National Bank of Ukraine

Financial Stability Report

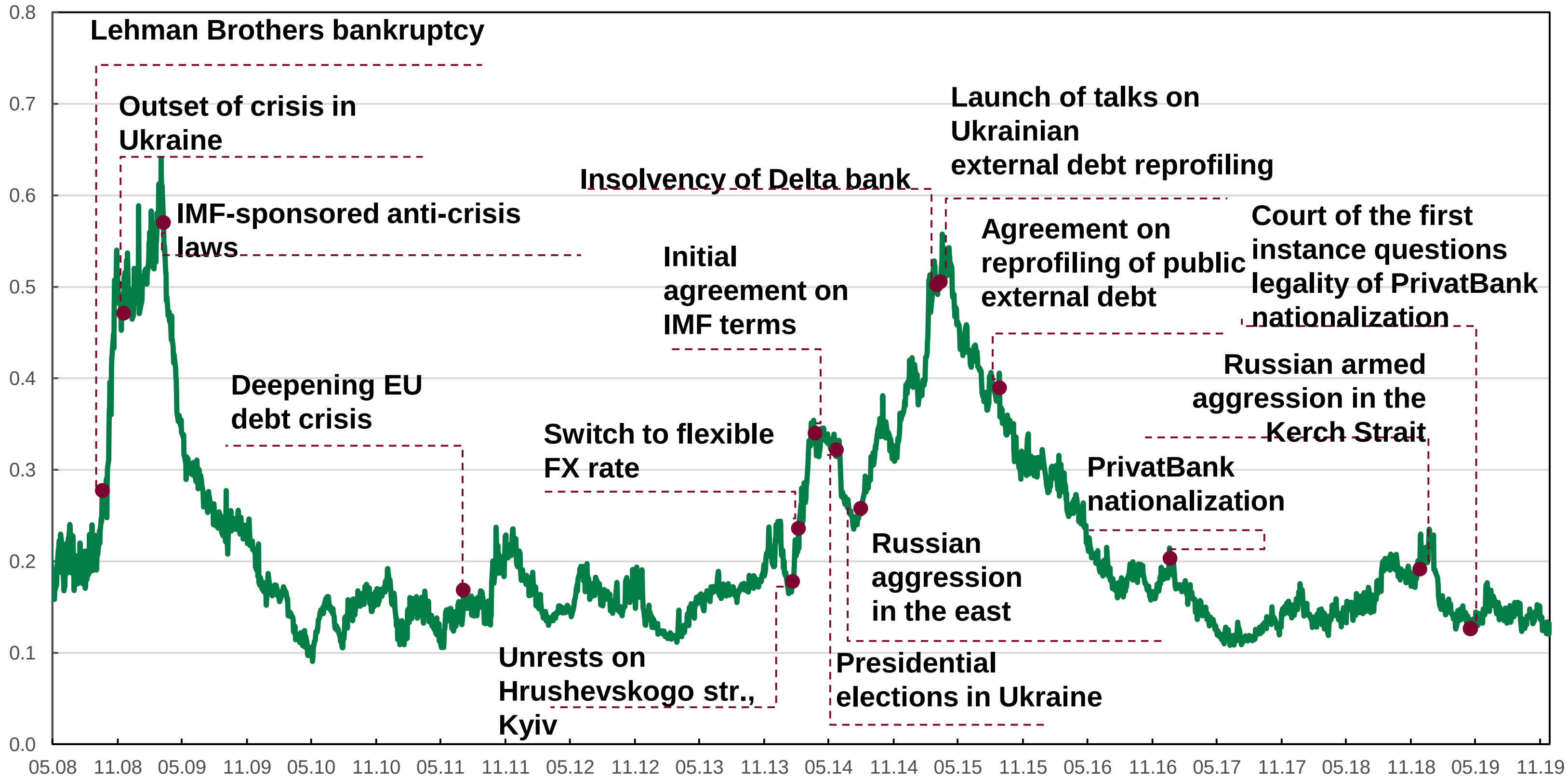
December, 2019

Key Conclusions

- Banking sector is currently in a good shape. Banks generate high profits, sector's return on capital is record high.
- Stress tests of 2019 showed that there was still a few banks in the system, including two state-owned ones, that faced material problems.
- The NBU expects fast decisions from independent supervisory boards of state-owned banks on clearing non-performing loans (NPLs) off balance sheets, change of business models, and optimization of operating costs.
- Real sector profitability has stabilized, debt burden is overall at the acceptable level. Number of enterprises planning to borrow from a bank is on the rise.
- Resumption of mortgage lending requires resolution of a few fundamental issues of primary real estate market. It is extremely non-transparent; households–investors have no efficient mechanisms for protection of their rights.
- Consumer lending is surging. The NBU believes that banks are not conservative enough in their assessment of risks of unsecured loans. In order to limit the build-up of systemic risks, the NBU will introduce higher risk weights for these loans.
- In December, the NBU made two decisions aimed at de-dollarization of bank balance sheets. Reserve requirements for FX deposits was increased to 10%, while for hryvnia deposits they were decreased to 0%. Domestic government bonds in FX will no longer be seen as risk-free.
- Next year, the key challenge for the NBU will be building institutional capacity on regulation of non-banking financial services market.

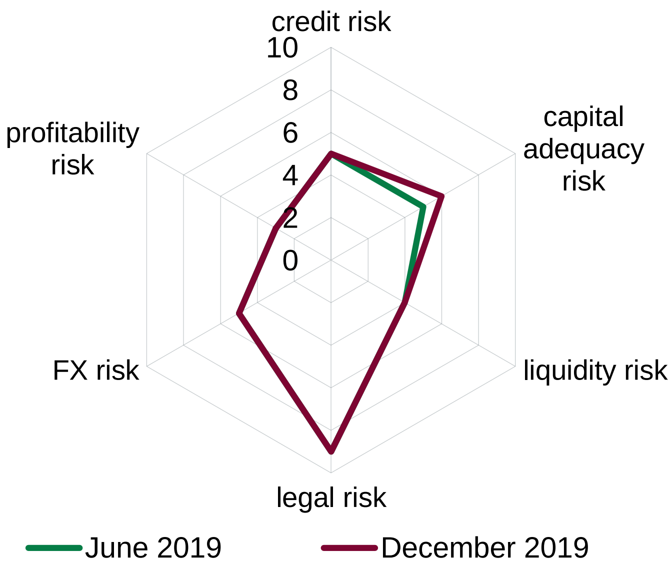
Financial stress index is decreasing

Financial Stress Index

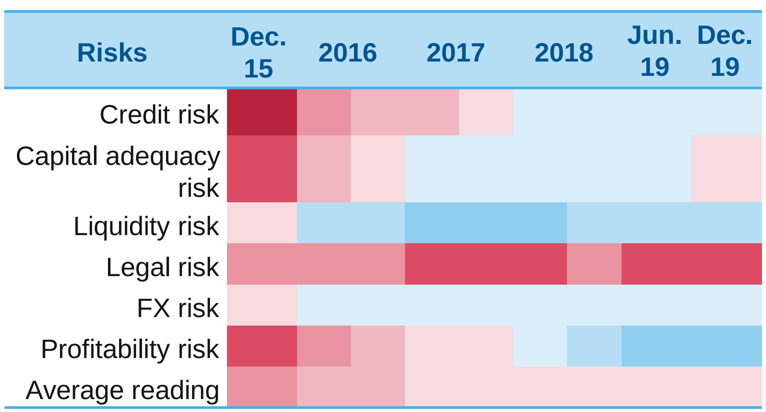


Source: NBU.

Risk map for banking sector



Heat map of banking sector risks



Credit risk (const). Paces of growth of corporations' profitability and households' incomes is slowing down. Corporations repaid some debts, however, some of them remain financially weak. In retail segment, lending standards are becoming more relaxed.

Capital adequacy risk (+1). Some banks (including two state-owned ones) have not enhanced their financial resilience since 2018. They have no resilience buffer against potential crises.

Liquidity risk (const). Banks work in a highly liquid environment, but competition for deposits is intense. Short maturities of liabilities pose a systemic risk.

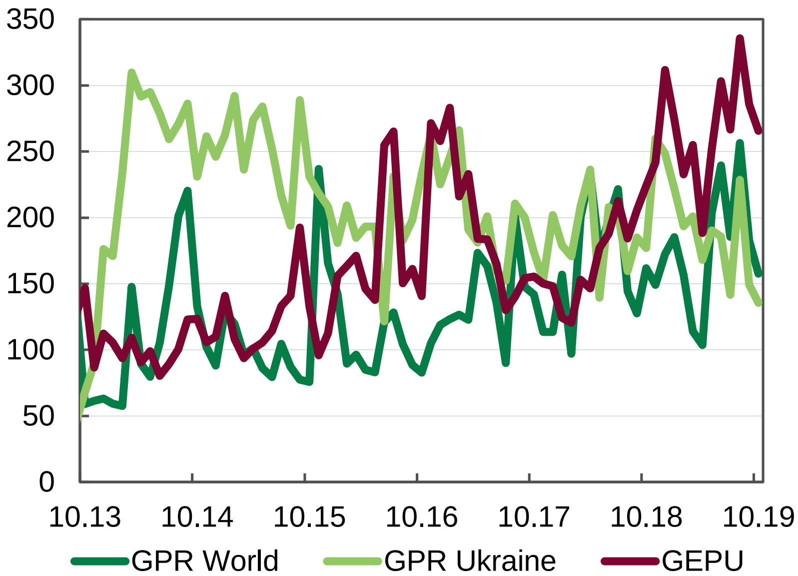
Legal risk (const). Parliament has adopted a number of much-needed bills. However, courts rulings are still mixed. There are risks related to appeals on PrivatBank nationalization.

