NATIONAL BANK OF ROMANIA

Financial Stability Report 2015

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NOTE

The Financial Stability Report was prepared by the Financial Stability Department under the coordination of Deputy Governor Liviu Voinea.

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The analyses draw on the information available by 20 August 2015.

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OVERVIEW

Financial stability has remained solid since the release of the previous Report (September 2014). The National Bank of Romania fulfilled the macroprudential objectives within its scope of activity. Financial stability is a public good that may be safeguarded by coordinating macroeconomic policies and cooperating with the other macroprudential authorities. Both cyclical and structural risks have remained manageable. The international economic and financial environment continues to be characterised by elevated volatility, but the local banking sector has got the resources to withstand potential adverse developments. Domestically, preserving macroeconomic equilibria, especially on the fiscal front, is of the essence for financial stability. With a view to strengthening system resilience to possible adverse developments and aligning with the European regulatory framework requirements, new macroprudential tools are to be implemented in the period ahead.

The main risks to financial stability are as follows:

Map of risks to financial stability

▬	No severe systemic risk
↑	Risk generated by external uncertainty surrounding global economic growth, the state of the international financial system, a possible reversal of the downward trend in interest rates worldwide and shifts in investor sentiment
→	Domestically, the risk of returning to pro-cyclical economic policies
→	Risk of further modest dynamics of loans to non-financial corporations, despite the sustainable growth potential
→	Contagion risk from the banking sector in Greece
↓	Credit risk associated with the stock of loans, amid the widening share of domestic currency loans
↑	Risk triggered by the geopolitical situation in the Middle East, with possible consequences on the European single market

▬ severe systemic risk
▬ high systemic risk
▬ moderate systemic risk
▬ low systemic risk

Note: The colour shows risk intensity. Arrows indicate whether the risk has increased/decreased since the previous Financial Stability Report.

On the external front, the European Central Bank launched a large-scale quantitative easing programme to prevent deflation risk in the euro area – at a time when the quantitative easing cycle in the US was losing momentum. This asynchrony of monetary policy in the euro area and that in the US, driven also by the difference between business cycles, fuels global uncertainty and may cause heightened capital flow volatility in emerging economies.

Low interest rates: (i) may create distortions through the lending channel, as they deepen the debt trap for both households and companies; (ii) may lead to public finance imbalances via temporary low-cost financing of wider deficits; (iii) reduce the incentive for structural reforms in the economy; (iv) may lead to misallocation of resources between economic sectors; (v) foster investment in higher-yielding, yet riskier and less liquid assets – and hence increase the role of the shadow banking sector, which is less regulated and supervised; (vi) underestimate credit risk; and (vii) may diminish monetary policy effectiveness after testing the zero bound. The persistence of too low interest rates for too long induces the risk of their abrupt reversal.

Against this backdrop, the domestic macroeconomic policy mix should remain prudent and promote sound economic growth, along with keeping the fiscal deficit in line with the Medium Term Objective (MTO) of fiscal policy.

The domestic macroeconomic environment improved on the back of the following developments: (i) economic growth supported the fast narrowing of the negative output gap, which is foreseen to close in the course of 2016; (ii) the end of 2014 saw the achievement of the MTO, i.e. a structural deficit of 1 percent of GDP; (iii) households' purchasing power increased as the inflation rate slipped into negative territory and their income moved higher; (iv) the monetary policy rate touched an all-time low; (v) the current account deficit consolidated at around 1 percent of GDP, amid more competitive exports; and (vi) the cost of public debt financing stayed on a downward trend.

However, these developments are not risk-free, as: (i) economic growth started to be mostly consumption-driven, while potential GDP is further depressed by weak transport infrastructure, the insufficiently fast pace of EU fund absorption and the non-financial corporations' payment delinquency; (ii) budget adjustment was accomplished largely via spending cuts, amid failure to carry through the scheduled investment, and now the risk of a trend reversal of the last five years' budget adjustment is looming because of pro-cyclical economic policies; (iii) curbing of inflation was primarily ascribed to lower fuel prices on international markets and to the cut in the VAT rate on food items domestically, which mask however the persistence of inflationary pressures that will become manifest once the base effect has faded out; (iv) monetary policy should take account of the macroeconomic policy mix; (v) the current account deficit may start widening again, on the back of higher imports driven by rising consumer spending; and (vi) investor sentiment might change following adverse developments locally or externally, which may swiftly push financing costs higher, while restraining the possibility for the domestic banking sector to raise its sovereign debt exposure.

