NATIONAL BANK OF UKRAINE

Financial Stability Report # 3

20 June 2017

Key findings

- Risks to financial stability have subsided (except legal risks), although progress has been uneven in different areas.
- The financial standing of households weakened during the crisis. However, household leverage remains quite low and consumer lending is on the verge of a boom.
- Banks will increase mortgage lending slowly.
- Companies in the real sector have gradually re-launched investment projects, which will boost demand for loans. This can facilitate the restart of corporate lending, but progress remains limited at the moment.
- The banking loan portfolio is concentrated: the top-20 Ukrainian business groups account for roughly half of all corporate loans.
- The ratio of retail and corporate deposits in the liabilities of Ukrainian banks is already among the region's highest. Deposits are mainly short-maturity facilities, which makes possible future liquidity risks more acute.
- The interest rate policy of banks provides depositors almost no incentive to deposit for longer terms. The interest rate spread on deposits with different maturities is insignificant.
- In April, the National Bank of Ukraine (NBU) for the first time published data on non-performing loans (NPLs) consistent with international standards. NPLs account for 57% of all loans, and state-owned banks lead in terms of NPL volume.
- The banking sector has been generating profits since the start of 2017, in-line with the NBU's expectations. Interest income at state-owned banks mainly comes from coupon payments on government bonds rather than from client operations.

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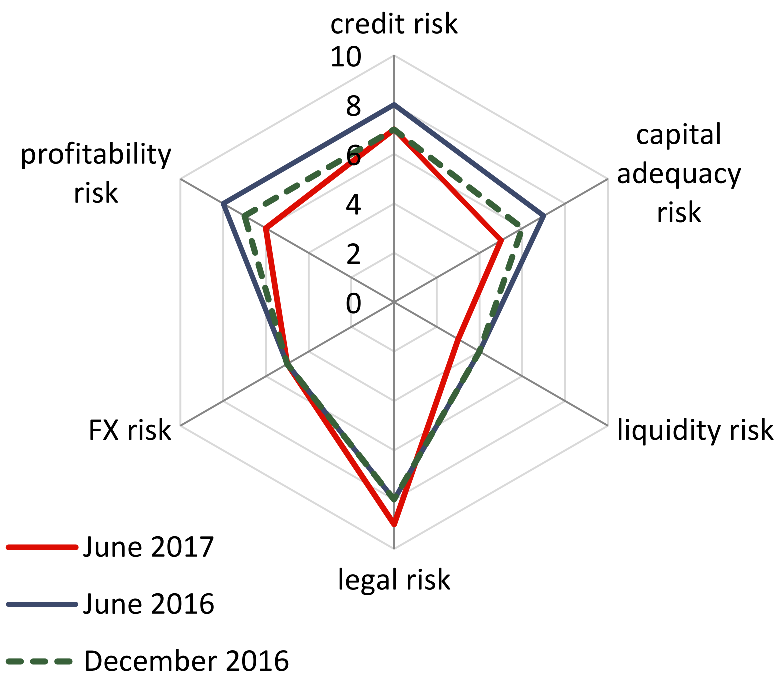
The decline in banking risks has been uneven

Map of banking sector risks



Credit risk ≈. The recovery of clients' solvency reduces risks for new loans. The restructuring of the NPL stock is slow.

Capital adequacy risk ↓ due to the PrivatBank nationalization and the recapitalization of state-owned banks. Private banks will require minor amounts of capital.

Liquidity risk ↓ due to the return of deposits to banks. High liquidity promotes lower interest rates. The distribution of liquidity is more even than six months ago.

Legal risk↑ as a result of controversial court rulings on the restitution of insolvent banks. Most laws that are essential for a lending recovery are still awaiting consideration by parliament.

FX risk ≈ as most negative effects from the hryvnia depreciation have materialized. However, the high dollarization rate makes banks vulnerable to external shocks.

Profitability risk ↓ due to a recovery in banks' operating incomes and a substantial reduction of provisioning. Performance risks remain significant for state-owned banks.

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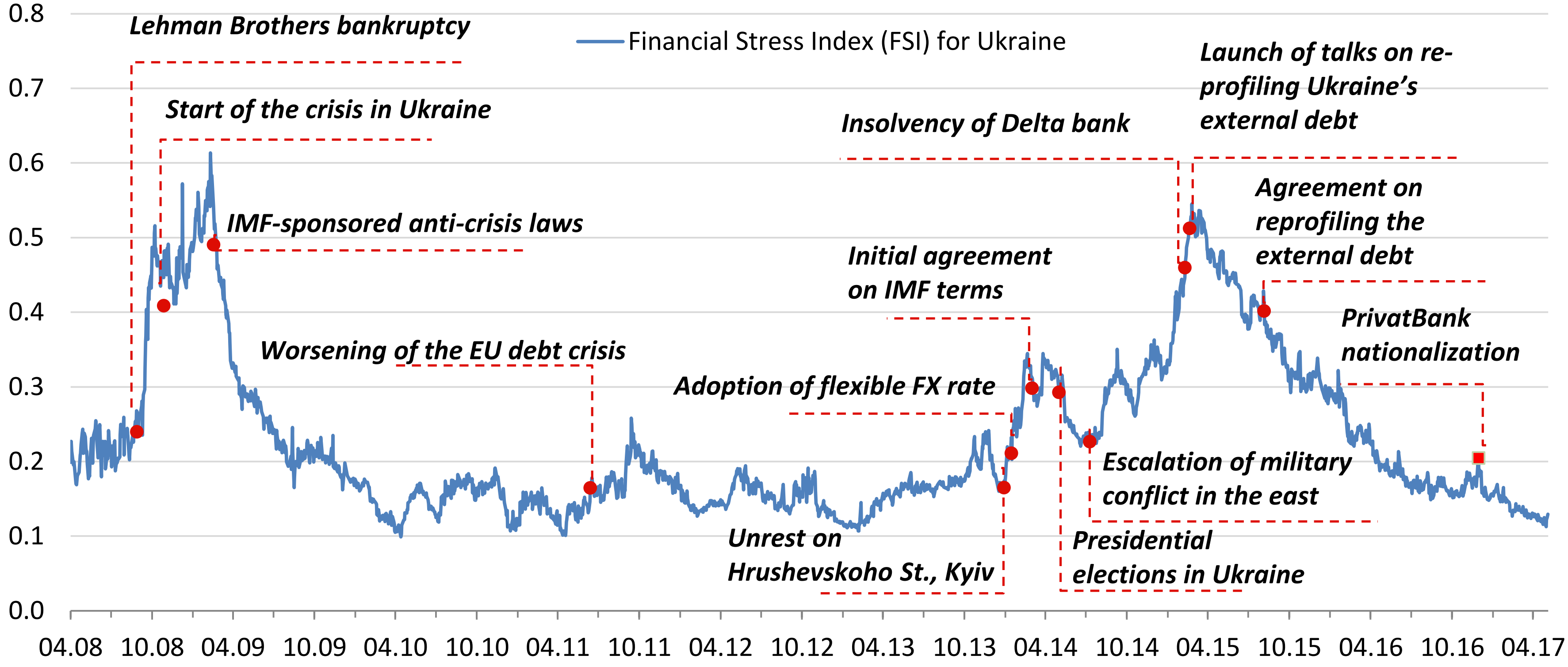
The Financial Stress Index has returned to pre-crisis levels



Source: NBU

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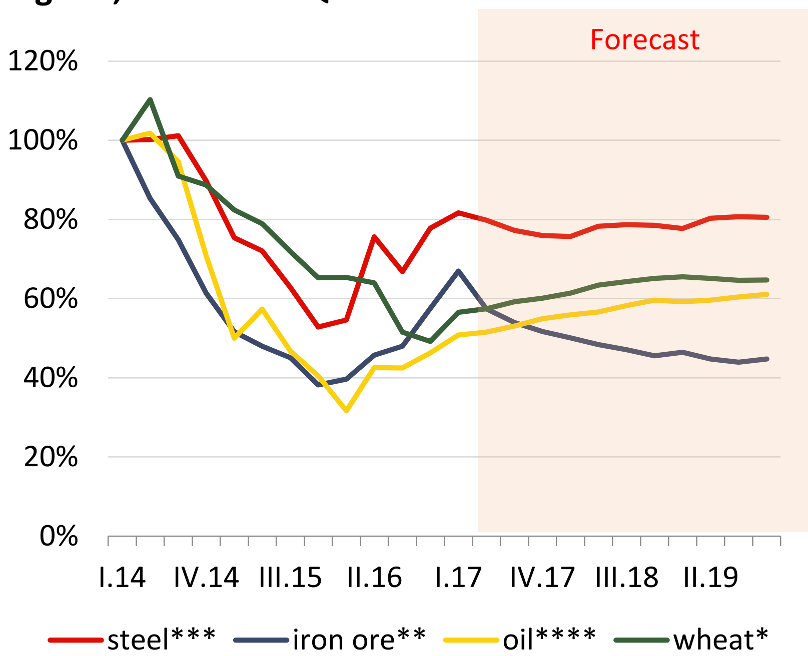
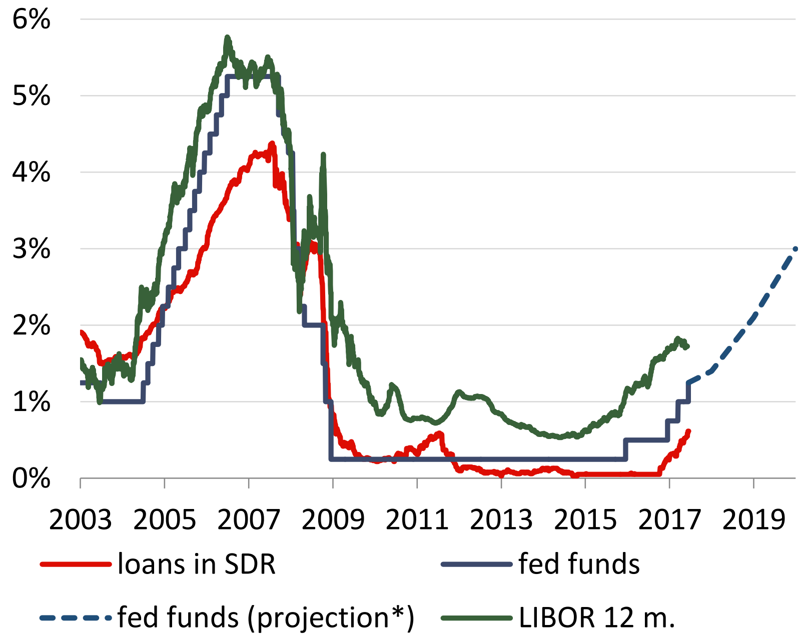
External risks have subsided for Ukraine