FX risk (const). Share of bank FX assets and liabilities has been rising, banks lend to business in FX. Open currency positions do not pose material risks, external debt is not rising.

Profitability risk (const). Environment remains favorable for banks, return on equity is historically high, but will be declining in the future.

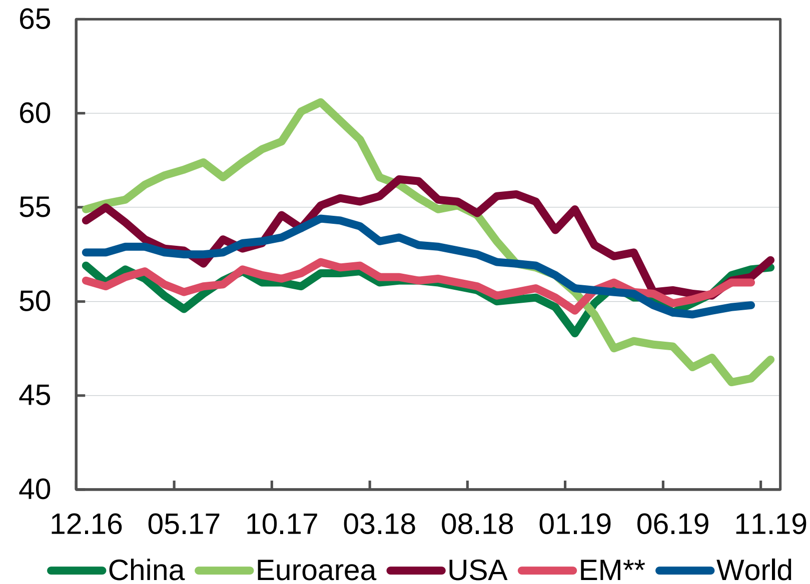
Global economy decelerated, but there are signs of revival

Geopolitical risk (GPR) index and global economic policy uncertainty (GEPU) index



Source: Dario Caldara and Matteo Iacoviello; Davis, Steven J.

PMI Manufacturing*



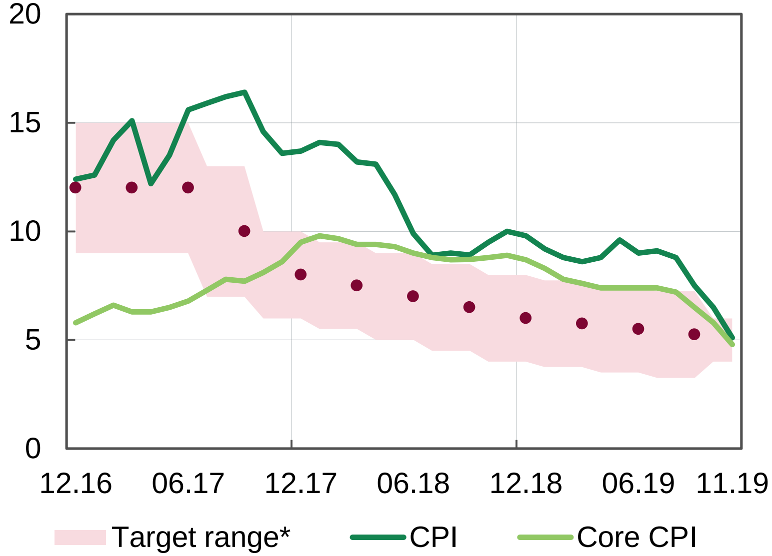
* Readings above 50 indicate an improvement, while anything below 50.0 suggests a decline. ** Emerging markets.

Source: Markit, Refinitiv Datastream.

- Geopolitical and geoeconomic risks remain high, global economy and world trade sharply decelerated.
- However, deceleration risks are fading, expectations for 2020 are better than six months ago. Manufacturing PMI started to improve for a number of regions.
- Recovery in prices of emerging market assets is sluggish.
- Risks of halt of gas transit through Ukrainian territory are high.

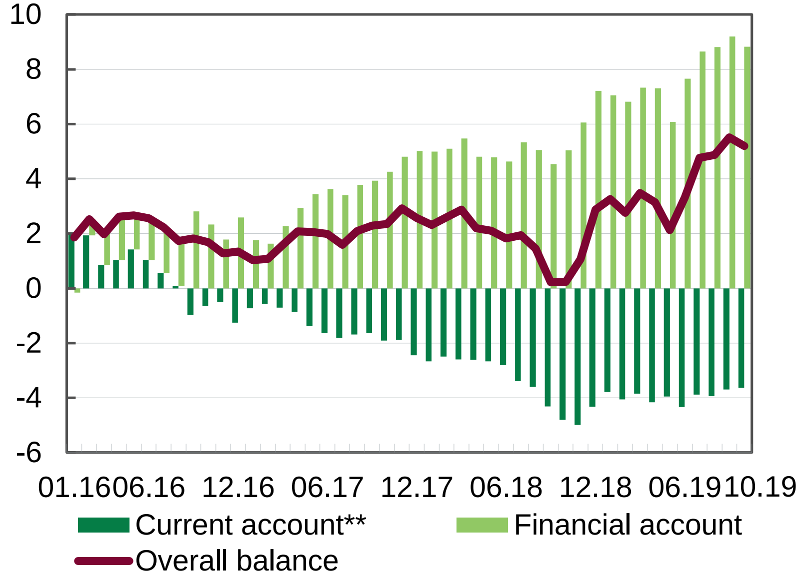
Economic environment promotes financial stability

Consumer price index, % yoy



* Red dots - the inflation target.
Source: SSSU, NBU.

Balance of Payments in 2016-2020, USD billion, TTM*

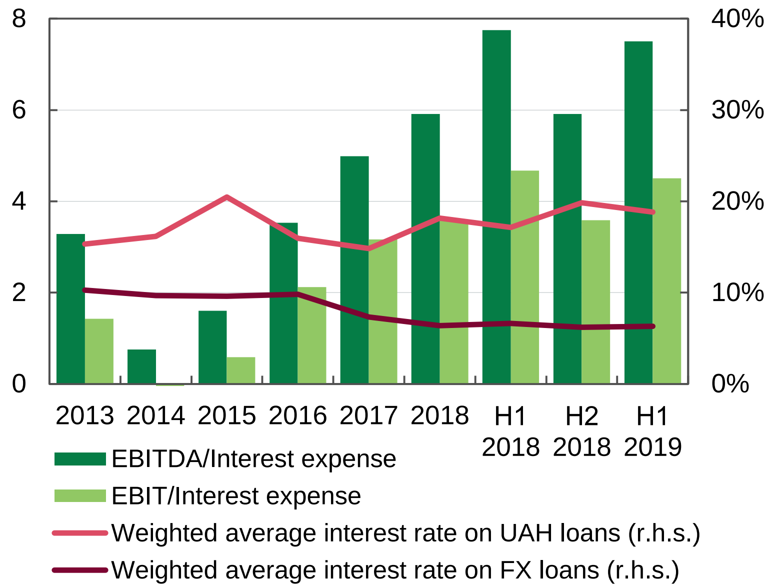


*TTM –Trailing Twelve Months. ** Current account including the capital account.
Source: NBU.

- In October, the NBU upgraded GDP growth forecast for 2019 to 3.5%.
- Deceleration of inflation to target level and its tamed swings should promote recovery of the long-term lending.
- Current account deficit is low and is narrowing in GDP terms. Stronger hryvnia did not cause the deficit widening in the first ten months of 2019.
- Non-resident demand for domestic government bonds is a new fundamental market driver.
- Redemption of domestic government bonds that belong to non-residents is evenly spread over time.

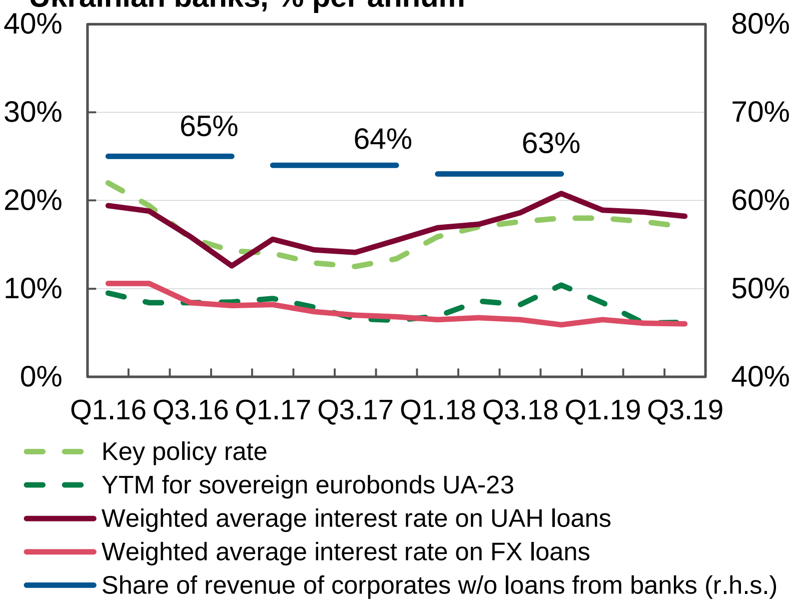
Financial condition of the real sector is acceptable for new borrowings

Interest coverage ratio (ICR) and EBITDA of non-financial companies, interest rates on new loans



Sources: SSSU, NBU estimates.

