2.3% of GDP in 2022. High energy prices will be the factor behind the gap**
- **Ukraine will depend heavily on concessional funding from IFIs for covering its C/A gap due to turbulence in global capital markets and Russia’s military pressure**
- **FDI inflow will remain insignificant in 2022**
- **Gross external debt is falling fast in relation to GDP weakening Ukraine’s dependence on external debt markets**
- **NBU reserves likely to stay above 90% of the IMF adequacy metric in 2022**

Global energy crisis poses key risks for C/A

In 3Q21, the C/A balance returned to a marginal deficit mainly due to a price-driven upsurge in the imports of fuels. This took the 12-month trailing C/A balance to 0.4% of 2021F GDP. Another factor behind the C/A shortfall is a substantial increase in profits of foreign-owned companies thanks to favourable commodity markets. Payments of dividends and reinvested income of foreign subsidiaries increased to US\$10.5bn in 9M21, from US\$1.4bn in 9M20. Ukraine’s service trade balance shrank as international travel quickly recovered and Russian gas transit fell. We expect fuel imports will surge even more in 4Q21, and the full 2021 C/A balance will turn to a 1.1% GDP deficit from a 3.4% GDP surplus in 2020.

C/A deficit should widen to 2.3% GDP in 2022, driven by a larger trade deficit

We project the C/A deficit will further widen to 2.3% GDP in 2022. The main pressure on the C/A will come from the trade deficit, which will widen significantly in 2022.

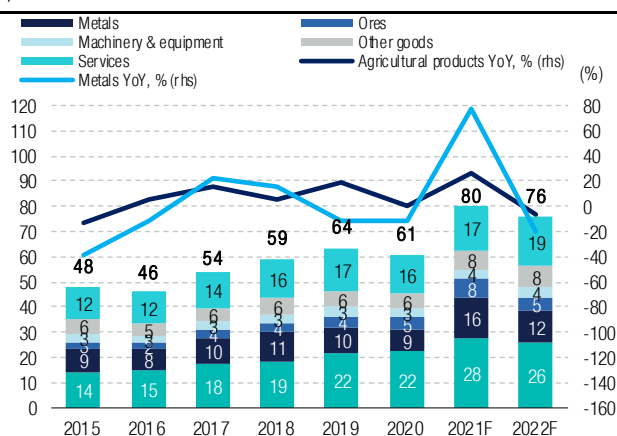
On the export side, sales of grain will remain strong in 1Q22, but are likely to subside afterwards on lower prices and moderately smaller harvest next year. Weakness in export iron ore prices will continue and will likely be followed by sliding prices for steel in Europe and MENA, the key markets for Ukrainian steel.

Higher natural gas prices will be responsible for nearly half of energy imports growth in 2021

On the import side, the key negative factor is high prices for natural gas, oil, and coal. As a result of surging fuel prices, we expect import of energy goods will jump 90% in 2021, and decline only marginally in 2022. Energy goods’ share of total imports will rise to 18% in 2021F from 13% in 2020. Higher natural gas prices will contribute nearly half to the total energy imports increase in 2021. There is a high risk that prices for fuels will be lower, but still elevated in 2022, or even increase further due to unexpected supply disruptions.

Chart 19. Exports, US\$bn

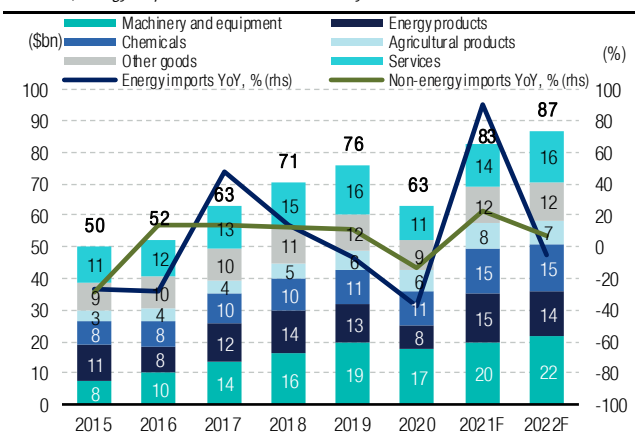
Prices for iron ore and steel became the key drivers for Ukraine’s exports in 2021; exports will decline 6% in 2022



Source: NBU, ICU

Chart 20. Imports, US\$bn

Due to surging world fuel prices, Ukraine’s energy imports will jump 90% in 2021. In 2022, energy imports to fall 6% but will stay elevated



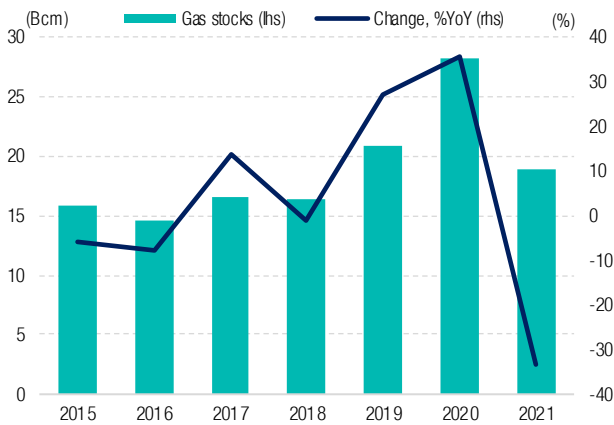
Source: NBU, ICU

The risk of higher-than-expected imports of natural gas during the current winter is particularly high

The risk that Ukraine may need to increase natural gas imports by more than expected during the 2021/22 winter season is high. Ukraine's gas inventories as of mid-October were 33% lower than at the same date in 2020, and 10% lower than in 2019. The available volumes are enough to go through the entire 2021/22 winter heating season if temperatures remain close to normal. If, however, temperatures fall below normal levels or the heating season lasts longer than usual, Ukraine will need to buy more gas at very high prices. The situation is exacerbated by low coal stocks at Ukraine's thermal power plants. TPPs are already forced to switch to burning natural gas given shortage of coal.