The local banking sector supported the favourable developments in the economy via: (i) substantial rise in leu-denominated loans, particularly mortgage loans to households, amid lower lending rates; (ii) decline in household indebtedness and in debt servicing cost for leu-denominated variable-rate loans; (iii) improvement in asset quality through a significant reduction in the non-performing loan rate, which is likely to facilitate lending recovery; (iv) mitigation of currency risk through a change in the

loan stock composition, i.e. a widening share of leu-denominated loans; (v) narrowing of the spread between lending and deposit rates; and (vi) further consolidation of bank prudential indicators (solvency and liquidity ratios), which helped insulate the banking sector against the contagion risk induced by foreign market uncertainty.

On the other hand, an impact on banking sector dynamics had also the following factors: (i) the still weak lending to non-financial corporations, despite their important borrowing potential; (ii) low-income households still report an elevated level of indebtedness and remain vulnerable to interest rate shocks; (iii) the banks' balance sheet clean-up is still under way, contributing to their lower profitability; (iv) foreign currency loans still prevail and currency risk materialised in 2015 for borrowers in Swiss francs and US dollars following the strengthening of these currencies versus the euro, without however triggering systemic risk; (v) the interest rate margin can be narrowed further in order to near the EU average; and (vi) close monitoring and a prudent approach in relation to local banks with Greek capital are further warranted.

The 2015 Financial Stability Report is organised as follows: Chapter 1 discusses the international and domestic economic and financial environment. Chapter 2 deals with the real sector, i.e. non-financial corporations and households. Chapter 3 looks at the financial sector, and Chapter 4 focuses on the financial sector infrastructure. Chapter 5 provides an in-depth overview of financial stability as a public good, describes the European regulatory framework and how macroprudential policies are implemented in Romania. Topical issues are separately addressed throughout the Report, such as the sovereign debt crisis, the state of CHF-denominated loans, the developments in the "First Home" programme, the role played by the National Committee for Macroprudential Supervision.

The 2015 Financial Stability Report also includes a special feature on Romania's public debt sustainability seen from the perspective of financial stability. The special feature provides answers as to why the public debt increased and how the money was spent, and assesses public debt sustainability. The analysis finds that Romania's public debt is sustainable at present in terms of size, but there is a risk of going beyond a critical threshold in the case of adverse economic conditions, an interest rate shock or budget slippages. Since 2011, refinancing risk has been decreasing steadily, financing costs have contracted substantially and the investor base has diversified. Nevertheless, public debt has shown reliance on the local banking sector, which has also had some benefits in terms of mitigating contagion risk and boosting liquidity, but the potential to further tap this financing source has largely been exhausted.

1. INTERNATIONAL AND DOMESTIC ECONOMIC AND FINANCIAL ENVIRONMENT

The international economic and financial environment was marked by rising volatility. The still high uncertainty surrounding future international economic and financial developments, among which those linked to the diverging monetary policy stances of the world's major central banks, the lingering doubts about the situation in Greece and the economic picture in China, is the main challenge to financial stability posed by the external sector.

The domestic macroeconomic framework continued to be supportive of financial stability, but there is a risk of returning to pro-cyclical economic policies. Preserving macroeconomic equilibria, also via the consistent implementation of an adequate fiscal, budgetary and monetary policy mix, is pivotal to maintaining financial stability.

The level of indebtedness of non-financial corporations and households is below the average of the countries in the region. Total debt stock of non-financial corporations and households further moved up, albeit at a slow pace, mostly due to resident banks, which granted leu-denominated loans to households. Nevertheless, non-financial corporations have a sizeable sustainable borrowing potential, which comes especially from the sectors that may weigh heavily upon Romania's economic growth pattern.

Romania's international trade and financial relations did not create vulnerabilities for financial stability. The current account deficit remained low, whereas capital flows were similar in composition to the preceding year. The main challenges to financial stability stemming from the companies with a bearing on external balance are related to strengthening the sustainability of the current account deficit, improving the competitiveness of Romania's exports and the capacity of foreign trade companies and foreign-funded companies to withstand potential adverse developments, as well as to increasing the share of such companies with borrowing potential in domestic banks' loan portfolios.

The European Commission identified 16 EU Member States facing certain macroeconomic challenges and Romania is seen as one of the countries dealing with risks that are relatively easy to manage (along with Belgium, the Netherlands, Finland, Sweden and the United Kingdom). Nevertheless, there is still a significant need to further pursue structural reforms both in Romania and the EU.