Global prices for crude oil, ferrous metals, and grain, indexed to Q1 2014 = 100%



** Quarter average ** Fine ore, China *** Steel billet FOB Ukraine **** Brent* crude
Source: NBU

USD interest rates and projected rates for the US Fed



**Average for the projection period*
Source: US Federal Reserve System, St. Louis Federal Reserve Bank

- External risks have subsided on the back of the global economy's dynamic recovery and the decreased political uncertainty in advanced countries.
- The price changes on commodity markets are generally in-line with the NBU's expectations.
- Key upside events of the last six months: progress in the EU-Ukraine Association Agreement, adoption of EU visa-free travel, Naftogaz of Ukraine's win in the first round of arbitration with Russia's Gazprom.
- The acceleration of global economic growth heralds higher interest rates.

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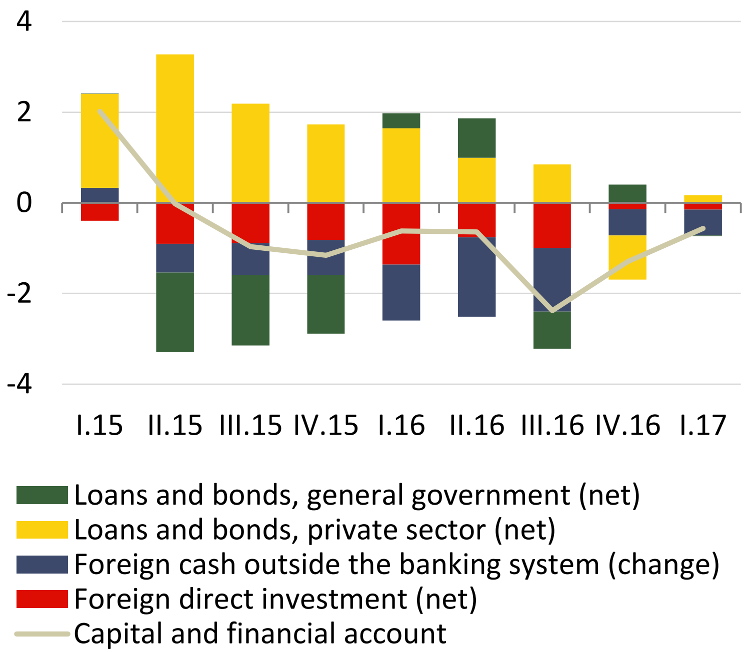
Macroeconomic and fiscal risks are under control

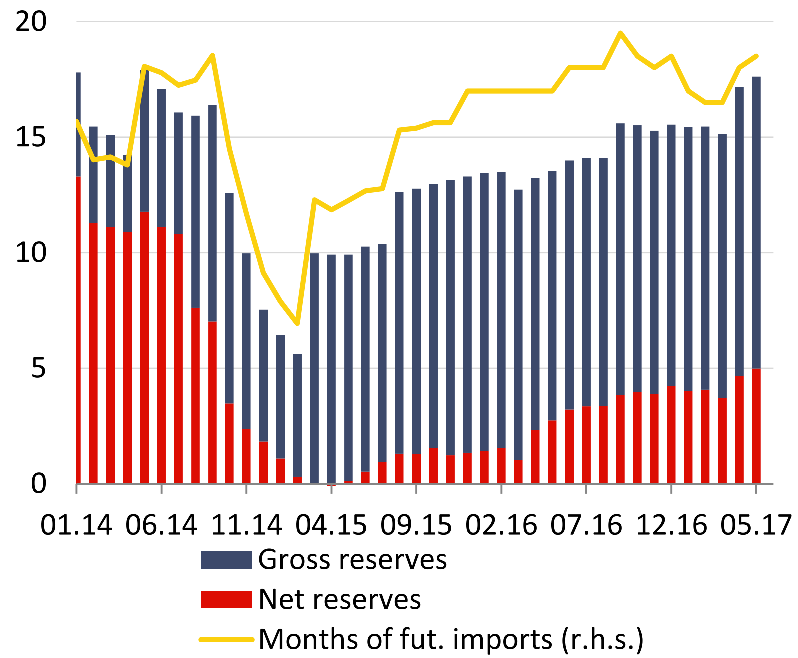
Capital and Financial Account, USD bn*



** Negative numbers reflect inflows of capital*

Source: NBU

Gross and net international reserves, USD bn



- The suspension of trade with the territories in Eastern Ukraine not controlled by the government has had a negative impact on the development of certain sectors and corporate financial results. However, the impact is not critical.
- Renewing inflows of external loans and FDI, as a means of financing the current account deficit of the balance of payments, is crucial for financial stability.
- Maintaining momentum in the implementation of the IMF program is critical. Any delays could pose material risks to financial stability starting in 2019 when substantial payments on public external debt start.

Household incomes recover and the debt burden remains moderate

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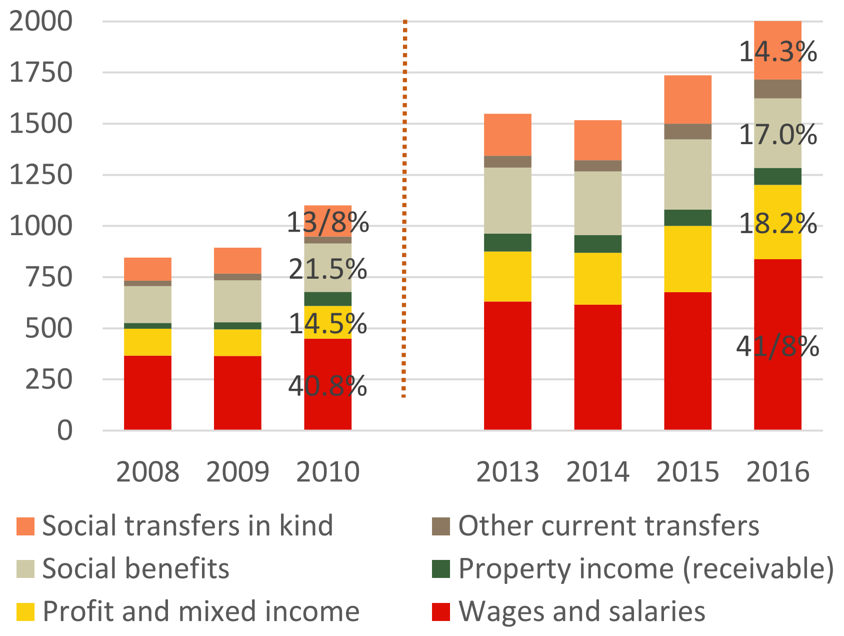
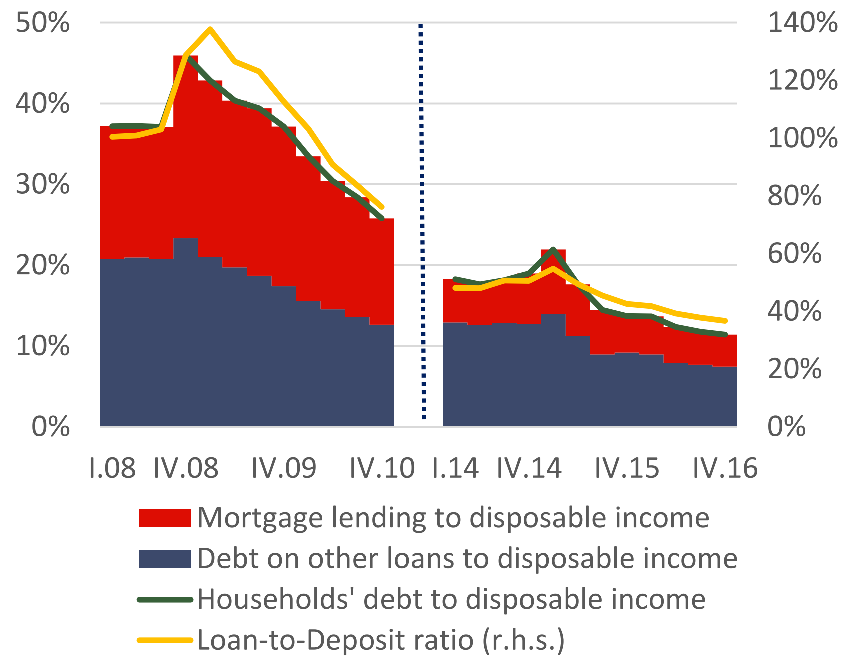
Nominal household incomes, UAH bn



Debt burden for households



Source: SSSU, NBU

- In 2016, wages as a share of GDP was significantly lower than prior to the crisis: 36.8% vs. 50.0% in 2013.
- In 2016, household real disposable incomes increased for the first time in three years: +0.3% yoy (compared to +17.1% in post-crisis 2010).
- Debt burden indicators for households remain low, and consumer lending has large potential. Increased wages facilitate repayments on past loans: in 2016, the debt-to-disposable income ratio for households declined from 14% to 11%.