Chart 21. Ukraine's mid-October stock of natural gas, bcm

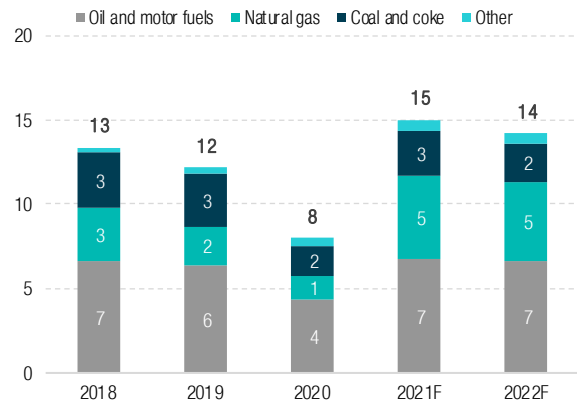
As of mid-October 2021, gas inventories were 33% lower than at the same date in 2020 and 10% lower than in 2019



Source: Bloomberg, NBU, ICU

Chart 22. Energy imports, US\$bn

Natural gas imports will be the key contributor in 90% growth in Ukraine's energy imports in 2021, and will stay elevated in 2022

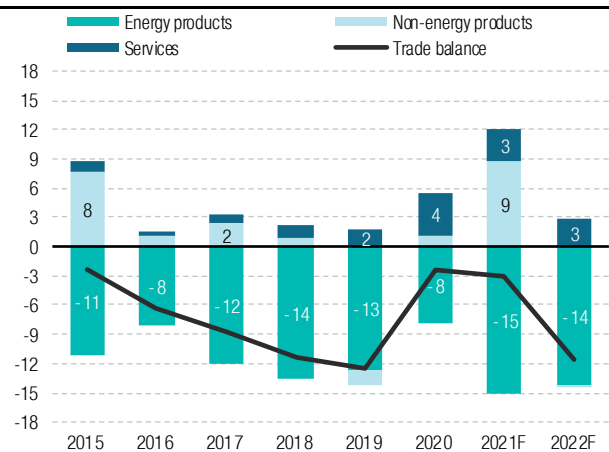


Source: NBU, ICU

High global inflation and rising energy prices will keep prices for Ukraine's non-energy imports high. On the other hand, import of consumer goods in real terms should moderate on slowing household incomes. With an unfavourable terms of trade shock, Ukraine is set to face a deterioration in the trade-in-goods balance. Trade-in-service balance is also likely to worsen marginally due to the growing number of tourist visits abroad. A wider trade deficit will be partly offset by strong remittances, which proved resilient during the COVID-related lockdowns. However, their growth will also decelerate due to the slowing global economy.

Chart 23. Trade balance, US\$bn

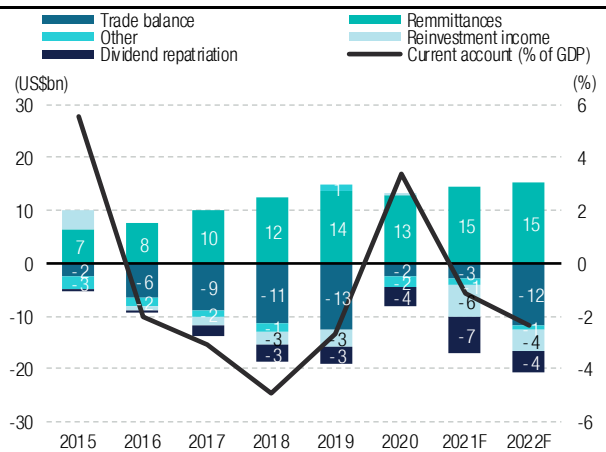
In 2021 and 2022, Ukraine's energy trade deficit will exceed those of 2018-2019; non-energy trade should turn from surplus in 2021 to deficit in 2022



Source: Bloomberg, NBU, ICU

Chart 24. Current account, US\$bn, % of GDP

Ukraine's C/A should widen to 2.3% GDP in 2022, driven by a larger trade deficit



Source: NBU, ICU

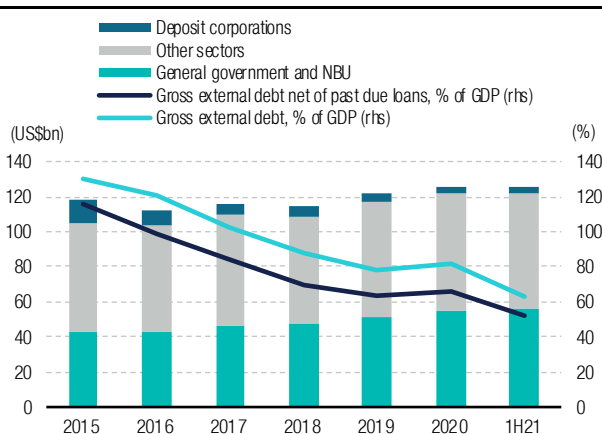
Net capital flows to be shaped by concessional borrowings

Gross external debt is on a downward trend, FDI remains insignificant

Ukraine's gross external debt declined significantly to 63% of GDP at end-1H21, from 130% at the end of 2015. If the stock of external debt is further adjusted for the past-due loans that were presumably in large part issued to companies in the occupied territories, the total external debt-to-GDP ratio nears 52%. This is a reasonable amount, which implies the Ukrainian economy is reasonably indebted and should not face difficulties in rolling over its obligations. While the economy's indebtedness significantly improved recently, the FDI story is not that bright. Ukraine saw minimal FDI inflows over the past decade, and most of new FDI was nothing but reinvestment of net income by foreign companies. The total stock of FDI to GDP at just 28% is a clear indication of fundamental problems in Ukraine's investment climate. FDI is very unlikely to become a significant contributor to net capital inflows in the coming years unless Ukraine's investment climate sees a material improvement.