Change in interest rates on new loans and share of revenue of corporates, which have not borrowed from Ukrainian banks, % per annum

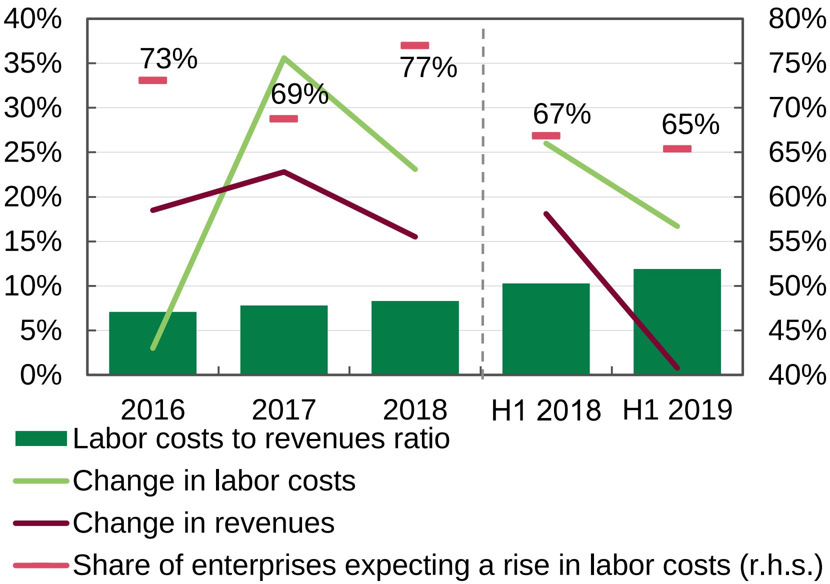


Sources: NBU, Bloomberg, SSSU, NBU estimates.

- Financial indicators for real sector enterprises have stabilized. Although the income growth has slowed down, profitability remains sustainable.
- Preconditions were ensured for resumption of lending: The NBU expects a decrease in interest rates, sector’s debt burden has normalized, creditor rights protection was enhanced.
- It is important to ensure that rising risk appetites does not lead to weaker lending standards.

The major risks are labor costs and falling export prices

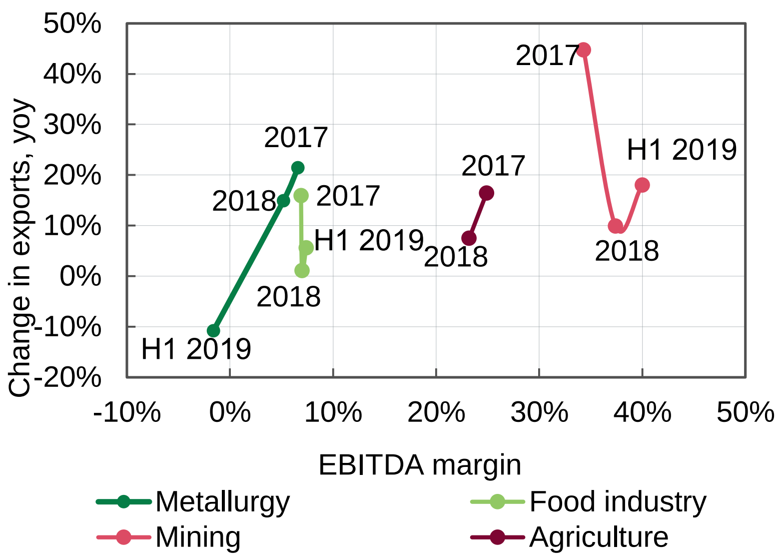
Growth rates in revenues, labor costs of non-financial companies* and enterprises' expectations



* Data for large and medium enterprises.

Source: SSSU, NBU, NBU estimates.

Change in exports in USD terms and EBITDA by sectors

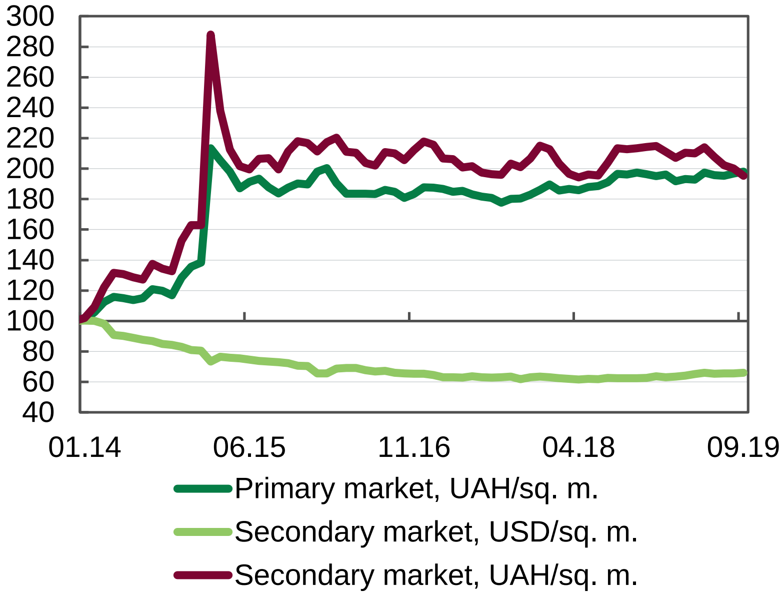


Source: SSSU, NBU estimates.

- Rising labor costs substantially outpace increase in enterprises revenues.
- Stronger hryvnia had a moderate effect on exporters' profits. FX-related costs were falling in line with decreasing incomes.
- Margins for some exporting enterprises squeezed because of falling world prices (metallurgy, certain areas of agriculture, and food industry).

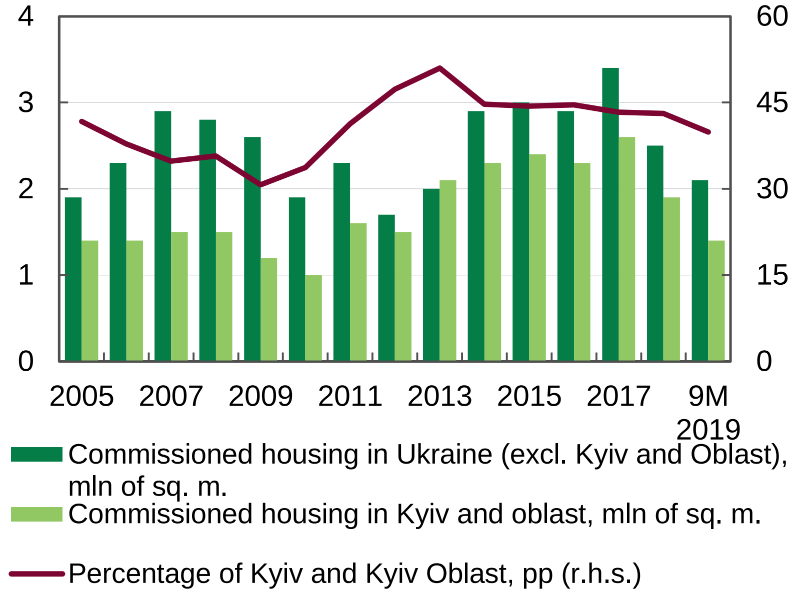
Housing market is on the rise, while prices stay flat

Housing prices in Kyiv, December 2013 = 100



Source: real estate agencies, NBU estimates.

New housing supply at apartment blocks

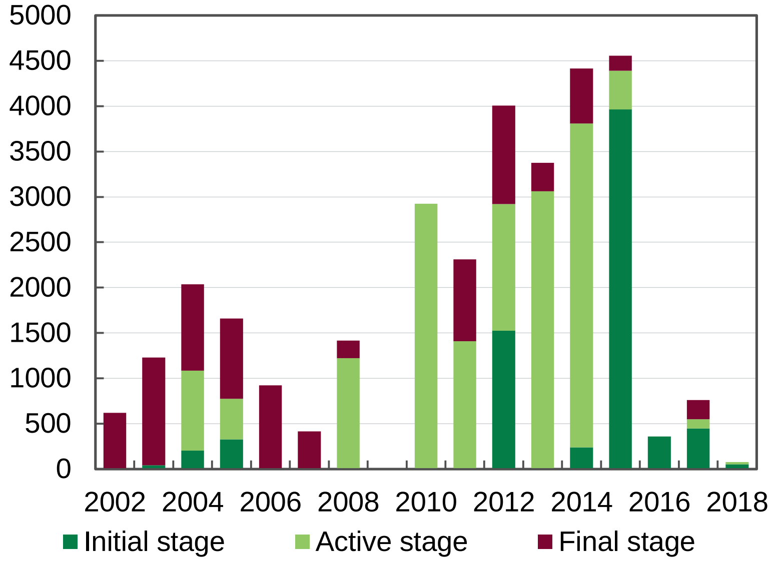


Source: SSCU, Kyiv Main Statistics Office.