Lending to business groups is a source of risk for the banking system

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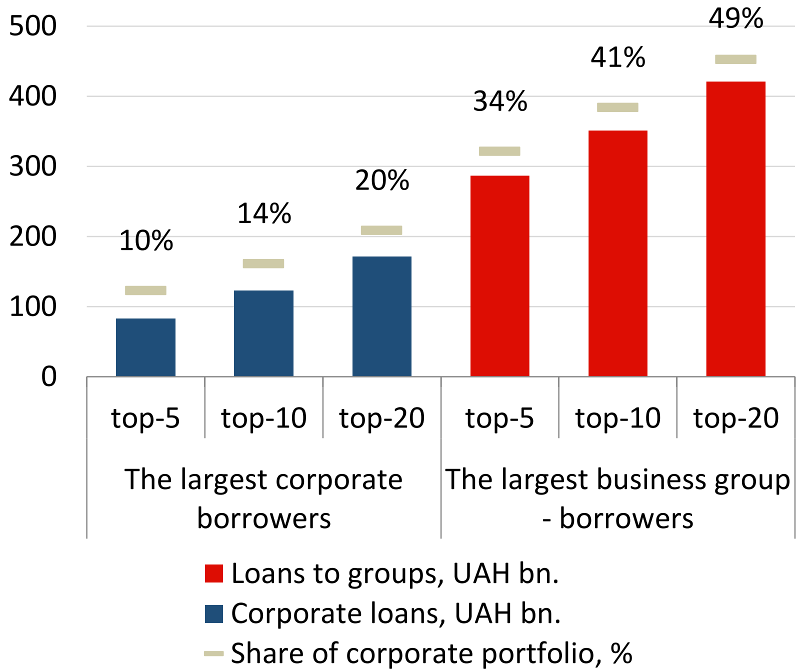
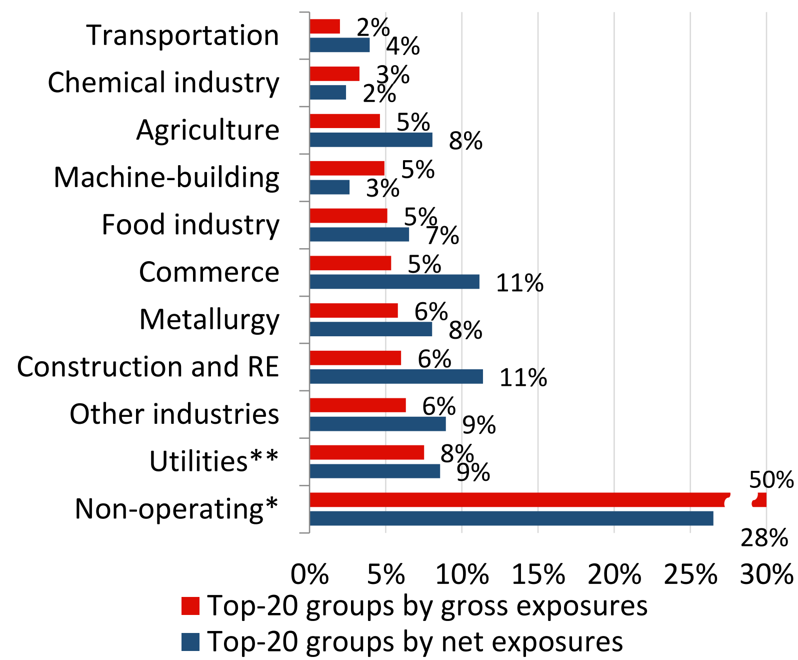
Gross loans to the largest borrowers and business groups in the banking system, 1 April 2017



Source: NBU

Breakdown of borrowers from the top-20 business groups by sector



* Not operationally active companies, ** Electricity and gas supply

Source: NBU

- The largest private exposures in Ukraine are to business groups with complex and opaque structures that have common beneficiaries and assets across a number of industries. Links within the group are unstable: groups frequently establish new entities and transfer debt and cash flows between companies.
- Exposures in the banking system are highly concentrated: the top-20 business groups account for 49% of gross and 32% of net corporate loans.
- Debt is accumulated in non-operating companies, which account for 49% of the bank loans of the top-20 business groups.

The exposure concentration risks materialized during the crisis

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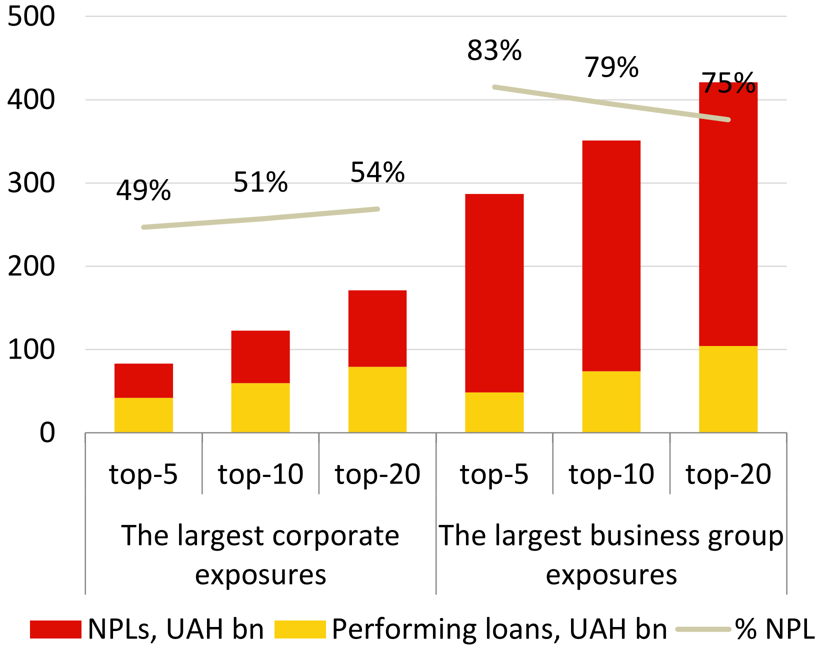
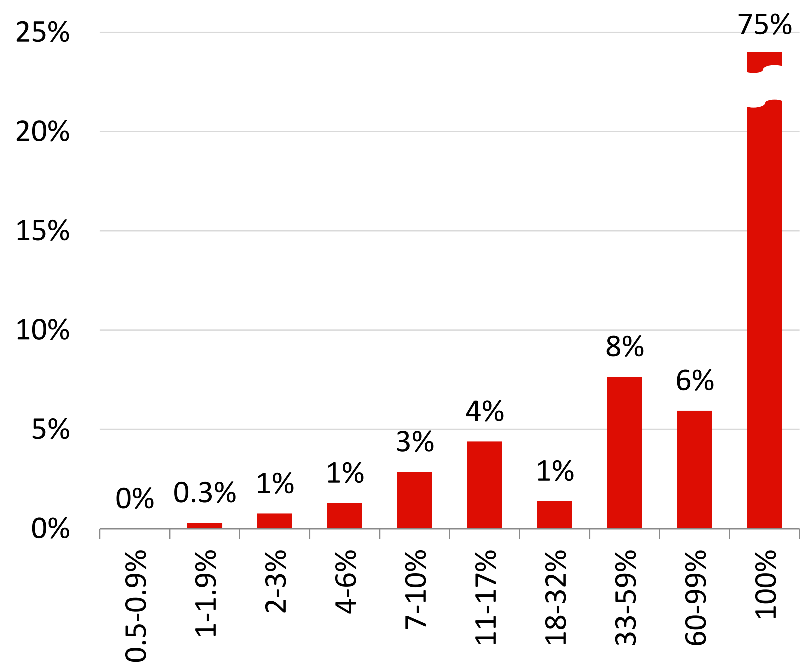
NPLs as a share of total exposures at the largest borrowers and business groups, 1 April 2017



Source: NBU

Distribution of the probability of default for companies belonging to the top-20 largest business groups



- Financial difficulties in one line of business often lead to a suspension of debt servicing across an entire business group.
- The weak payment discipline is specific to large business groups: the top-20 business groups have a 75% NPL rate, far higher than the system average.
- The problem of defaults at business groups and at non-operating companies is nearly resolved, and losses are reflected in banks’ reporting. Going forward, the NBU will be vigilant in monitoring high concentration risks in the banking sector.