Chart 25. Gross external debt, US\$bn, % of GDP

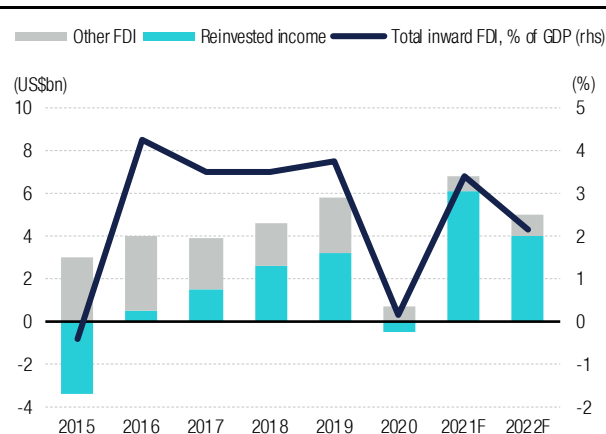
Gross external debt declining fast in relation to GDP



Source: NBU, ICU

Chart 26. Inward FDI, US\$bn, % of GDP

FDI inflow was insignificant over the past years



Source: NBU, ICU

Ukraine will substantially rely on concessional funding to cover the C/A gap in 2022

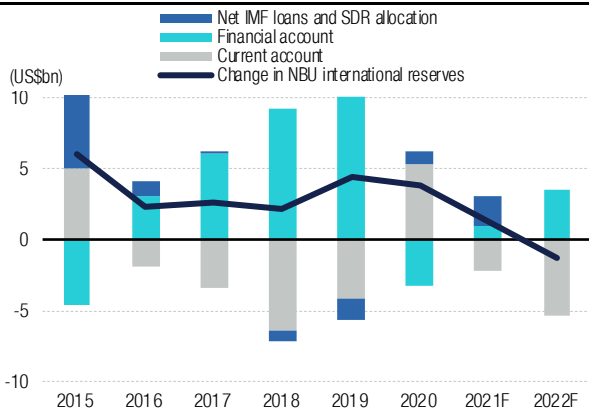
We project Ukraine will be facing a C/A gap of US\$5.3bn, or 2.3% of GDP in 2022. This is a manageable amount and can be covered via capital inflows even in times of moderate stress in global capital markets providing Ukraine continues to receive support from IFIs. Government should be able to ensure a net inflow of debt capital thanks to concessional funding, in particular, via loans from the IMF that may total up to US\$2.2bn under the current Stand-by Agreement. Other IFIs are also likely to step up their efforts to aid Ukraine when country risks are elevated due to Russia's military pressure. The private sector is likely to see marginal debt flows in 2022. We thus expect the NBU's reserves will decline marginally in 2022 to US\$29bn. That is a comfortable level above 90% of the IMF's reserve-assessing adequacy (ARA) metric.

FX market may be under pressure at times due to tensions with Russia

The FX market is likely to be volatile at least through the end of 1Q22, as tensions with Russia may temporarily undercut confidence of local businesses and the population as well as non-resident investors. Given country-specific geopolitical factors combined with larger financial market uncertainties globally, we expect the hryvnia to be moderately weaker compared with an average UAH27.3/US\$ in 2021.

Chart 27. Balance of payments flows and NBU reserves, US\$bn

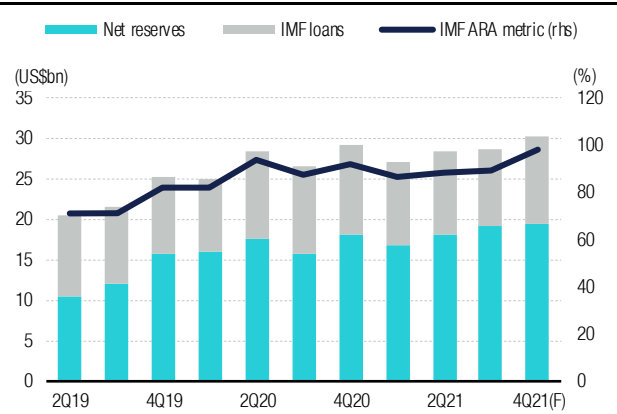
Current account deficit should be largely covered with FA inflows in 2022F



Source: Bloomberg, NBU, ICU

Chart 28. NBU gross international reserves, US\$bn

NBU reserves are close to 100% IMF ARA metric



Source: NBU, ICU

Fiscal policy: Firm consolidation path

- Fiscal deficit is significantly below the start-of-the-year target adding credibility to government’s fiscal policy
- State budget deficit for 2022 approved with a deficit of 3.5% of GDP, in line with the IMF programme target
- Government’s ability to finance the fiscal gap is fully dependent on smooth cooperation with IFIs

Fiscal deficit target outperformed consistently

Government maintains prudent fiscal policy, outperforms budget deficit targets

Government is on track to outperform its own fiscal targets for 2021. This year’s deficit is likely to be close to 3%, well below the ceiling of 5.5% of GDP. This outperformance is largely due to substantial growth in revenues that are expected to be about 20% YoY higher, well above the original plan. All taxes are growing above expectations largely due to surging commodity prices and imports. Revenue outperformance is going to result in a lower central budget gap.