- Hryvnia prices for housing remain relatively stable: new housing prices rose just 1% in the last 12 months and 7% since September 2016.
- Thanks to higher households incomes and lower real estate prices, affordability and attractiveness of housing are currently at their decade high (since the start of estimations).
- Despite unnaturally low volume of mortgage lending, construction is surging: in the first nine months of 2019, 36.6% more yoy of housing was commissioned in Ukraine.

Unregulated market is an obstacle for mortgage lending take-up

Number of flats in the long-delayed construction by the year of start and its stage at the moment of halt



Source: DC Evolution, NBU estimates.

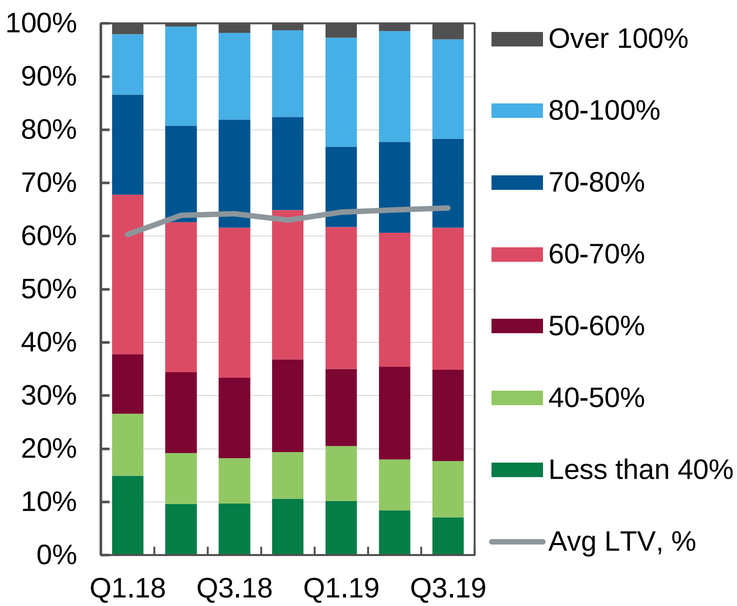
Primary housing market experiences a number of unresolved issues that pose risks both for investors and potential lenders:

- Non-transparent market: absence of information on ultimate beneficiaries of developers and their financing schemes.
- Low level of protection of investor rights and opaque investment schemes.
- No financial liability of developers for violations of contract terms.
- Delayed commissioning of new housing.

As of the late August 2019, there were 66 residential compounds in Kyiv that could be described as long-delayed and unfinished construction sites. The total number of flats in unfinished construction projects exceeds the average annual supply of new flats in Kyiv over the last 5 years by the factor of 1.5.

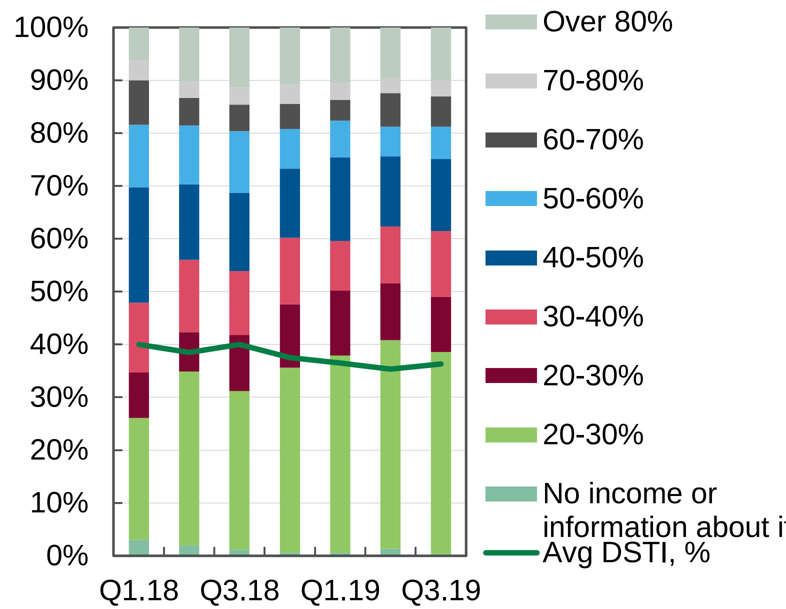
Mortgages terms are conservative

Loan distribution by LTV*



*Weighted for the volume of loans issued.
Source: banks' data.

Loan distribution by DSTI at origination*

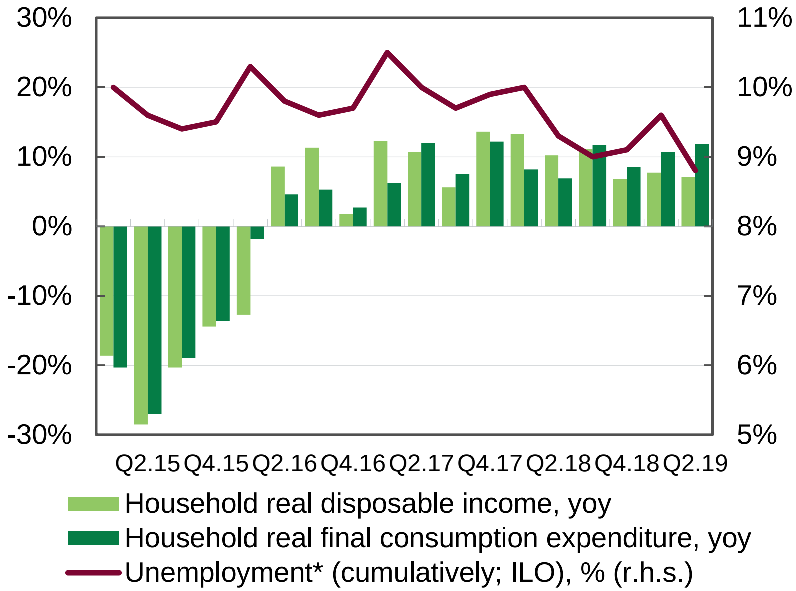


*Weighted for the volume of loans issued.
Source: banks' data.

- Volumes of mortgage lending are still low, but are recovering steadily.
- Banks' requirements to borrowers fully comply with standards: average Loan-to-value (LTV) for new mortgages is currently 65%. Average Debt-service-to-income (DSTI) for new loans is 36%, while around 50% of mortgages are issued with DSTI of 30%.
- It is crucial that banks maintain high lending standards in the future.

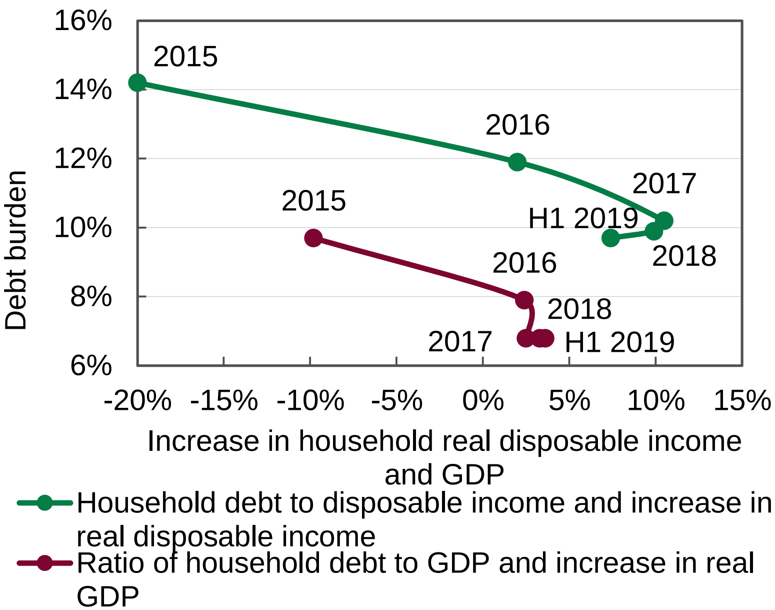
Growth of real household incomes normalizes

Change in household real disposable income, consumer expenditures and the unemployment rate



* Ratio in % to economically active population of working age.
Source: SSSU, NBU estimates.

Debt burden on households

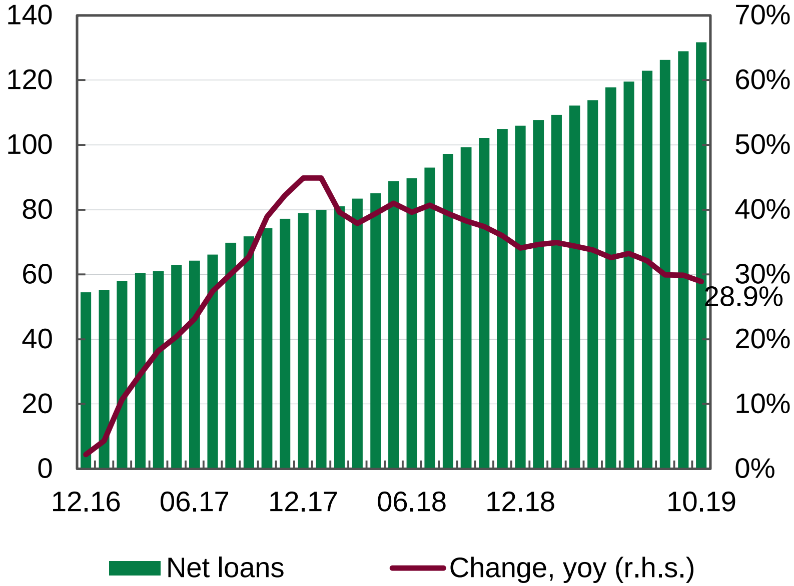


Source: SSSU, NBU estimates.