1.1. International economic and financial developments

Since the previous Report, the international economic and financial environment has been marked by rising volatility, which had however mixed effects on financial stability in Romania. Economic growth returned to positive territory in many of Romania's trading partners, benefitting its exports, and the accommodative monetary policy stances of the main developed countries pushed down its financing costs as well.

The outlook is further uncertain, which could generate significant effects on the stability of the financial sector in Romania. Moreover, the domestic economic and financial environment came under pressure from the worsening situation in Greece, the uncertainty surrounding the developments in the Ukraine conflict and the low profitability of the European banking groups operating also in Romania. In the period ahead, the said factors remain the key sources of vulnerability for the European banking sector and, via this channel, for financial stability in Romania.

The external macroeconomic environment and its implications for the domestic economy

Romania's main trading partners (Germany, France and Italy) reported improved economic growth in 2014 as compared with 2013 and these positive trends look set to continue. The stronger economic performance was manifest worldwide, but uncertainty still surrounds growth projections. According to the IMF's World Economic Outlook Update of July 2015, global GDP growth is forecasted at 3.3 percent in 2015 and 3.8 percent in 2016, with marked heterogeneity across countries depending on their level of development. The EU witnesses a more tepid consolidation of economic growth, the European Commission (EC) estimating GDP dynamics at 1.8 percent in 2015 and 2.1 percent in 2016 (the European Commission's Spring 2015 Economic Forecast), yet uneven across Member States.

The rebound in economic activity was also underpinned by the accommodative monetary policy stances taken by the main developed countries. The European Central Bank (ECB) further expanded its set of instruments in 2014 as well, with a view to boosting lending to the real sector amid the cut in the main refinancing rate to historical lows[1], to include (i) targeted longer-term refinancing operations (TLTROs) and (ii) new assets in the asset purchase programme[2] (estimated to amount to EUR 1,140 billion until September 2016). Behind the quantitative easing decisions taken by the ECB, as well as by the Federal Reserve, stood concerns over a too prolonged period of low inflation. The ECB mainly aimed to reduce real interest rates, household, corporate and government debt burden, and banks' funding costs.

On the other hand, keeping interest rates low for an extended period fuels the search for yield, which may lead to unsustainable increases in some asset prices (real estate, financial instruments) and the emergence of liquidity illusion on certain segments of financial markets worldwide. These are the main vulnerabilities for financial stability

1 On 4 September 2014, the ECB decided to lower the interest rate on its main refinancing operations (MROs) to 0.05 percent.

2 In June 2014, the asset purchase programme was expanded, before being adjusted in January 2015. The purchases under the programme currently include asset-backed securities, covered bonds and public sector securities.

identified by major international institutions (Box 1. Challenges to the international financial system). The build-up of such imbalances might cause systemic risks to become manifest following fast and significant changes in investor sentiment on global financial markets. These swings may be driven by lower-than-expected macroeconomic performance, materialisation of geopolitical risks or uncertainty surrounding the future monetary policy decisions of major central banks worldwide.

Box 1. Challenges to the international financial system

In its latest Annual Report, the Bank for International Settlements (BIS) identified several aspects of international financial stability, as follows:

- The main challenges to global economy are: the persistence of interest rates at exceptionally low levels, the unbalanced economic expansion, the high debt burden, financial risks, the low productivity growth and the limited room for manoeuvre in macroeconomic policy. The build-up of these vulnerabilities owed to the excessive focus of macroeconomic policies on short-term objectives for output and inflation and to losing sight of the position of the economy in the financial cycle;
- The accommodative policies of the world's major central banks continue to fuel the uptrend in prices in global asset markets, whereas investor expectations about the diverging monetary policy decisions of the Federal Reserve and the European Central Bank keep putting pressure on the single currency. Moreover, the further accommodative monetary policies led to the emergence of liquidity illusion in financial markets worldwide, and particularly bond markets: market liquidity seems to be ample in normal times, but vanishes quickly during market stress;
- The movements in the oil price and the US dollar triggered different responses of the economies depending on the stages of their business and financial cycles, with better macroeconomic management and more robust financial structures increasing resilience to such shocks. The large stock of debt worldwide and the shift from banks to capital market funding could raise new risks;
- The build-up of global financial imbalances, in the context of inflation rates running below targets, complicates the decision of keeping accommodative monetary policies in place, pointing to the need for an adjustment of monetary policy frameworks to incorporate financial stability considerations;
- The current international economic and financial environment brought to the fore again the debate about the design of the international monetary and financial system and the need to strike a balance between international cooperation and domestic macroeconomic policies, given the integration of financial markets worldwide and the spillovers it facilitates;
- Despite a further improvement in its capital and liquidity positions, the banking sector in advanced economies continues to face difficulties, adding to those driven by the persistently low interest rates and the still frail macroeconomic environment.