The announced plans for 2022 look reasonable. Central budget revenues and expenditures are expected to grow slightly below nominal GDP thus reducing the fiscal burden on the economy. The government set the target for the 2022 budget deficit at 3.5% of GDP. This will mark the second consecutive year of a reasonable fiscal gap following the spike to 5.2% of GDP during the COVID-hit year of 2020. Given consistent deficit target outperformance in the past two years, chances are high that next year’s deficit will finish below 3.5% of GDP.

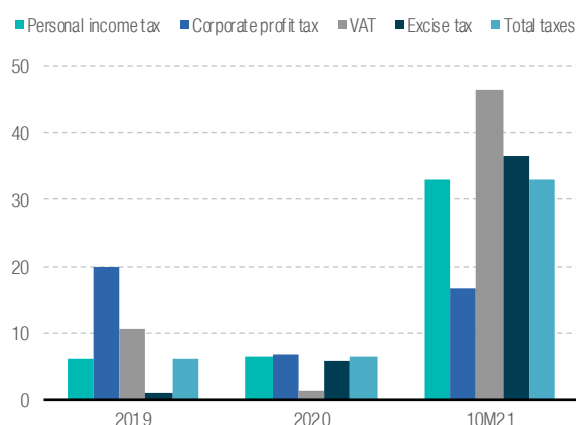
The central government cash budget deficit is only a part of the story. The broader fiscal deficit is usually higher due to issuance of state guarantees. This year, government was generous in granting state guarantees to Ukravtodor, which raised over US\$1bn in Eurobond and debt from local banks, and Ukrenerg, which borrowed US\$825mn internationally.

Quasi-fiscal gap is also reasonable

The government managed to keep other components of quasi-fiscal expenditures at low levels. In 2021, no state banks were recapitalized. Given decent progress in corporate governance standards and business strategy overhaul by state banks, they may well get along without fresh capital in 2022. Meanwhile, government plans to capitalize the State Housing Corporation (Ukrfinzhytlo) to the tune of UAH30bn to facilitate the housing thermos-modernization project. Government earmarked US\$1.3bn in state guarantees for 2022, in line with the terms agreed with the IMF.

Chart 29. Change in state budget tax revenues, % YoY

Taxes significantly outperform targets due to inflation and larger imports



Source: MoF.

Chart 30. State budget deficit, % of GDP

Central budget deficit will decline substantially in 2021



Source: MoF, ICU.

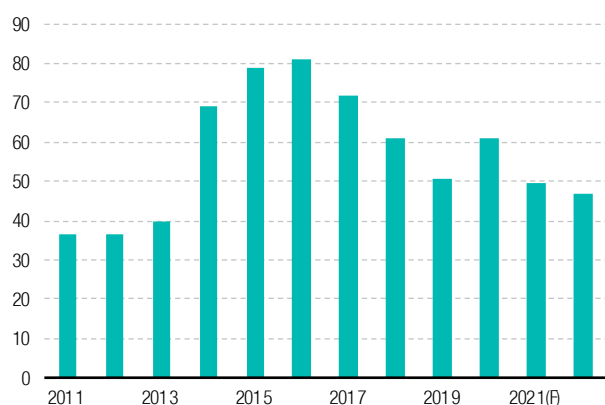
Public debt on a solid downward trend

Public debt-to-GDP ratio declining fast due to rapid growth in nominal GDP

Ukraine has seen an impressive decline in its public debt-to-GDP ratio over the past two years. The ratio is likely to land below 50% already in 2021. These results come from a combination of two factors. Firstly, high inflation and the related rapid growth in nominal GDP contributed to the trend. Secondly, the deficit of the general government sector was also moderate during the COVID crisis compared with other countries. The outlook for 2022 is also optimistic, and we expect the public debt-to-GDP to decline close to 45%. Despite noticeable progress in this area, it's too early to say debt management risks are minimal. The debt composition is still worrying across several dimensions. The share of FX in total debt is still high at about 65%, even though this share declined somewhat over the past two years. Also, the blended cost of debt is relatively high at about 7-8% per annum. The 2022 state budget allocates 14% of total revenues to service the debt. Here is where cheap concessional funding from IFIs may be of particular help. Ukraine should use every chance to reduce the cost of debt by maintaining constructive relations with the IFIs that repeatedly showed they are prepared to provide funding to regularly cover the budget deficit.

Chart 31. Public debt, % of GDP

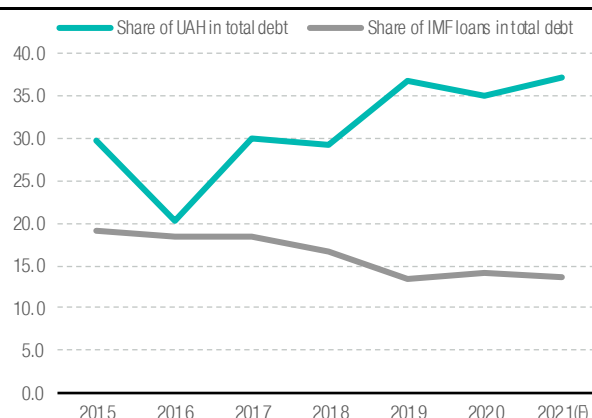
Ukraine's public debt-to-GDP ratio is declining and will likely settle below the 50% line already in 2021



Source: UkrStat, ICU.

Chart 32. Share of UAH and IMF loans in total debt, %

Public debt is still heavily dominated by FX obligations



Source: MoF, ICU.

Risks to budget financing in 2022 manageable

The government's total target for net borrowings of UAH178bn (US\$6.2bn) in 2022 is split at 56% for the domestic market and 44% for external markets.