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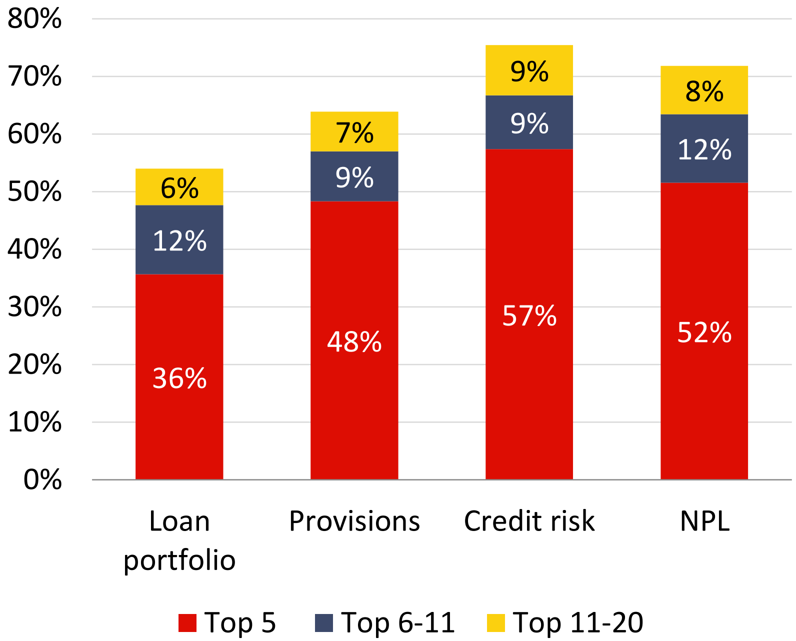
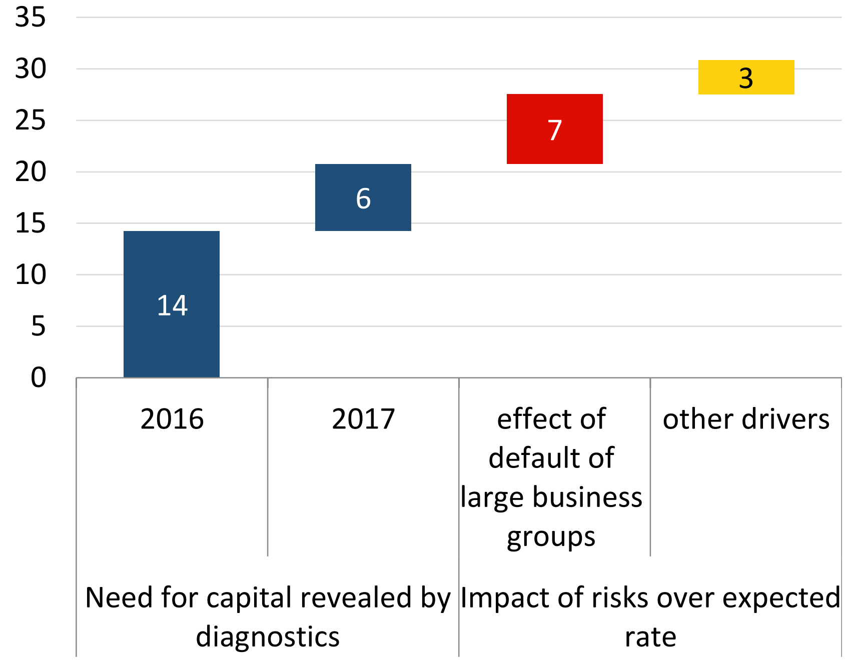
Bankruptcies at business groups are the major driver of state-owned banks' need for additional capital

Concentration of exposures at two recapitalized state-owned banks, 1 April 2017



Source: NBU

Expected and actual capital needs at two recapitalized state-owned banks, UAH bn



- The problem of high exposure concentration is especially acute for the two oldest state-owned banks. The top-10 private exposures account for 56% of the loan portfolio at one bank and 38% at the other. The quality of these exposures is much lower than the quality of the entire corporate loan portfolio.
- In 2017, the need for additional capital emerged because of defaults at large business groups. The stress test scenario assumed these groups would remain solvent. However, in 2015-16 they stopped servicing loans at state-owned banks.
- The high concentration of exposures to these groups drove an increase in credit risk and the need for additional capital. The depreciation of collateral was another driver of the need for capital.

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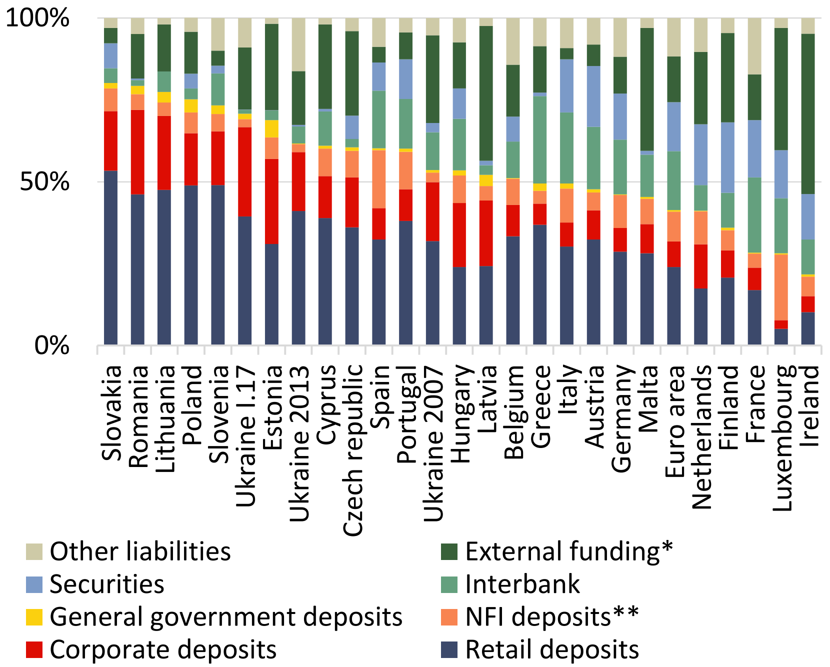
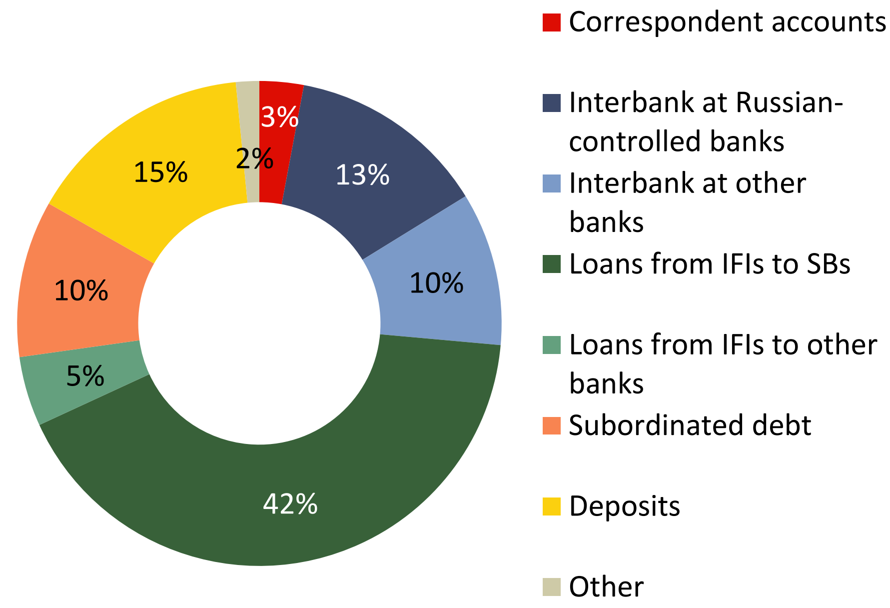
Banks are focused entirely on domestic funding

Structure of bank liabilities as of 1 April 2017



**Including deposits from non-residents **Non-bank financial institutions*
Source: ECB, NBU

Components of external funding as of 1 May 2017

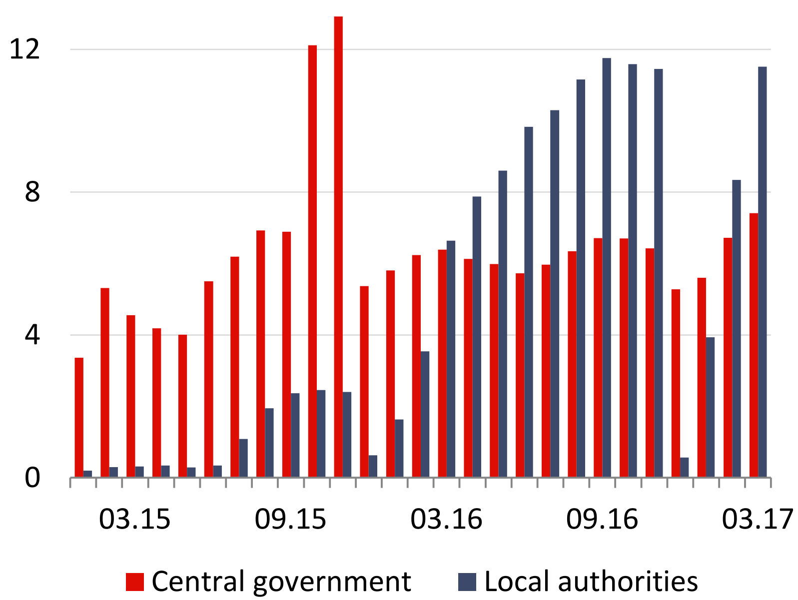


Source: NBU

- Domestic funding sources (retail and corporate deposits) are growing their share of bank liabilities. This reduces the dependence of the banking sector on external markets.
- The share of deposits in liabilities is among the highest in Europe.
- The structure of liabilities' maturities is deteriorating: long-term external loans are being replaced with short-term deposits.
- Banks should work on extending deposit maturities.

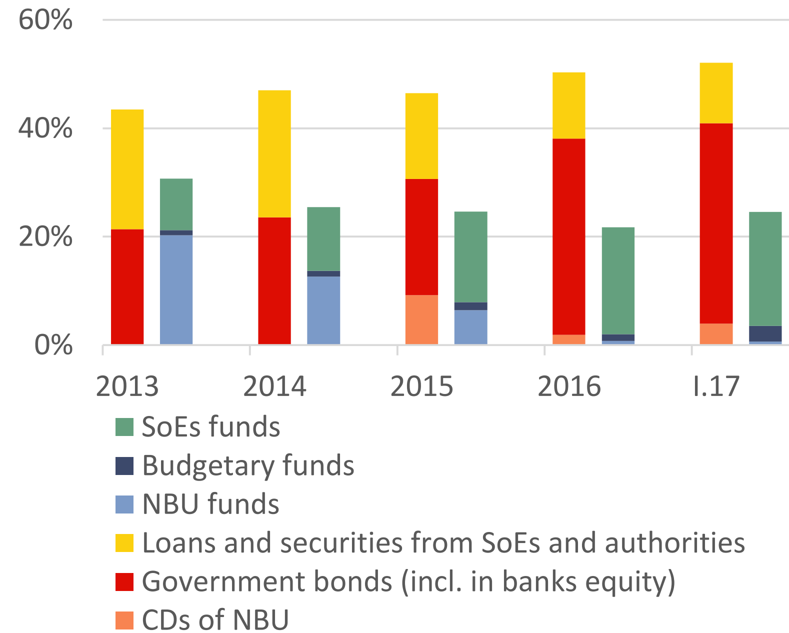
Public funds hold a prominent position on banks' balance sheets

Budgetary funds at banks, UAH bn



Source: NBU

The government's share of total assets and liabilities of state-owned banks (excl. PrivatBank)*



** Assets in the first column, liabilities in the second*
Source: NBU

- Since the start of the crisis, the deposits of state-owned enterprises (SoEs) increased 3.7 times and have contributed 46% of the overall growth in corporate deposits. They now account for 9% of banking sector liabilities.
- The cost of government securities is higher than the cost of other sources of funding.