- In H1 2019, growth of real disposable income slowed down by 4.1 pps to 7.4%.
- Over the last two years, wages in USD terms increased by the factor of 1.5. Ratio of average wages in Poland to those in Ukraine in the last four years decreased from 4.5 to 2.7.
- The impact of consumer lending has substantially increased. However, debt burden level remains at 10%.

Consumer lending grows on at steady pace

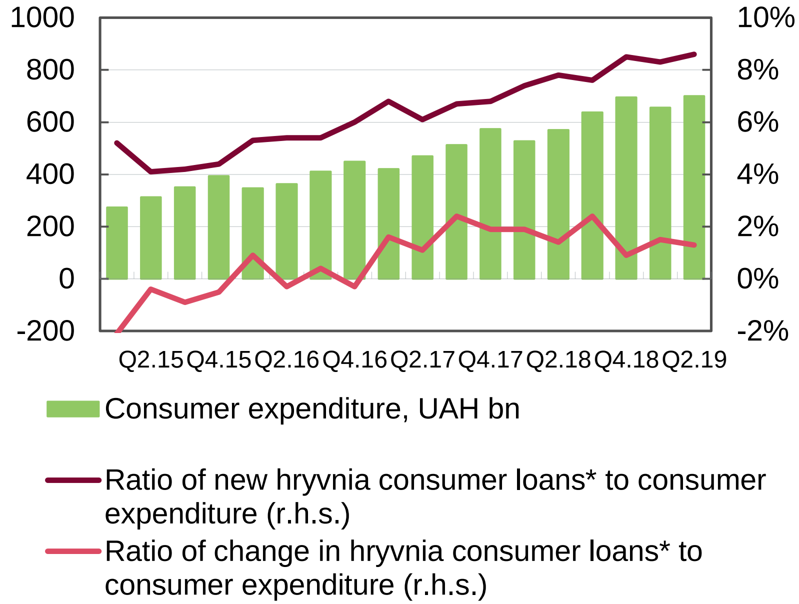
Net retail loans in hryvnia*, UAH billion



* At banks solvent as of 1 November 2019.

Source: NBU.

Impact of consumer lending on consumer expenditure



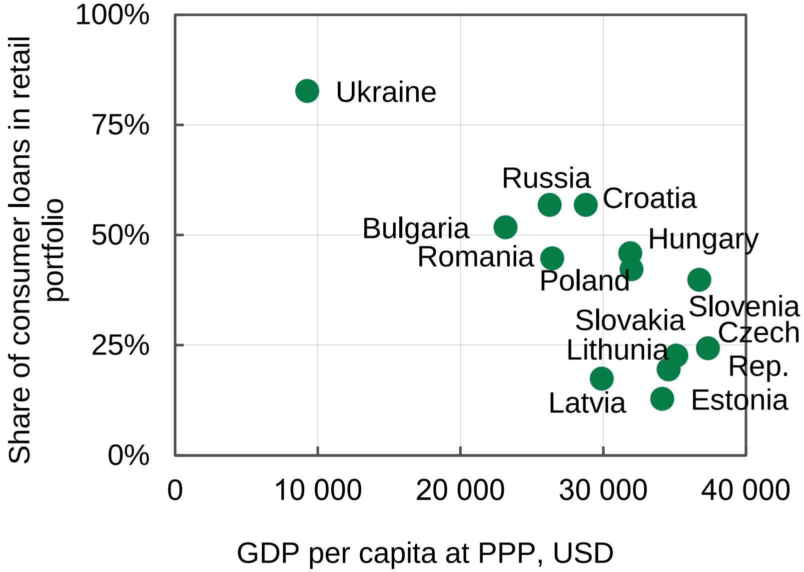
* Gross consumer loans of solvent banks and non-bank financial institutions.

Source: NBU.

- Rates of growth remain high at 28.9% yoy.
- Fast increase in households incomes supports considerable demand for loans.
- Ratio of new loans to household consumption is already at 9% and grows on.

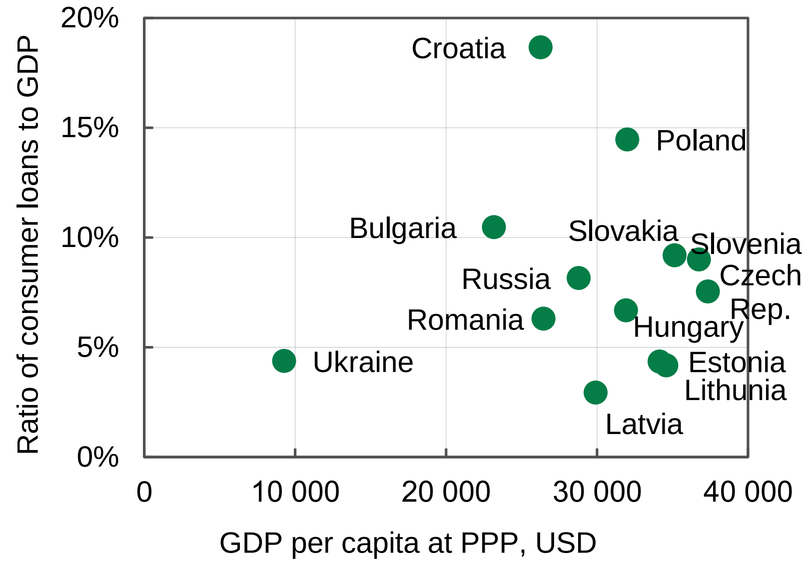
Consumer loans dominate in weaker economies

Ratio of GDP per capita to consumer loans in retail portfolios of banks



Source: IMF, ECB, central banks sites of the countries, NBU.

Ratio of GDP per capita to consumer loans to GDP

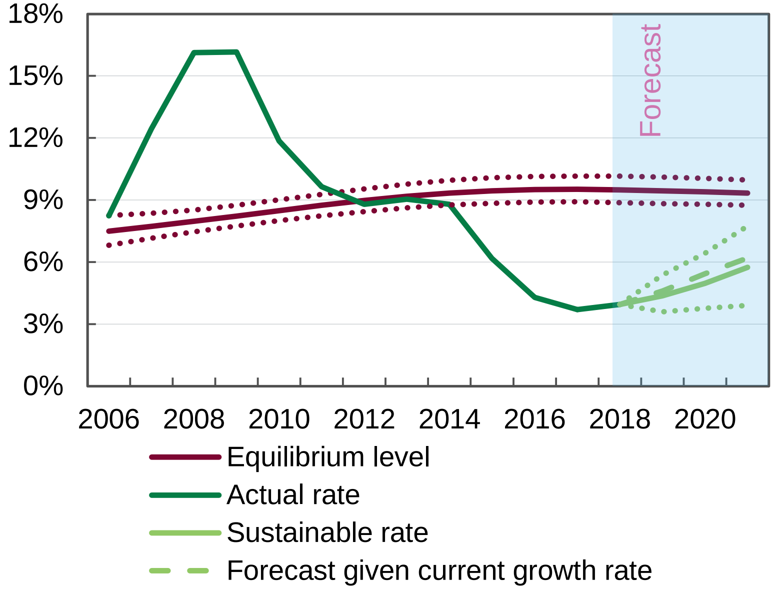


Source: IMF, ECB, central banks sites of the countries, NBU.

- A surge in unsecured consumer lending is specific to developing countries. As economy develops, the share of consumer loans subsides, giving way for mortgages.
- In European countries, amount of unsecured consumer loans mostly does not exceed 10% of GDP.

Consumer lending approaches equilibrium level too fast

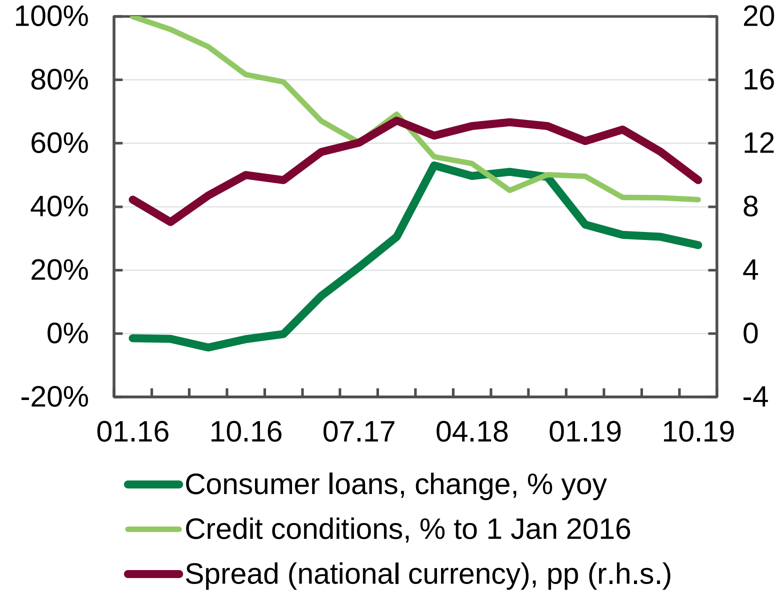
Ratio of consumer loans to GDP and its equilibrium level, %



Dotted line indicates 95% confidence interval.