Table 1. Budget financing sources (ICU assumption) and debt redemption 2022, US\$bn

	2022		2022
External financing	5.2	External debt redemption	2.5
IMF	2.2	IMF	0.5
Other IFIs	1.0	Other IFIs	0.7
Private capital markets	2.0	Eurobonds	1.0
		Other external debt repayments	0.3
Net external financing	2.7		
Domestic financing	13.5	Domestic debt redemption	10.0
FX-denominated bonds	3.0	FX-denominated bonds	3.0
UAH-denominated bonds	10.0	UAH-denominated bonds	7.0
Locals	8.9	Incl local	6.9
Foreign investors	1.1		
Net domestic financing	3.5		
Total budget financing	18.7		12.5

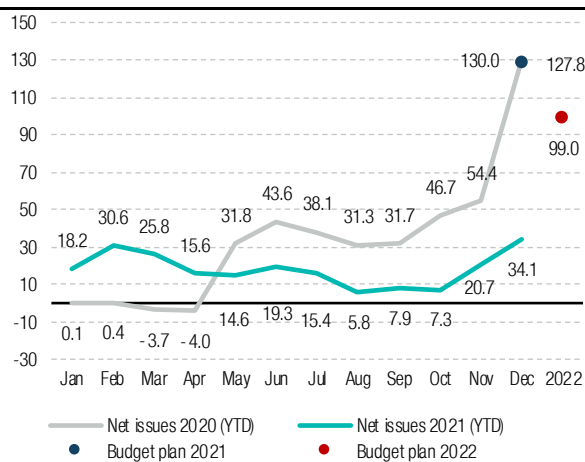
Source: MFU, ICU.

The 2022 plan for raising domestic debt is ambitious

The plan to raise net UAH99bn domestically is a challenge as proved by very slow progress in borrowing this year. Year-to-date, government managed to raise a net UAH34.1bn even though banks had access to the NBU’s long-term refinancing facility until September. The borrowing plan for 2022 will thus not be an easy walk, and it is unlikely to be met in full. A greater part of the plan still looks plausible under certain realistic assumptions. Firstly, we assume foreign investors regain interest to local UAH debt and increase holdings by up to USD1.0bn (vs the current stock of USD3.4bn). New inflows will be supported by the expected inclusion of the 2025 UAH-denominated bond into JPMorgan GBI EM index since the end of March. This will expand the investor universe for Ukrainian debt and attract new inflows from index funds. The MoF said it is also looking to add other Ukraine paper to the index, in particular notes maturing in 2024, 2026, and 2027. Secondly, assuming the current share of T-bills in banks’ assets remains unchanged and given the current rate of asset growth of around 10% p.a., we believe banks may increase their holdings of T-bills by c. UAH50bn without crowding out lending. Even under these plausible assumptions, the target of UAH99bn is hardly achievable. If MinFin misses the target for local borrowings, it will have to either increase borrowings externally or adjust the fiscal deficit accordingly.

Chart 33. Cumulative borrowings for 2021, UAHbn

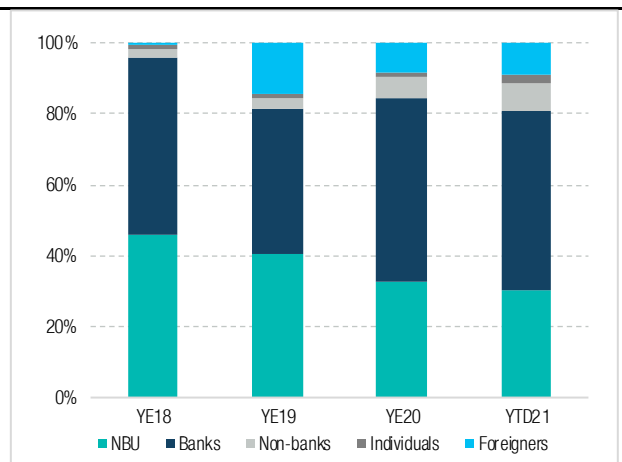
Net budget financing. Actual for 2021, and budget plan for 2021 and 2022



Source: MFU, ICU.

Chart 34. Structure of local debt investors

UAH and FX-denominated bonds



Source: NBU, ICU.

External borrowings are expected at US\$5.2bn for 2022, which includes US\$2.5bn needed for rollover of maturing obligations. On a positive note, most repayments, including US\$1bn of 2015 Eurobond, fall into 3Q22. Government will enter 2022 with sufficient FX liquidity thanks to a November’s tranche from the IMF. Such reserves give the MoF some flexibility with regard to the timing of tapping international private debt markets.

External borrowings will be dominated by concessional funding

Providing Ukraine remains firmly on track of its Stand-by Programme with the IMF, we don’t expect any significant challenges in meeting the FX borrowing needs. The IMF funding is US\$2.2bn and loans from other IFIs of up to US\$1.0bn are a realistic scenario. The remaining US\$2.0 can be borrowed in private capital markets. We also expect Ukravtodor will re-enter the Eurobond market with a fresh issuance next year.

Any delays in the IMF programme and lower borrowings will present a challenge. The authorities will thus be facing a tough choice when the time comes to implement socially sensitive reforms, like removing the price cap for gas to households.