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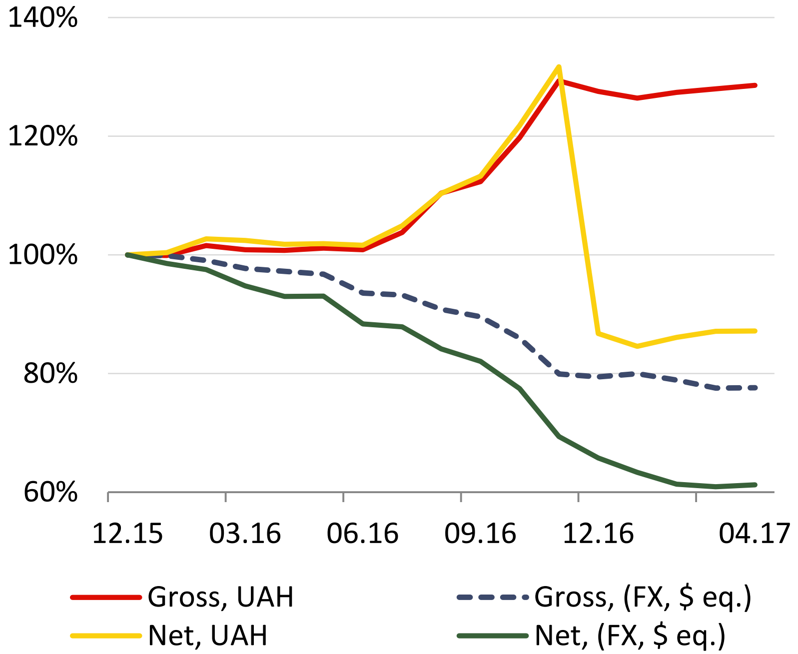
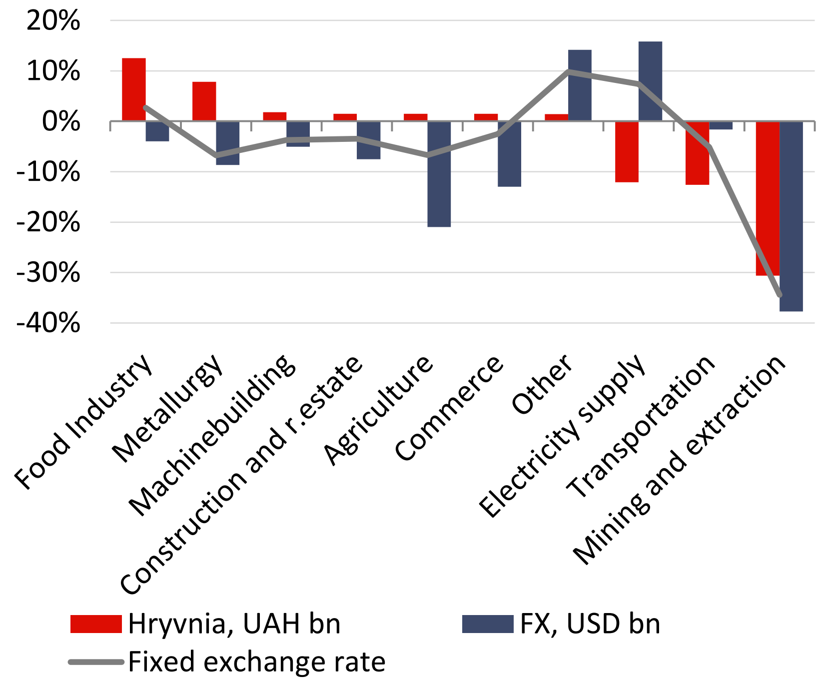
Corporate lending has not intensified yet

Corporate loans (2015 = 100%)*



Change in outstanding loans by industry – the largest banking borrowers, Jan-Apr 2017



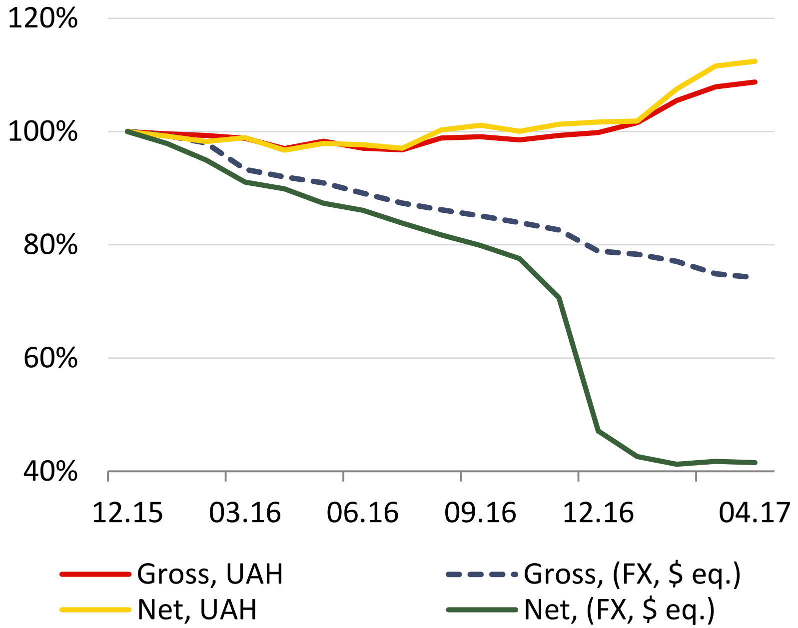
**Issued by banks solvent as of 1 May 2017; the sharp fall in net loans in hryvnia is the result of provisioning for the loan portfolio at PrivatBank*

Source: NBU

- Total gross corporate loans have remained virtually unchanged. Net loans have declined moderately because of provisioning.
- High corporate leverage, the slow economic recovery, and elevated legal risks are impediments to a revival of corporate lending.

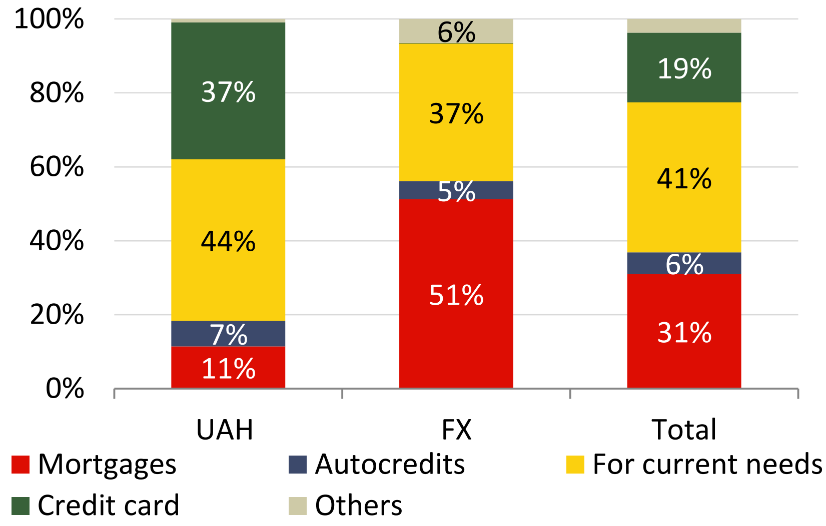
Consumer lending is on the verge of a boom

Retail loans (2015 = 100%)*



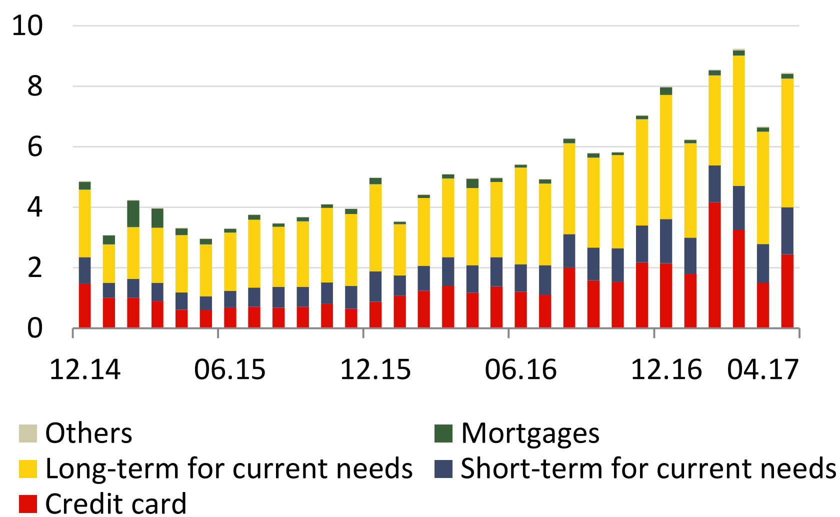
*Issued by banks solvent as of 1 May 2017
Source: NBU

Structure of retail loans as of 1 May 2017*



*In a month, at banks solvent as of the date

New retail loans in hryvnia, UAH bn**



**New loans issued over the past 12 months
Source: NBU

- Hryvnia loans increased 11.7%, including PrivatBank's conversion of P2P loans on the balance sheet; excluding that factor, hryvnia loans grew 6.1%.
- Loans to cover current needs and credit card overdrafts are on the rise.
- Mortgage lending is recovering slowly because of the weak solvency of borrowers.