Source: European Credit Research Institute

Credit conditions and consumer lending growth



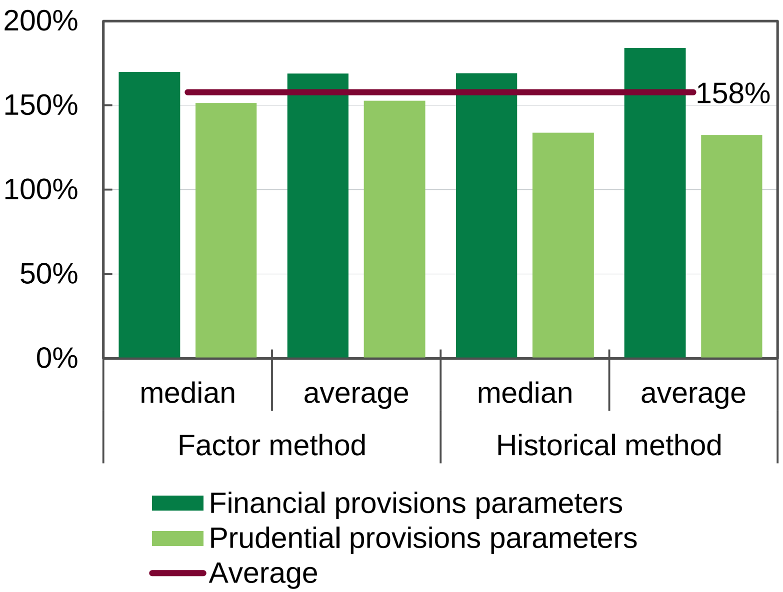
The line denotes total change of response balance to the question "How have standards for loan application approval changed for retail loans over the quarter?" of quarterly Lending Surveys

Source: NBU.

- Equilibrium level of consumer loan penetration relative to GDP is not achieved yet. However, lending growth rates exceed sustainable ones.
- According to lending survey, banks considerably relaxed requirements to borrowers in the aftermath of the crisis.

Unexpected losses should be covered with capital

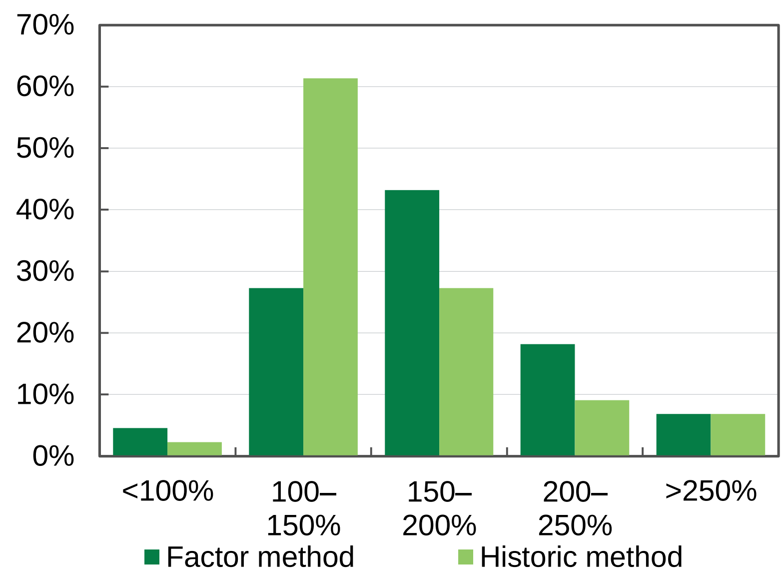
Average estimated risk weights for unsecured consumer loans based on bank data



* Factor method is applied according to the Basel IRB.

Source: information from banks, NBU estimates.

Risk weights distribution of consumer loans

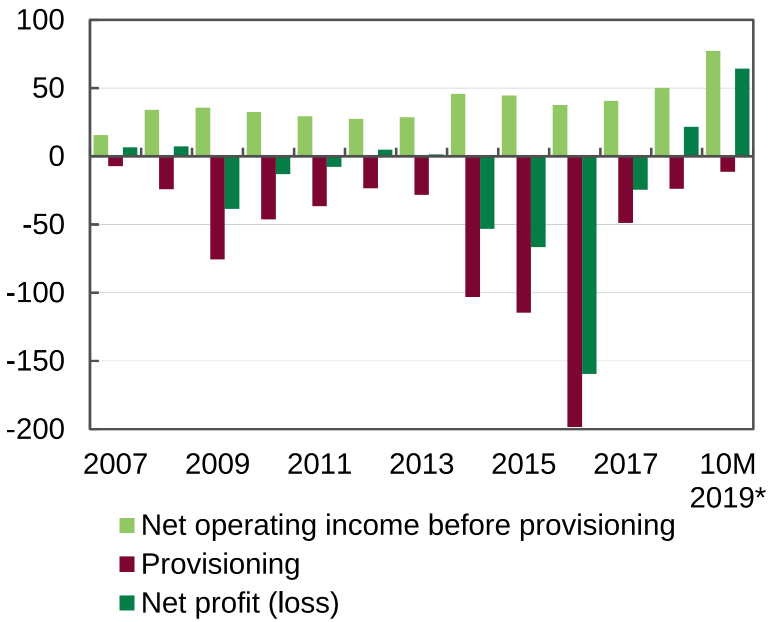


Source: information from banks, NBU estimates.

- According to estimations based on bank data, risk weights must be above 100%.
- Higher risk weights for certain types of loans mean that banks will have to finance larger chunk of these loans with capital, not with deposits.
- In order to mitigate the build-up of systemic risks, the NBU will have to raise risk weights for unsecured consumer loans from the beginning of 2021.

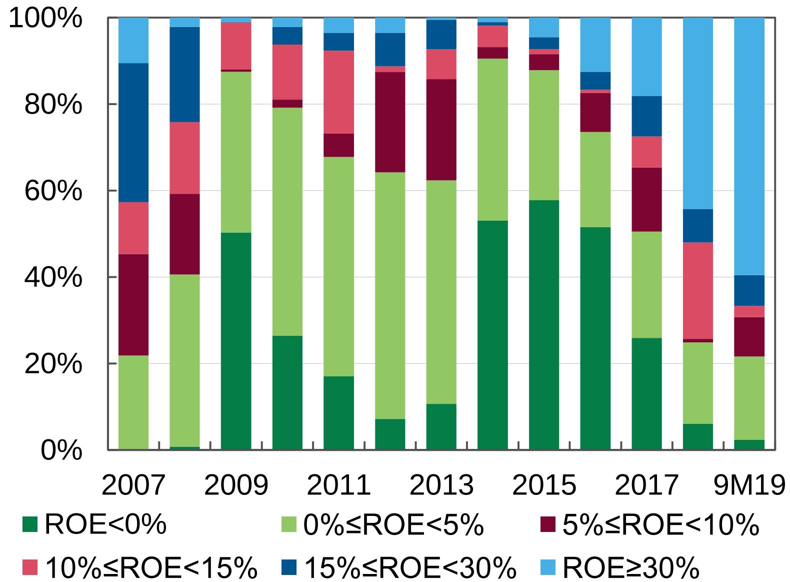
Banking sector generates high incomes and returns

Banking sector profit (loss), UAH billion



*Annualized data.
Source: NBU.

Distribution of net assets of the banking sector by banks' return on capital (ROE)

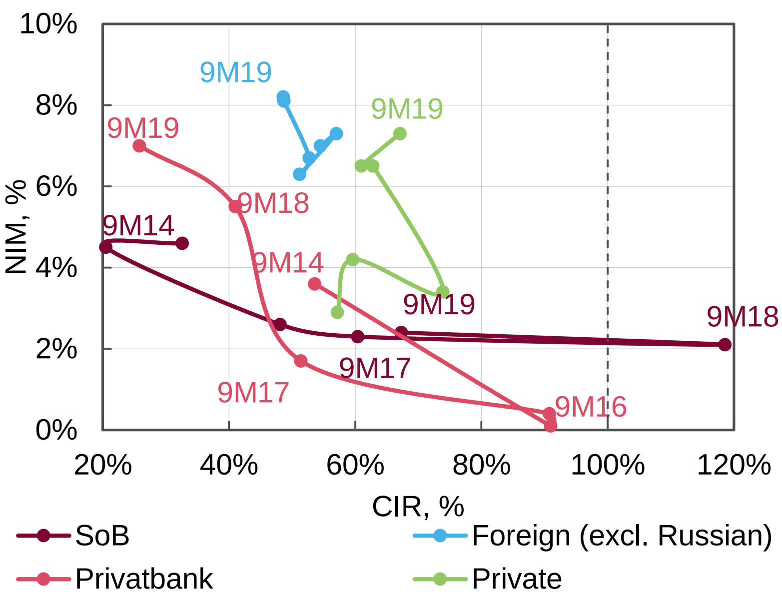


Source: NBU.