Local debt: Stays attractive for foreigners

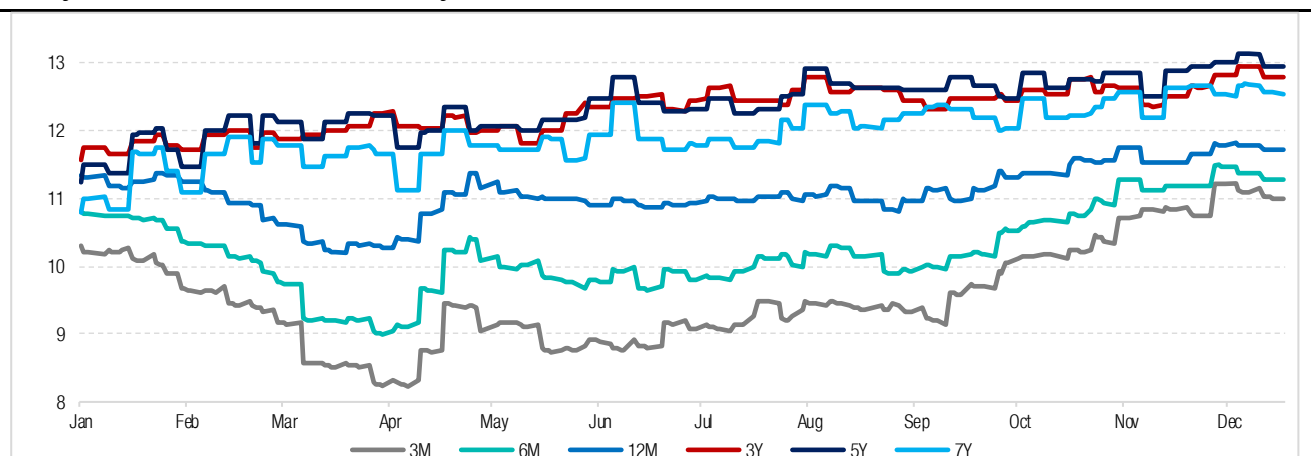
Since 2019, the significant presence of non-residents in the local UAH-denominated debt market became the new normal. Even after noticeable outflows since the outbreak of COVID, the current stock remains material at US\$3.4bn, about 3.7% of the total public debt. The local T-bill market will continue offering reasonable investment opportunities in 2022. Providing no new external shocks, we expect holdings of the UAH-denominated debt by non-residents will increase. We see several noticeable features of the local debt market next year:

Interest rates will remain elevated due to NBU's tight monetary policy

Interest rates are set to remain relatively high, in low double-digits, throughout 2022. Now, interest rates in the primary market varied from 10.5% for three-month bills up to 13.25% for six-year paper, providing local investors with at least 150bp over the NBU key policy rate. The secondary market YTM's ranged between 11% and 13% for the same maturities. We expect inflation will remain more persistent than the NBU currently projects, which implies the current key policy rate of 9.0%, which sets the natural benchmark for the cost of government debt, will stay unchanged at least through the end of September 2022. This may adjust expectations somewhat regarding the longer end of the curve. In our view, interest rates in the primary bond market will further increase to 11–14% for instruments from three months and up to five years (e.g. notes due in 2027).

Chart 35. Yields in secondary bond market, %

Average YTM's based on the NBU fair value of domestic government bonds



Source: NBU, ICU

Carry trade opportunities will remain intact even though the hryvnia exchange rate may at times be under moderate pressure, given Russia's military pressure on Ukraine.

Continued focus on short and medium-term paper. The MoF is likely to avoid significant issuance of long-term debt so as not to lock in the current elevated cost of debt in anticipation of a rate decline starting 4Q22. The focus will thus remain on issuance of short and medium term debt to match the term pattern of demand of local banks driven by their liquidity constraints.

Inclusion of Ukraine's bond into JPMorgan index is an important milestone

Inclusion of paper in JPMorgan GBI EM will improve liquidity as new demand from index funds will emerge. A larger investor universe will offer more exit opportunities even in times of stress, and it definitely bodes well for primary and secondary market liquidity.

Eurobonds: Supported by credit profile

Ukrainian Eurobond yields declined to all-time lows during 2021, before bond prices lost their gains since November due to broader global capital market jitters and maneuvers of Russia's army along Ukraine's boarder. The government is set to tap the private international capital markets for at least USD2.0bn in 2022. We also expect that state companies, in particular Ukravtodor, will raise funding externally. The key points to keep in mind next year are:

Global capital markets likely to be less friendly to EM but Ukraine's credit profile is likely to improve

US tightening of monetary policy. Tightening cycles are usually accompanied by narrowing spreads of lower-quality bonds. This is far from certain this time since tightening is happening against the backdrop of significant uncertainties with COVID pandemics and slowing growth in emerging markets. Ukraine, like many other EMs, may thus face tougher access to international capital markets and higher spreads, all else being equal, in 2022. As the Eurozone monetary policy remains more relaxed vs the US, Ukraine might consider euro-denominated paper due to their lower cost. However, the investor base for euro-denominated bonds is smaller.

Improved solvency profile of Ukraine will be a clear supporting factor for Eurobonds. Ukraine made a significant progress in recent years in terms of improving its solvency. Its external accounts are balanced, FX reserve adequacy is at a comfortable level, and fiscal deficit and debt-to-GDP ratio are increasingly safe relative to peer economies.