A new method for calculating the NPL rate

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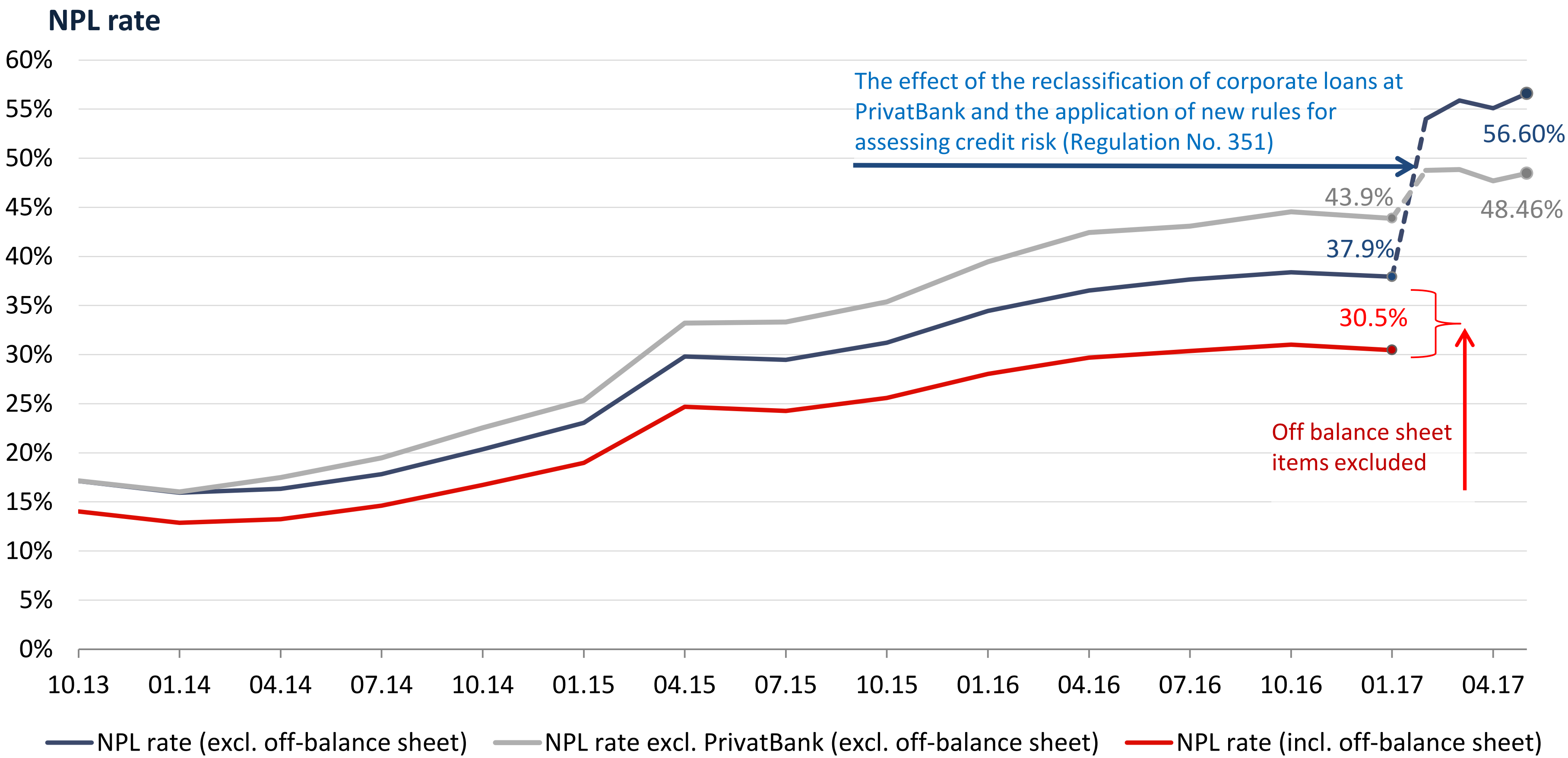

Source: NBU

Drivers of the increase in the NPL rate:

- The recognition of NPLs by PrivatBank after its nationalization (+15.1 pp).
- Amendments to the definition of NPLs (+3.6 pp)
- The exclusion of off-balance sheet items from the calculation (+7.4 pp)

The quality of retail loans improves

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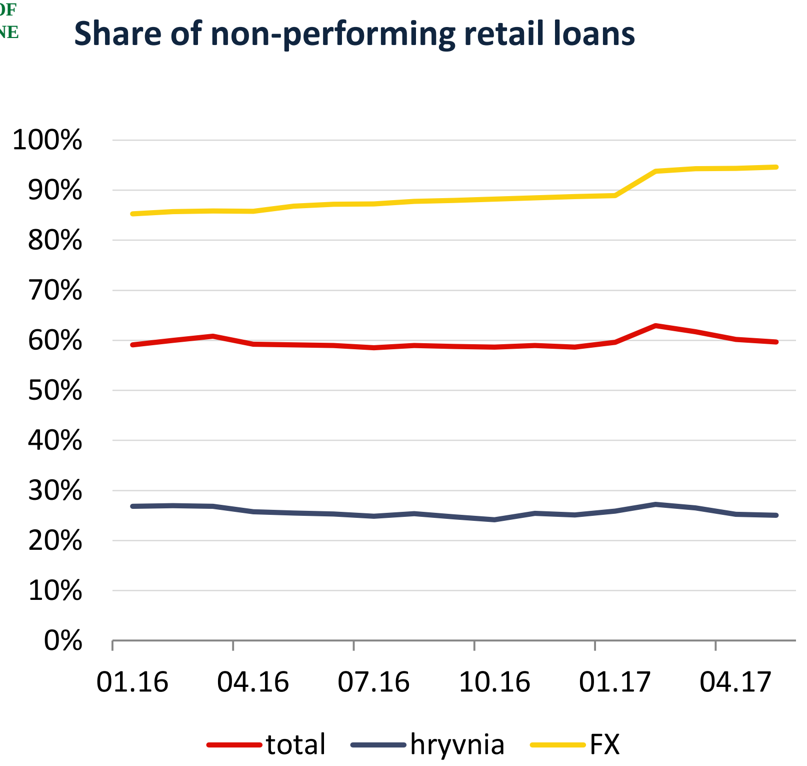
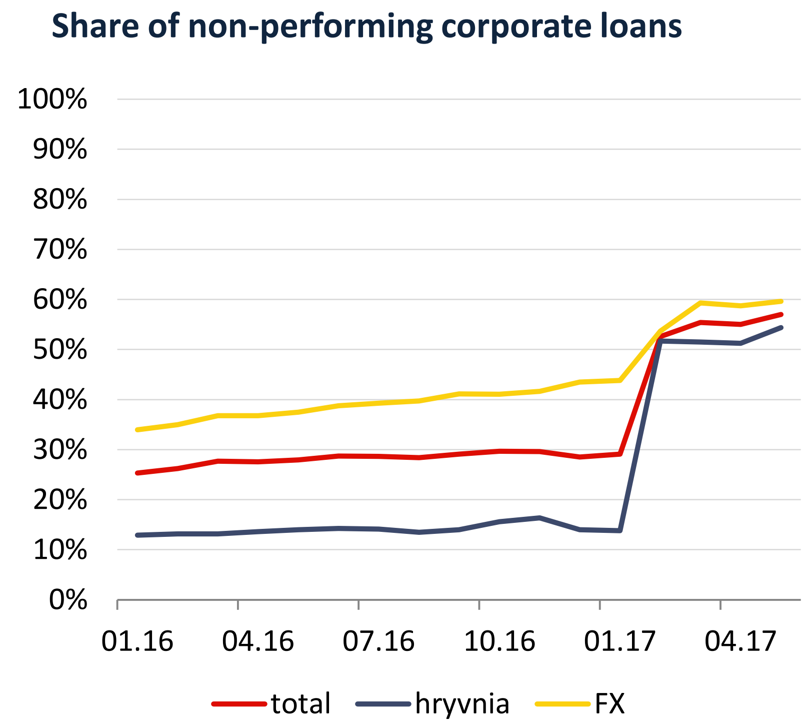


Source: NBU

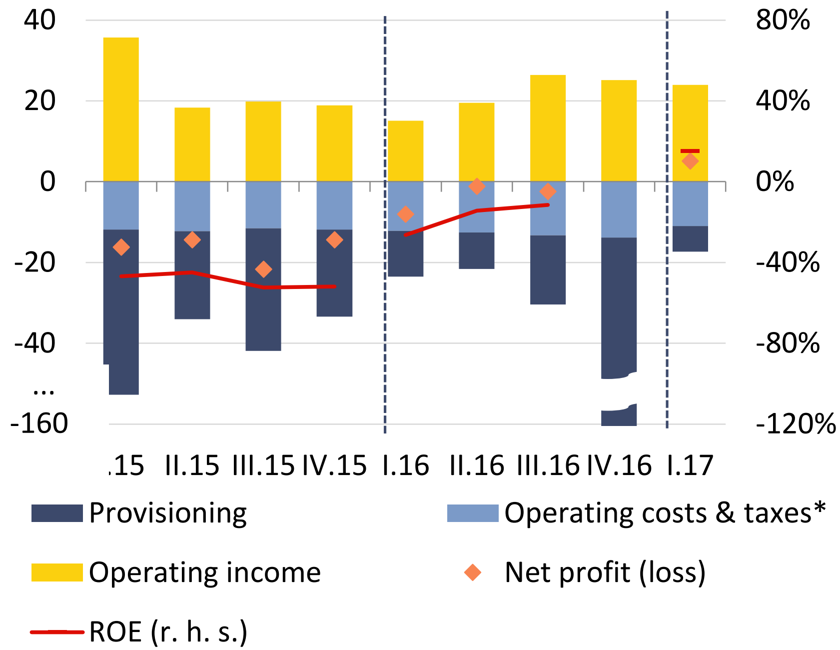


Source: NBU

- After an increase in the NPL rate driven by the new regulation in February, the share of non-performing retail loans has decreased for three consecutive months, down 3.3 pp over the period to 59.7%.
- In the corporate segment, the NPL rates in foreign currency and in hryvnia are approximately equal.