Source: BIS Annual Report, 2014/15

Another risk factor could stem from the adverse developments in emerging market economies, such as China (economic slowdown, the deterioration of the loan portfolio quality, adjustments in the real estate market and marked drops in equity prices), via the shift in investors' exposure from this asset class, as well as via the indirect channel of China's trade with EU Member States that are also some of Romania's major trading partners.

The potentially detrimental impact that a change in investor sentiment towards emerging economies may exert on Romania could be substantially less severe than in other countries in the region. This assumption is supported by further robust domestic macroeconomic equilibria, strengthened economic growth and lower presence of non-residents on domestic financial markets. Non-residents' stock of portfolio investment ranks among the lowest in the EU (14 percent of GDP versus 86 percent of GDP at EU level in December 2014) and the size of capital and interbank markets is also smaller than in other emerging countries in the EU.

As for the geopolitical environment, the domestic economy was marginally exposed to the risks stemming from the conflict between Russia and Ukraine, chiefly via the indirect channel of business relationships and funding of non-financial corporations and via the European banking groups operating in Romania with exposure to Russia and Ukraine, the most important of which are based in France, Austria and Germany[3]. Although the situation in the region continued to be a source of uncertainty, systemic risk has not manifested itself across the banking sectors in the EU so far. The worsening sovereign debt situation in Greece exerted a moderate impact on the banking sector (for further details, see Box 2. The sovereign debt situation in Greece).

On the other hand, the geopolitical tensions in the Middle East led to significant influxes of migrants from this region to the EU Member States. Although at present Romania is not directly affected by these developments, the main risks to the economy could occur through the following channels: (i) budgetary pressures via the increase in social security and national security spending; (ii) foreign trade, following the potential freight transport bottlenecks that may emerge in the European Union and (iii) the labour market, via the higher unemployment rate.

The state of the European banking sector

The European banking sector further reported low profitability, to which contributed particularly the modest economic growth. The significant non-performing loan stock in some countries, especially those with high public and private sector indebtedness, was an additional concern for certain European banking groups and continues to hinder the resumption of lending, playing a certain part in the sluggishness of economic recovery as well. Another factor that may weigh on the profitability of the banking sector is its interdependence with the public sector. With a view to limiting contagion effects via this channel, the reform of the EU's institutional framework was carried on, translating into the adoption of Directive 2014/59/EU establishing a framework for the recovery and resolution of credit institutions and investment firms,

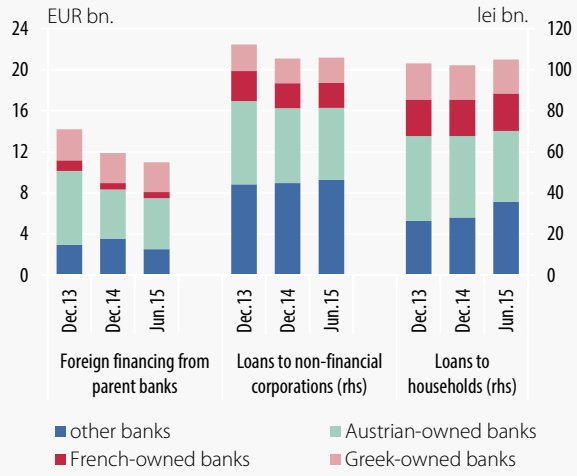
3 According to Bank for International Settlements data as of December 2014.

as well as of Regulation (EU) No. 806/2014 establishing uniform rules and a uniform procedure for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism and a Single Resolution Fund.

Box 2. The sovereign debt situation in Greece

Four credit institutions with Greek capital operate in Romania, playing a moderate part in the domestic banking system. They hold approximately 12 percent of total bank assets (June 2015). All banks with Greek capital are Romanian legal entities under the direct supervision of the National Bank of Romania.