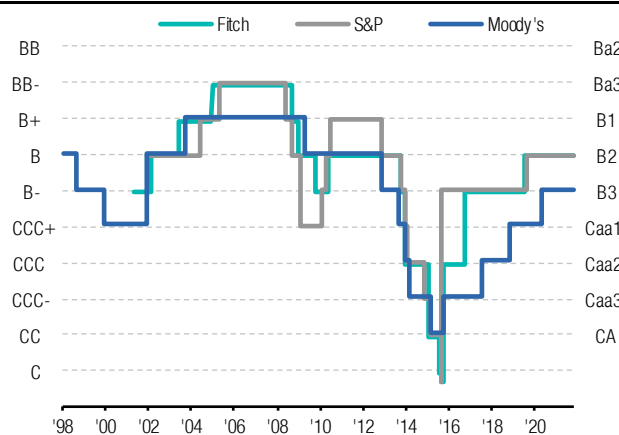
Upgrade in sovereign credit rating is very likely if Russia does not escalate aggression further

Sovereign ratings upgrade is possible in 2022. Fitch and S&P ratings for Ukraine are currently aligned and have not been changed since September 2019. Moody's upgraded Ukraine's credit rating in 2020 to B3, but it is still one notch behind S&P and Fitch. This suggests a good chance of a sovereign rating update in 2022 that may push Ukraine's equilibrium spread to US Treasuries by 50–100 bps, all other things being equal.

Geopolitics is the key risk that may keep yields high. Ukraine is very far from solving its security issues and will remain under threat from Russia in the foreseeable future. While the current military buildup along Ukrainian borders will likely de-escalate in the coming months, it is certain to be repeated regularly in the years to come. This naturally raises the risk premium that investors demand for holding the country's debt.

Chart 36. Sovereign credit rating of Ukraine

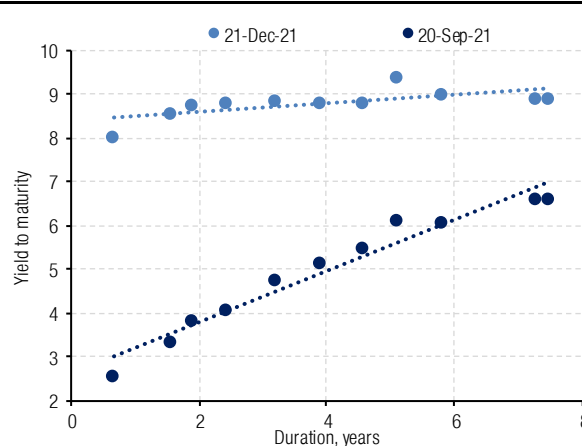
Rating agencies are likely to raise Ukraine's sovereign rating in 2022



Source: Bloomberg, Refinitiv, ICU.

Chart 37. Eurobond yield curve

The curve has flattened and yields rose as the military threat increased



Source: Bloomberg, Refinitiv, ICU.

Yearly forecast 2021–22

	Historical data for 2011–20										Forecast by ICU	
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021F	2022F
Activity												
Real GDP (% YoY)	5.5	0.2	(0.0)	(6.6)	(9.8)	2.4	2.5	3.4	3.2	(4.0)	2.9	3.2
Nominal GDP (UAHbn)	1,300	1,405	1,465	1,587	1,989	2,385	2,984	3,561	3,978	4,194	5,435	6,450
Nominal GDP (US\$bn)	163	174	180	133	90	93	112	131	155	155	199	233
Unemployment (%)	8.0	7.6	7.3	9.3	9.1	9.3	9.5	8.8	8.2	9.5	9.0	8.3
Inflation												
Headline inflation (% YoY, e.o.p)	4.6	(0.2)	0.5	24.9	43.3	12.4	13.7	9.8	4.1	5.0	10.3	7.2
Headline inflation (% YoY, avg.)	8.0	0.6	(0.3)	12.1	48.7	13.9	14.4	10.9	7.9	2.7	9.4	8.9
GDP deflator (% YoY)	14.2	7.8	4.3	15.9	38.9	17.1	22.1	15.4	8.3	9.8	26.0	15.0
Exchange rates												
UAH/USD (e.o.p.)	8.0	8.1	8.2	15.8	24.0	27.3	28.1	27.7	23.8	28.3	27.4	27.8
UAH/USD (avg.)	8.0	8.1	8.2	12.0	21.9	25.6	26.6	27.2	25.8	27.0	27.3	27.7
External balance												
Current account balance (US\$bn)	(10.2)	(14.3)	(16.5)	(4.6)	5.0	(1.9)	(3.5)	(6.4)	(4.1)	5.3	(2.2)	(5.3)
Current account balance (% of GDP)	(6.3)	(8.3)	(9.2)	(3.5)	5.6	(2.0)	(3.1)	(4.9)	(2.7)	3.4	(1.1)	(2.3)
Trade balance (US\$bn)	(10.1)	(14.3)	(15.6)	(4.6)	(2.4)	(6.5)	(8.7)	(11.4)	(12.5)	(2.4)	(3.0)	(11.6)
Trade balance (% of GDP)	(6.2)	(8.3)	(8.7)	(3.5)	(2.6)	(6.9)	(7.8)	(8.7)	(8.1)	(1.5)	(1.5)	(5.1)
Exports (US\$bn)	83.7	86.5	81.7	65.4	47.9	46.0	53.9	59.2	63.6	60.7	79.8	75.3
Imports (US\$bn)	93.8	100.9	97.4	70.0	50.2	52.5	62.7	70.6	76.1	62.5	82.8	86.9
Capital flows (F/A) (US\$bn)	7.7	10.1	18.6	(9.1)	(4.6)	3.1	6.0	9.3	10.1	(3.3)	0.7	(1.0)
FDI (US\$bn)	7.0	7.2	4.1	0.3	(0.4)	3.8	3.7	4.5	5.2	0.1	6.8	5.0
FDI (% of GDP)	4.3	4.1	2.3	0.2	(0.5)	4.1	3.3	3.4	3.4	0.1	3.4	2.1
Reserves (US\$bn)	31.8	24.5	20.4	7.5	13.3	15.5	18.8	20.8	25.3	29.1	30.3	29.0
Interest rates												
NBU's key policy rate (% e.o.p.)	7.75	7.50	6.50	14.00	22.00	14.00	14.50	18.00	13.50	6.0	9.0	8.5
Fiscal balance												
Budget balance (% of GDP)	(1.8)	(3.8)	(4.4)	(5.0)	(2.3)	(2.9)	(1.5)	(2.4)	(2.1)	(5.1)	(2.4)	(2.9)
Public debt (% of GDP)	36.4	36.7	39.9	69.4	79.0	80.9	71.8	60.9	50.6	60.8	49.7	46.8
Wages												
Average nominal wage (UAH)	2,639	3,032	3,274	3,475	4,207	5,187	7,105	8,867	10,504	11,591	13,999	15,905
Real wage (% YoY)	8.8	14.3	8.2	(5.2)	(18.5)	7.8	19.7	12.6	9.9	7.4	10.1	5.5

Source: Ukrstat, NBU, MoF, ICU.