- Net profit of the banking sector in the first ten months of 2019 reached UAH 52 billion, 3.5 times higher yoy. The key drivers behind it were high operating efficiency and low provisioning.
- In the first nine months of 2019, 15 banks accounting for 59.6% of the sector assets performed with ROE above 30%.

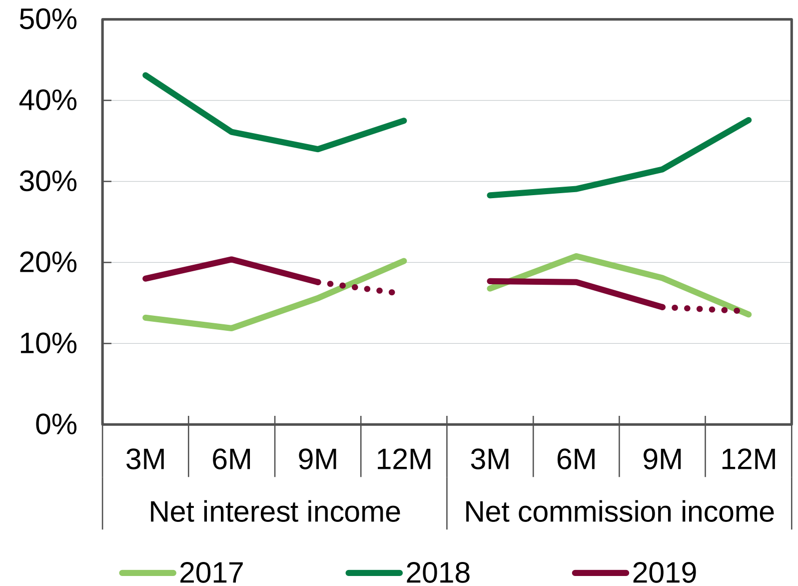
Interest and commission incomes are high, but growth decelerates

Cost-to-income ratio (CIR) and net interest margin (NIM) by groups of banks



Source: NBU.

Change in net interest and net commission income, yoy

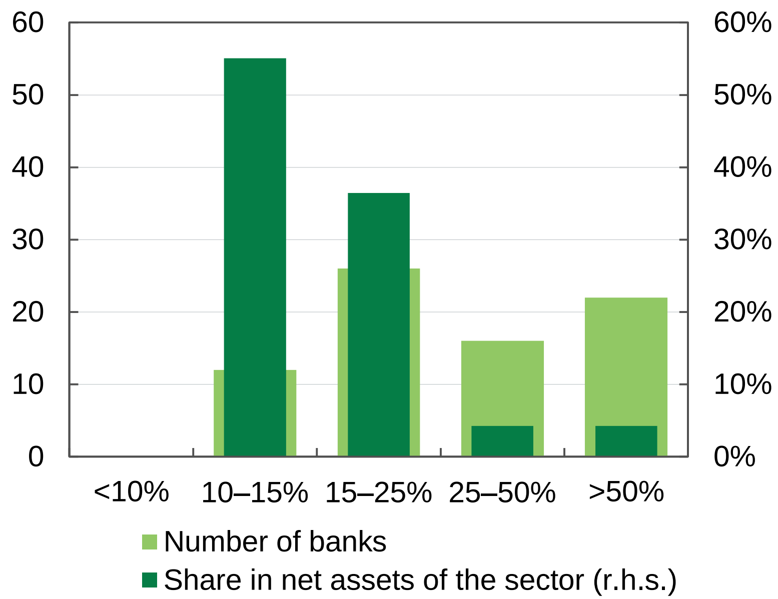


Source: NBU.

- Operational efficiency of the sector is high: CIR = 47.4% vs 58.0% in the first nine months of the last year, NIM = 5.8%.
- Rates of growth of net interest income (+17.6% yoy) and net fee and commission income (+14.5% yoy) in the first nine months of 2019 were much lower than in 9M 2018.
- Thanks to lower inflation, interest rates will go down. Highly profitable retail lending will support high NIM.

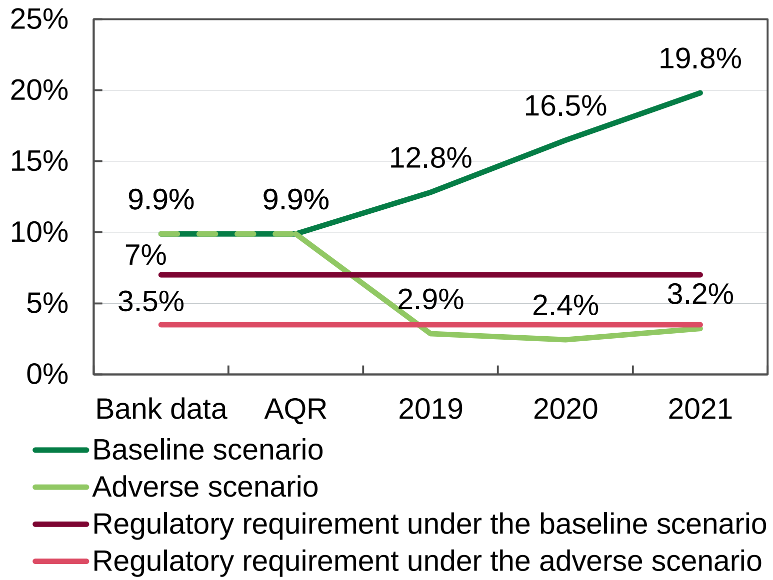
Not all banks have sufficient capital to withstand shocks

Distribution of capital adequacy as of 1 October 2019



Source: NBU.

Weighted average assessments of core capital adequacy ratio of banks based on stress tests*

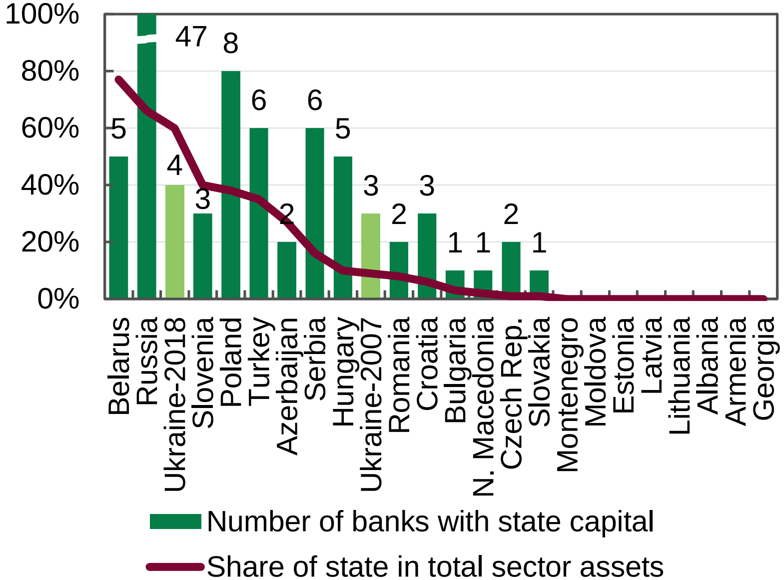


* Weighted for total risk-weighted assets for a given year.
Source: NBU.

- The banking sector is well capitalized under current conditions.
- However, gradual increase of minimal capital requirement solicits capital planning.
- Should adverse scenarios materialize, credit, interest rate, and FX risks can downgrade capital adequacy at 18 banks.

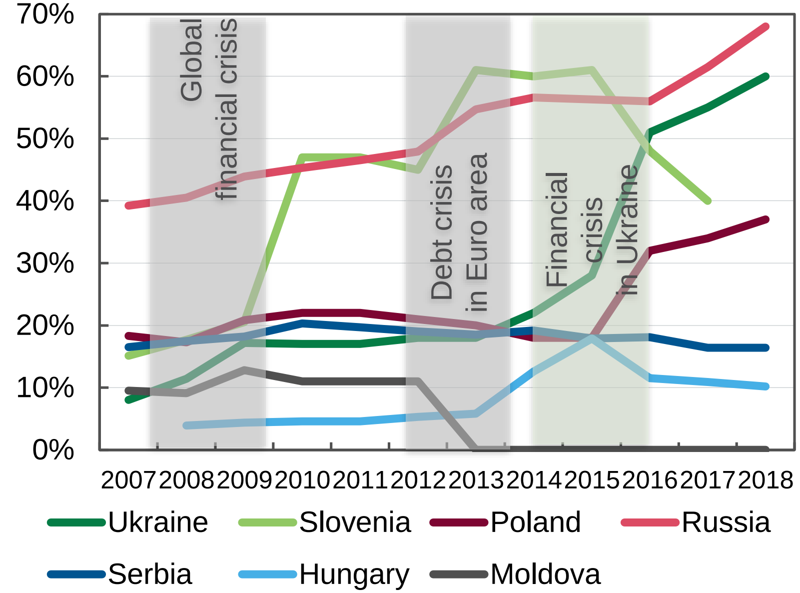
State-owned banks in Europe are mostly niche, crisis legacy or absent

Market share and number of banks with state capital in banking sectors of Central and Eastern Europe



Note: 2017 data; data for Russia includes banks with state's share in capital of over 15%; data for Ukraine excludes Settlement Center.
Source: NBU, EBF, Raiffeizen Bank International, reports of banks with state capital.