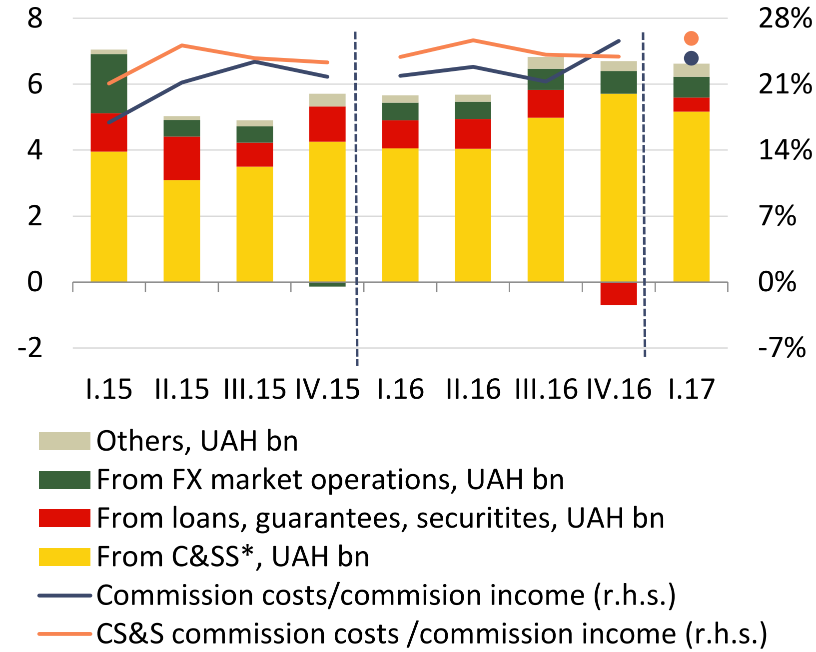
The profitability of the banking sector has recovered

Financial results in UAH bn and ROE



**Including corporate profit tax*
Source: NBU

Components of commission income in UAH bn and the efficiency of commissions for service provision



**Cash and settlement services*
Source: NBU

- The banking sector has started to generate profit (UAH 9.4 bn in the first four months of 2017) on the back of higher operating income and lower provisioning.
- Net interest income has increased on lower interest costs thanks to a reduction of deposit rates.
- Net commission income increased 16% yoy as demand for banking services has grown.

State-owned banks rely heavily on interest income from government bonds

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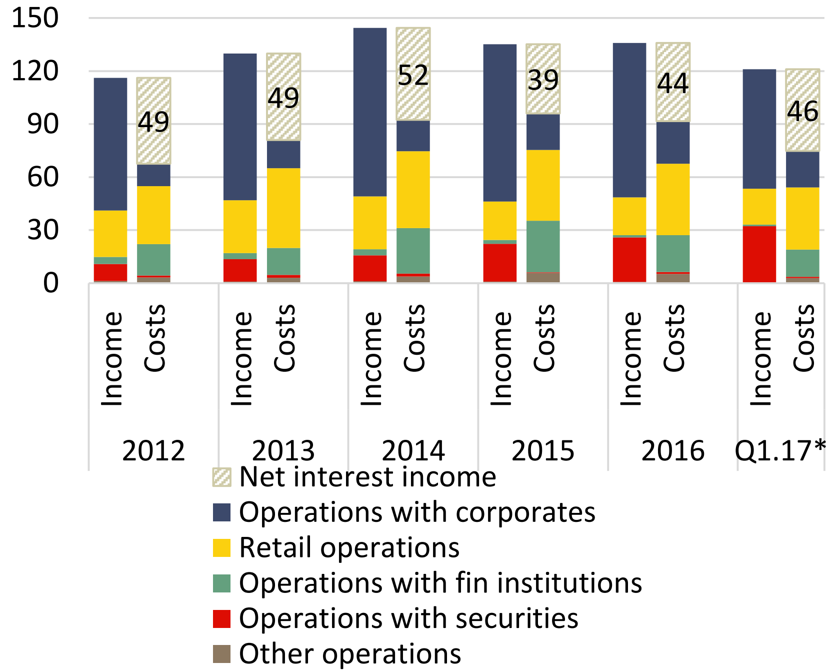
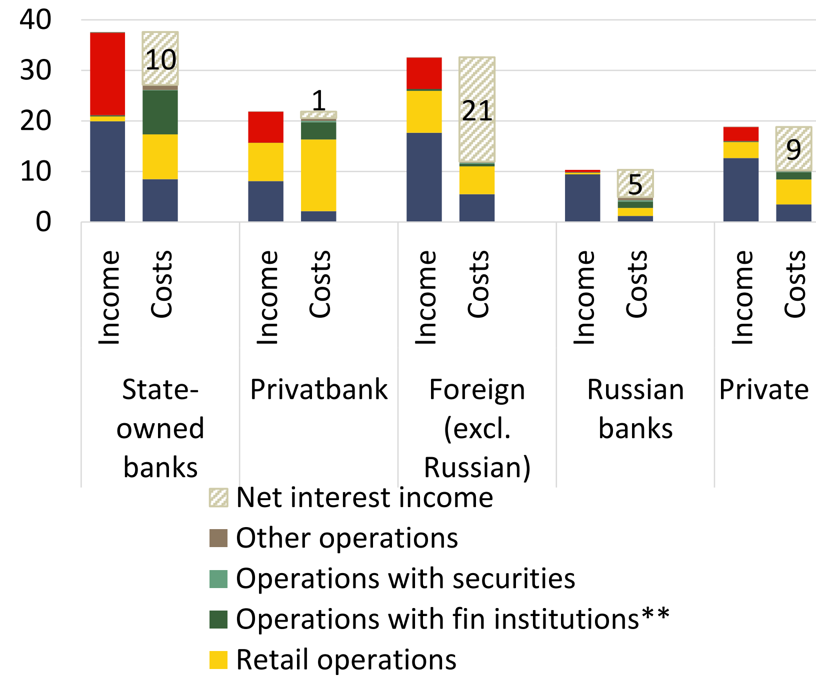
Interest income and cost components, UAH bn



*Annualized **Interbank, IFIs, NBU
Source: NBU

Interest income and cost components by groups of banks in Q1 2017, UAH bn*



*Annualized **Interbank, IFIs, NBU
Source: NBU

- The share of repayments on securities, including on government bonds, is growing within the structure of total interest income. On the other hand, income from lending is declining: it accounted for almost 90% of interest income prior to the crisis, but declined to 80% last year and 79% in Q1 2017.
- Coupon payments on government bonds and incomes from certificates of deposit make up around 40% of interest income at state-owned banks.

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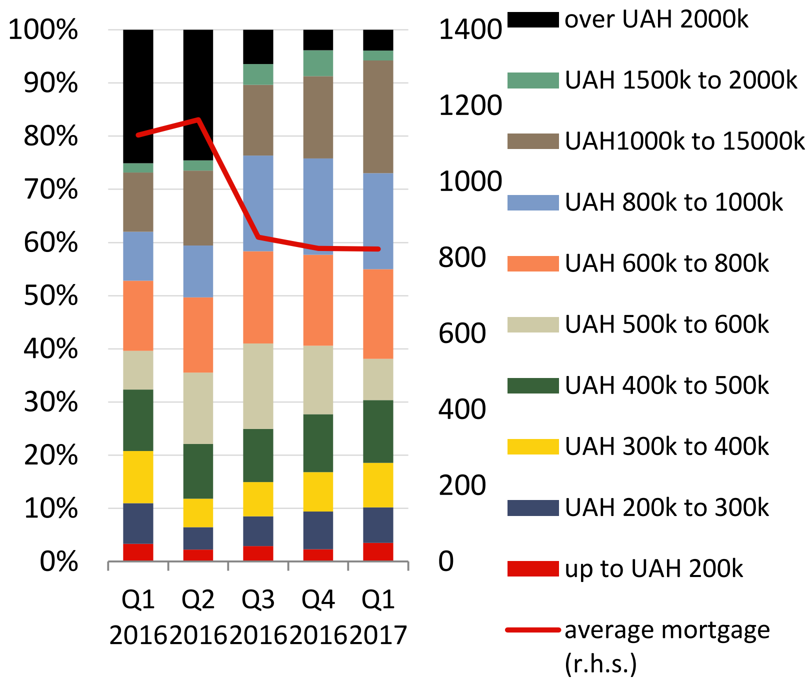
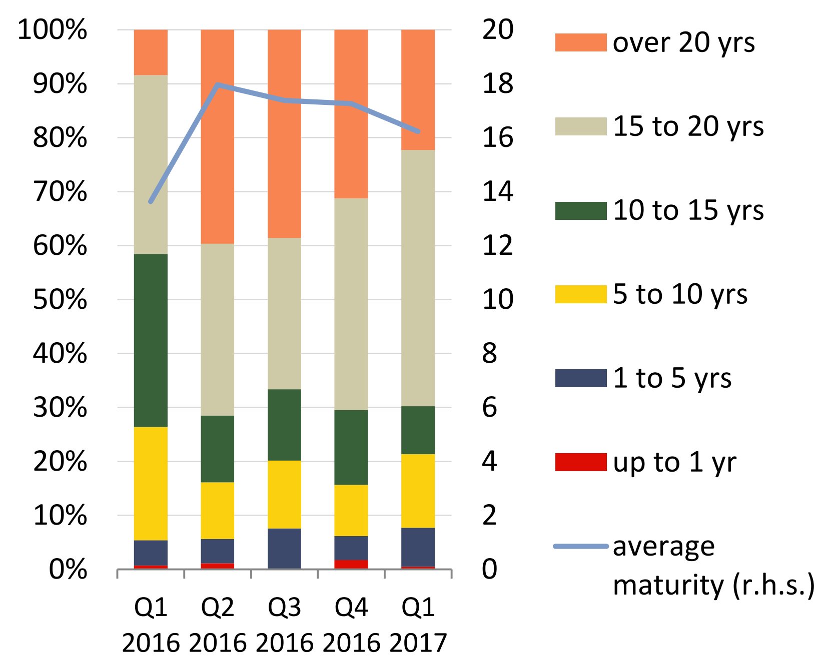
The status of mortgage lending: survey results (1/2)

Mortgages by principle amount



Source: data from banks

Mortgages by maturity



Source: data from banks

- In 2016 to Q1 2017, 17 of 25 surveyed banks issued loans for the purchase, construction, or reconstruction of real estate.
- At the end of May, seven banks were expecting an increase of over 10% in the average monthly volume of new loans. The volume of lending remains far below the pre-crisis level.
- As of Q1 2017, the average loan size was UAH 545,000 with an average maturity of 10.7 years.