Quarterly forecast 2021–22

	Historical data								Forecast by ICU							
	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22
Gross domestic product																
Real GDP (% YoY)	3.1	4.8	3.8	1.4	(1.2)	(11.2)	(3.5)	(0.5)	(2.2)	5.7	2.7	5.0	3.3	3.3	3.2	3.0
Nominal GDP (UAHbn)	820	933	1,112	1,113	854	875	1,163	1,301	1,009	1,169	1,498	1,759	1,276	1,401	1,778	1,993
Nominal GDP (US\$bn)	30	35	44	46	34	33	42	46	36	42	56	66	46	51	65	72
Prices																
Headline inflation (% YoY, e.o.p)	8.6	9.0	7.5	4.1	2.3	2.4	2.3	5.0	8.5	9.5	11.0	10.3	9.1	8.0	7.5	7.2
Headline inflation (% YoY, avg.)	8.9	9.1	8.5	5.2	2.6	2.1	2.4	3.8	7.4	9.1	10.5	10.5	9.7	8.6	7.8	7.4
GDP deflator (% YoY)	12.2	9.9	7.6	4.7	5.3	5.6	8.4	17.5	20.7	26.4	25.5	28.8	22.5	16.0	15.0	10.0
Exchange rates																
UAH/USD (avg.)	27.3	26.5	25.2	24.2	25.0	26.9	27.6	28.3	28.0	27.6	26.9	26.8	27.7	27.7	27.5	27.8
UAH/USD (e.o.p.)	27.3	26.2	24.4	23.8	27.6	26.7	28.3	28.3	27.9	27.2	26.6	27.4	27.8	27.6	27.5	27.8
Interest rates																
NBU's key policy rate (% e.o.p.)	18.0	17.5	16.5	13.5	10.0	6.0	6.0	6.0	6.5	7.5	8.5	9.0	9.0	9.0	9.0	8.5

Source: Ukrstat, NBU, ICU.

Disclosures

ANALYST CERTIFICATION

This research publication has been prepared by the analyst(s), whose name(s) appear on the front page of this publication. The analyst(s) hereby certifies that the views expressed within this publication accurately reflect her/his own views about the subject financial instruments or issuers and no part of her/his compensation was, is, or will be directly or indirectly related to the inclusion of specific recommendations or views within this research publication.

EQUITY RATING DEFINITIONS

Buy: Forecast 12-month total return greater than 20%

Hold: Forecast 12-month total return 0% to 20%

Sell: Forecast 12-month total return less than 0%

Note: total return is share price appreciation to a target price in relative terms plus forecasted dividend yield.

DEBT RATING DEFINITIONS

Buy: Forecast 12-month total return significantly greater than that of relevant benchmark

Hold: Forecast 12-month total return is in line with or modestly deviates from relevant benchmark

Sell: Forecast 12-month total return significantly less than that of relevant benchmark



11th floor, LEONARDO Business Centre
19-21 Bogdan Khmelnytsky Street
Kyiv, 01030 Ukraine
Phone/Fax +38 044 3777040

WEB www.icu.ua




RESEARCH

Vitaliy Vavryshchuk
Head of macro research
vitaliy.vavryshchuk@icu.ua

Alexander Martynenko 
Head of corporate research
alexander.martynenko@icu.ua

Taras Kotovych 
Senior financial analyst (Sovereign debt)
taras.kotovych@icu.ua

Mykhaylo Demkiv 
Financial analyst (Banks)
mykhaylo.demkiv@icu.ua

Dmytro Diachenko, CFA
Financial analyst
dmitry.dyachenko@icu.ua

Investment Capital Ukraine LLC is regulated by Securities and Stock Market State Commission of Ukraine (license numbers: dealer activity AE 263019, broker activity AE 263018, underwriting activity AE 263020 dated 11 April 2013).

DISCLAIMER

This research publication has been prepared by Investment Capital Ukraine LLC solely for information purposes for its clients. It does not constitute an investment advice or an offer or solicitation for the purchase or sale of any financial instrument. While reasonable care has been taken to ensure that the information contained herein is not untrue or misleading at the time of publication, Investment Capital Ukraine makes no representation that it is accurate or complete. The information contained herein is subject to change without notice. Copyright and database rights protection exists in this report and it may not be reproduced, distributed or published by any person for any purpose without the prior express consent of Investment Capital Ukraine LLC. All rights are reserved. Any investments referred to herein may involve significant risk, are not necessarily available in all jurisdictions, may be illiquid and may not be suitable for all investors. The value of, or income from, any investments referred to herein may fluctuate and/or be affected by changes in exchange rates. Past performance is not indicative of future results. Investors should make their own investigations and investment decisions without relying on this report. Only investors with sufficient knowledge and experience in financial matters to evaluate the merits and risks should consider an investment in any issuer or market discussed herein and other persons should not take any action on the basis of this report.

Additional information is available upon request.