Share of state-owned banks in total assets of domestic banking sectors*

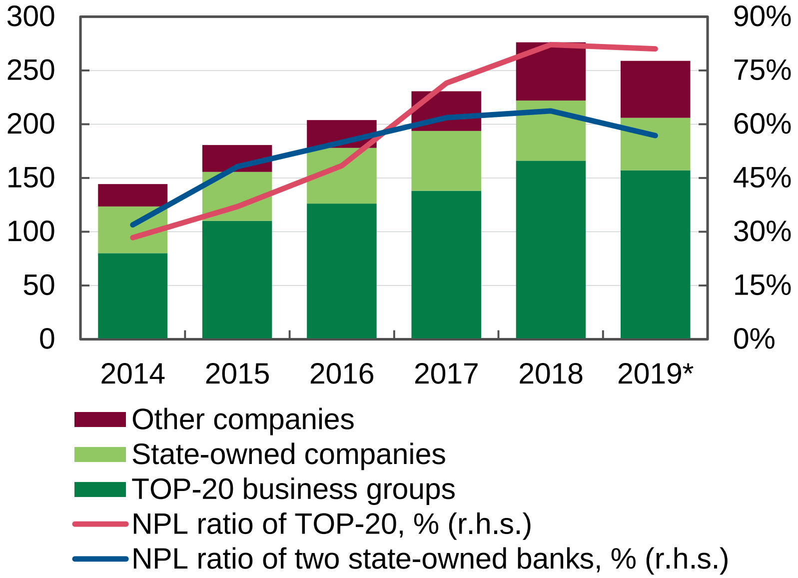


* State-owned banks according to national central banks' definitions.
Source: Raiffeizen Bank International.

- In Europe, state-owned banks rarely play a key role in the sector.
- Fundamental features of state-owned banks in countries, where their presence is material, are operational efficiency, profitability and independence.
- Share of state-owned banks often rise because of crises, when government have to support failing banks.

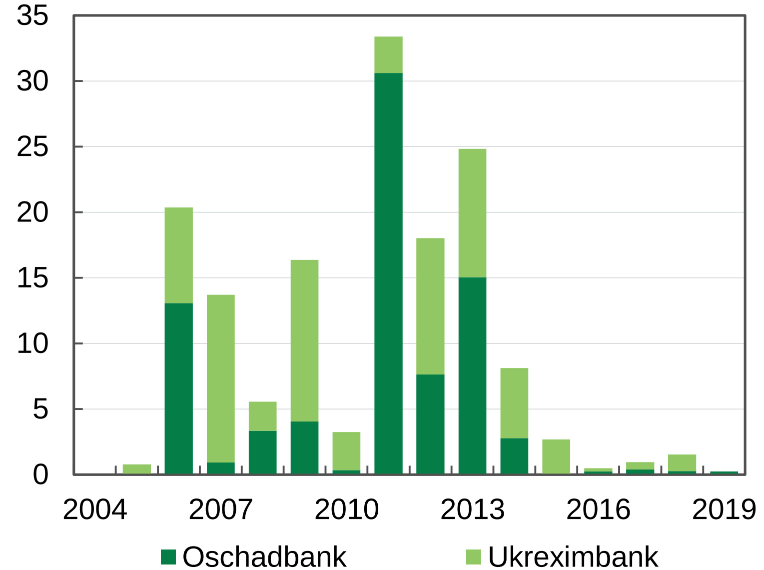
Loan portfolios of state-owned banks reflect the history of Ukrainian oligarchy

Structure of corporate loan portfolio of Oschadbank and Ukreximbank, UAH billion



Source: NBU.

Years of origination of loans that became NPLs, UAH billion

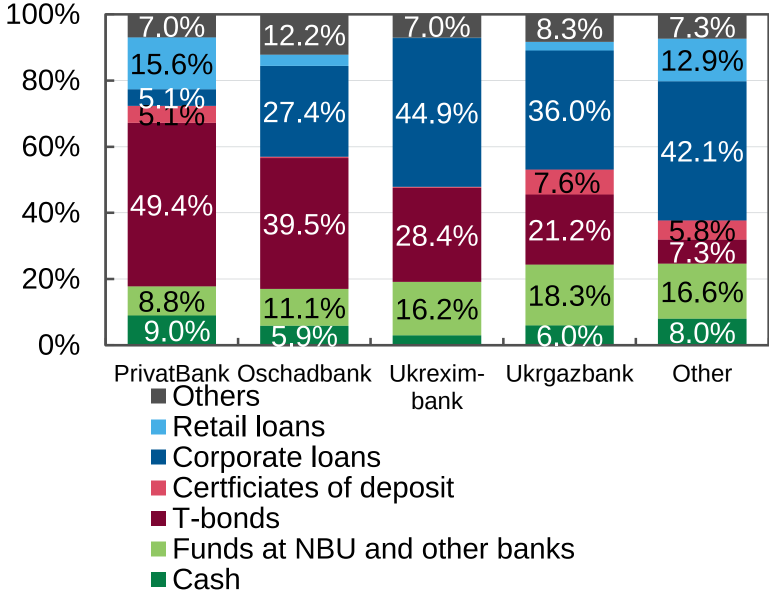


Source: NBU.

- Loans to 20 well-known private business groups make 60% of state-owned banks portfolio. These loans are of bad quality a make the major part of the NPL portfolio (81% of all NPLs at Oschadbank and Ukreximbank).
- Oschadbank and Ukreximbank are still failing to resolve their NPLs. Corporate NPL ratio went down to 56.8%, but still stands much higher than the readings for private and foreign (excluding Russian) banks (at 13.4%).
- New loans are mostly of acceptable quality, but credit policy has to be prudent. The banks must adopt efficient strategies and comply with them.

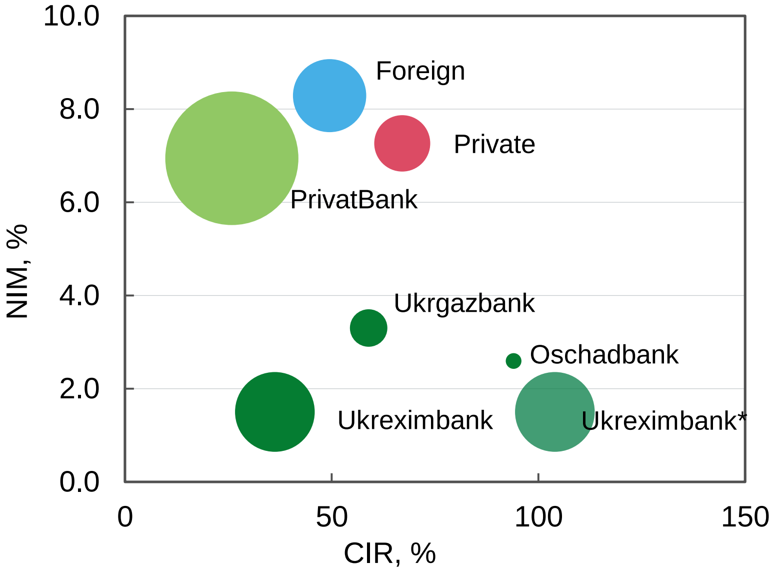
Some state-owned banks are inefficient and cannot generate capital

Structure of state-owned banks' assets



Source: NBU.

Key indicators of banks' financial results



* CIR does not include incomes from FX revaluations.
Size of a circle reflects ROE rate.
All indicators by groups are weighted for assets.

- Low-margin securities and corporate loans (many of them non-performing) dominate portfolios of Oschadbank and Ukreximbank.
- The banks cannot generate capital in a sustainable manner because of low interest margin and high administrative costs.
- According to the stress test results, the banks need UAH 23.3 billion in capital under the baseline scenario and UAH 45.8 billion under the adverse scenario.

Recommendations to authorities and intentions of the NBU

Recommendations for public authorities

- Adopt laws facilitating efficient financial sector regulation
- Ensure full-scale implementation of new IMF program
- Speed up implementation of strategy for state-owned banks reforms
- Scale down FX borrowing on domestic market
- Enhance transparency of primary real estate market and investor rights protection.

NBU plans and intentions

- Introduce new regulation of non-bank financial sector
- Finalize development of requirements on introduction of new capital structure
- Introduce new liquidity requirement NSFR
- Set requirements for capital to cover operational risk
- Adopt a new regulation model for payments market.

Recommendations to banks

- Implement recommendations of previous Reports:
  - Speed up the NPLs resolution
  - Be conservative in assessment of credit risk under consumer loans
  - Reduce dollarization of loan balance sheets
  - Raise and retain more sustainable long-term funds
  - Comply with re-capitalization/restructuring programs based on stress test results
  - Maintain lending standards and control concentration rates for corporate borrowers.
- Finalize establishment of risk management systems
- Introduce work-out systems
- Approve balanced dividend policy
- Develop and submit to the NBU recovery plans.