Chart A. Foreign exposures and the effect on corporate and household lending



Source: NBR

These credit institutions evince an adequate prudential standing, most indicators further improving in the past year. At present, these banks boast a total capital ratio significantly above the required level (18.1 percent in June 2015, up from 16.3 percent in December 2014, as compared with the 8 percent minimum threshold), high quality own funds (a 13.1 percent Tier 1 capital ratio in June 2015), an appropriate coverage ratio of non-performing loans with IFRS provisions (69.4 percent), as well as better loan portfolio quality, in line with the changes across the banking sector as a whole (with the NPL ratio standing at 15.8 percent in June 2015, down from 21 percent in April 2014). Over the last year, their funding from parent banks fell to EUR 2.9 billion (Chart A), accounting for 18 percent of total liabilities, with 12 percent of these loans having a maturity of up to one year (in June 2015). The liquidity stress test for macroprudential purposes reveals that the banks with Greek capital have the necessary means to withstand a shock stemming from the withdrawal of financing from non-resident financial institutions. The NBR continues to closely monitor the developments in Greece and those related to the transmission channels of potential shocks, with a view to acting as early as possible to limit the potential negative effects on the domestic banking sector.

An analysis of the impact of the sovereign debt situation in Greece on the real economy in Romania shows that, over the short term, the consequences via the trade channel are limited (domestic exports to Greece accounted for 1.4 percent of total exports in December 2014). Moreover, the difficulties encountered by parent undertakings in Greece that would beset their subsidiaries in Romania would exert a moderate impact. Romanian companies with Greek capital make a modest contribution to economic activity (as they generated 0.5 percent of gross value

added and accounted for 0.3 percent of the number of employees economy-wide in December 2014) and have a relatively low share in domestic banks' loan portfolio (tantamount to approximately lei 1 billion).

In the medium to long run, the fallout from the situation in Greece on Romania's economy and banking sector is expected to manifest itself along three main lines: (i) the reshaping of the Romanian banking sector via the lower importance of credit institutions with Greek capital; (ii) an increased focus on the sustainable fulfilment of real convergence criteria with a view to joining the euro area, which pleads for further structural reforms and the preservation of macroeconomic equilibria[4], and (iii) higher relevance attached to keeping public and private sector indebtedness indicators within prudent limits in the oversight of financial stability. Public sector indebtedness is currently relatively low in Romania, but there is limited room for manoeuvre to exceed it (for further details, see Special feature – Romania's public debt sustainability seen from the perspective of financial stability).

1.2. Domestic macroeconomic developments

The domestic macroeconomic framework continued to be supportive of financial stability. Economic growth strengthened without affecting macroeconomic equilibria. In the coming period, the major challenge to financial stability remains the safeguarding of domestic macrostability, also through further efforts to foster conditions conducive to investment and to keeping in place a coherent fiscal policy framework.

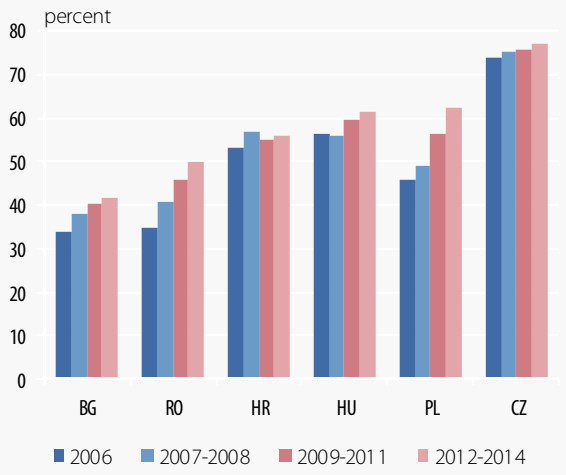
Romania's economic growth stuck to the positive trend it had started in 2011, albeit at a slower pace. Specifically, in 2014, GDP dynamics stood at 2.8 percent, down from 3.4 percent a year earlier. This performance ensured the preservation of the macroeconomic equilibria regained after the outbreak of the global financial crisis. Future economic growth needs to be oriented along the same coordinates of sustainability, as macrostability may be affected by numerous risks. The European Commission identified 16 EU Member States facing certain macroeconomic challenges and Romania is seen as one of the countries dealing with risks that are relatively easy to manage[5] (along with Belgium, the Netherlands, Finland, Sweden and the United Kingdom). In 2015-2016, favourable GDP dynamics are expected to continue, domestic demand further acting as the main driver of growth.

After joining the EU, Romania reported one of the fastest convergence rates towards the euro area economy. Nevertheless, the domestic economy still has a lot of catching-up to do, also with economies that have recently adopted the single currency. At present, GDP (expressed in PPS) per capita accounts for approximately 50 percent of GDP (expressed in PPS) per capita for the euro area, as compared with 38 percent in 2007, when Romania joined the EU (Chart 1.1).