The status of mortgage lending: survey results (2/2)

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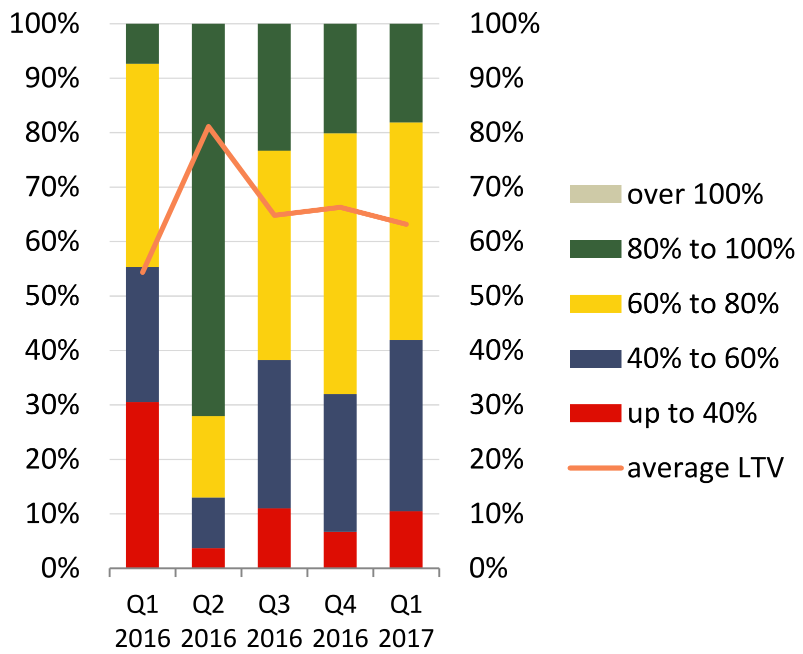
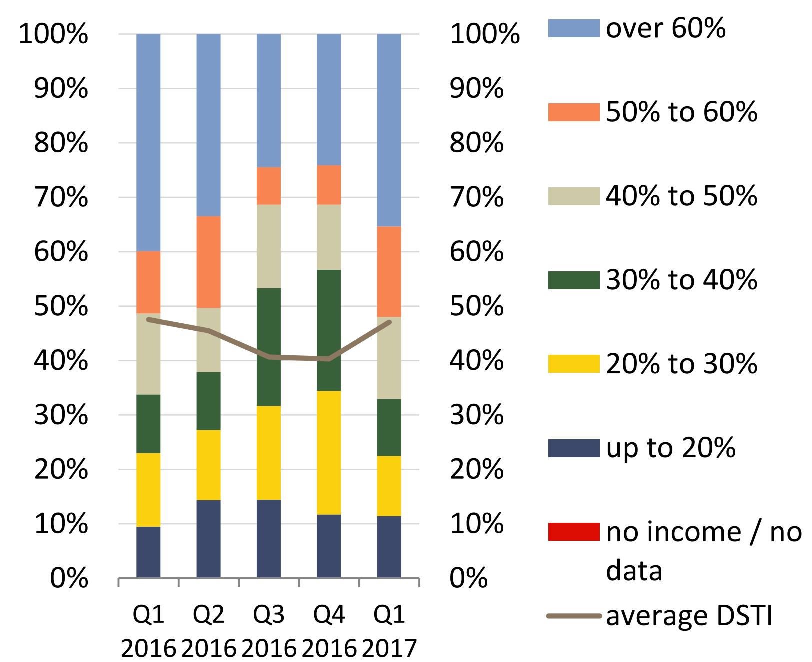
Mortgages by LTV



Source: data from banks

Mortgages by DSTI



Source: data from banks

- The average weighted LTV stands at 63%. Some banks lend to borrowers with a down payment of less than 20% and there are instances of large loans (over UAH 1.5 million) with LTV of greater than 80%.
- The average weighted DSTI stands at 47%, and households buying housing on credit have an average income of UAH 23,600.
- Most banks identify the lack of solvent borrowers with official confirmed incomes as the major impediment to a recovery of lending.
- Certain banks are not conservative enough in their assessment of the creditworthiness of borrowers.

The cost of the crisis has been relatively moderate

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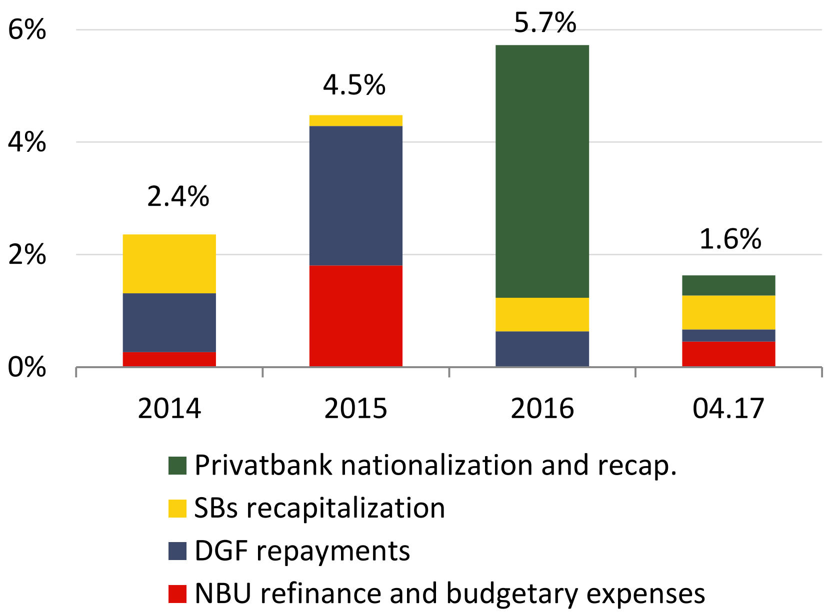
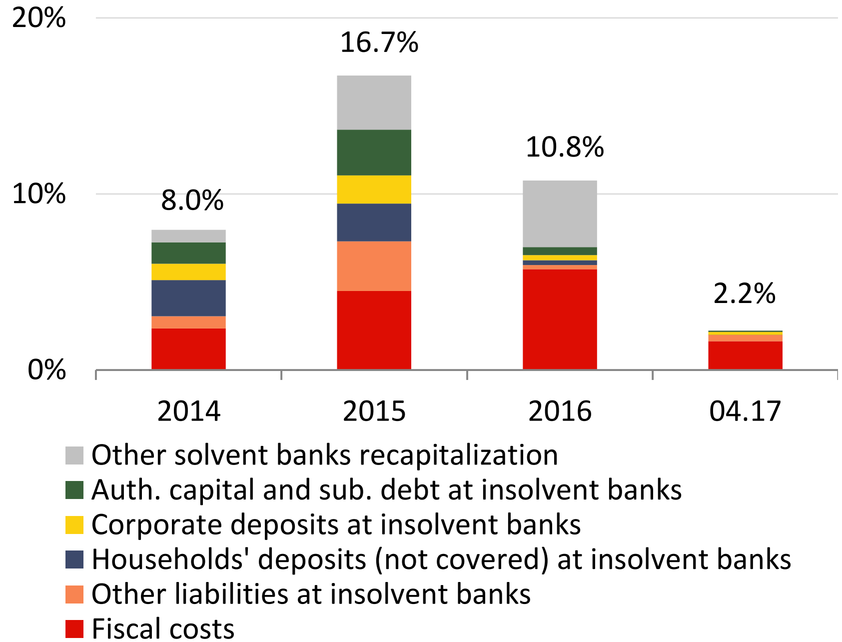
Costs for government and economic agents, % of GDP

Direct fiscal costs for the government



Sources: NBU, DGF

Total costs



Sources: NBU, DGF

- Crisis-related costs were distributed between the government, banks, and the private sector. Fiscal costs over the crisis years equaled 14% of GDP and total costs equaled 38% of GDP.
- The most substantial government costs were related to:
  - PrivatBank recapitalization: 4.8% of GDP
  - Recapitalization of other state-owned banks (SBs): 2.4% of GDP
  - Repayment of covered deposits to households: 4.4% of GDP
  - Refinancing not repaid by insolvent banks: 2.5% of GDP
- The fiscal costs for countries where the crisis persisted for three years or more varied in a wide range from 1% to 57% of GDP.

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Recommendations

Recommendations to Authorities

- Accelerate reforms at state-owned banks
- Adopt financial sector reform legislation

Recommendations to Banks

- More aggressively clean up balance sheets of NPLs
- Actively use the mechanism for financial restructuring
- Enter into ELA agreements in a timely manner

The NBU's Plans

- Enhance disclosure standards for banks' financial and prudential reports
- Make further progress in designing new capital and liquidity requirements that comply with EU legislation (CRR/CRD 4 package) based on Basel III recommendations
- Continue liberalizing FX regulations