4 Isărescu, M. (2015), speech delivered at the "CESEE – Old and New Policy Challenges" conference, http://www.bnr.ro/CESEE---old-and-new-policy-challenges-12535.aspx.

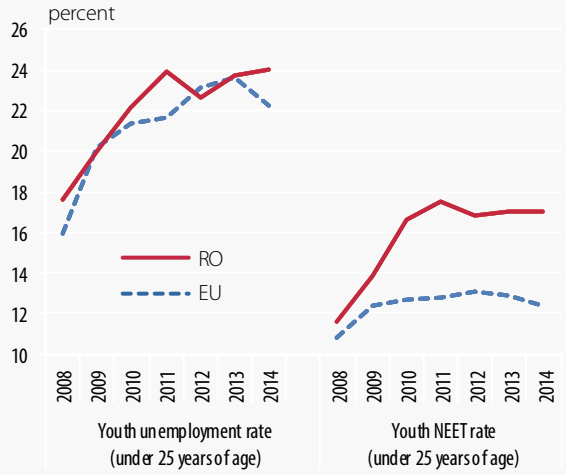
5 The Alert Mechanism Report 2015, published on 28 November 2014. According to this Report, the macroeconomic risks facing Romania stem from the markedly negative net international investment position (NIIP) and the long-term strengthening of export capacity.

Chart 1.1. GDP (expressed in PPS) per capita relative to the euro area average (regional comparison)



Source: Eurostat

Chart 1.2. Labour market developments in Romania and the EU



Source: Eurostat

In 2014, the advance in economic activity was strongly supported by private consumption, whereas net exports made a neutral contribution and investment recorded negative dynamics for the second consecutive year. Under the circumstances, in the absence of economic policies that should ensure sustainable growth, there is a risk of reverting to the former (mainly consumption-based) growth pattern. The government has lately taken a series of measures to boost investment, which have had however a limited effect. Starting in 2014, a government-supported scheme was launched with a view to spurring investment with a major economic impact. The maximum budget of the said scheme amounts to lei 2.7 billion for 2014-2020, with an annual budget equalling lei 450 million. In 2015, the available amount was spent in the first half of the year, i.e. lei 483 million. Although the level of investment in Romania remains high (22 percent of GDP in 2014, above 19.3 percent of GDP, the EU average), its capacity to generate traction on the economy may be improved, also by implementing measures designed to prioritise public investment. Moreover, European funding could help secure substantial investment, yet the EU fund absorption rate[6] remains among the lowest in the European Union (51.3 percent in July 2015, up from 35.6 percent in the same year-earlier period). In addition to investment-boosting schemes, the authorities should consider measures to improve the business environment also by ensuring a predictable legal framework and by reducing the administrative burden, particularly on SMEs. In fact, the latter issue ranks among the conditions set forth in the financing arrangement signed with the European Union.

Romania's R&D expenditure is further low, standing at 0.4 percent of GDP in 2013, down from 0.5 percent of GDP in 2012, below the EU average (2 percent of GDP in 2013) and well beneath the national R&D intensity target set in the Europe 2020 Strategy (2 percent of GDP by 2020, of which 1 percent from public funding and 1 percent from private funding).

6 The absorption rate refers to the 2007-2013 funds. Regulation (EU) No. 1297/2013 of the European Parliament and of the Council allowed Romania to further draw EU funds from the 2007-2013 budget. EU funds earmarked for Romania for 2014-2020 amount to EUR 30.7 billion.

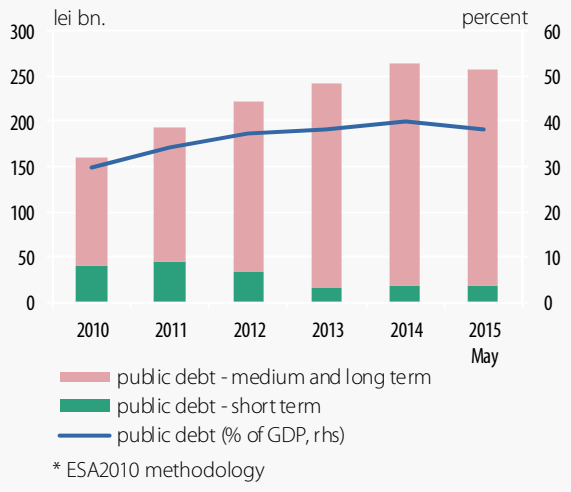
The labour market placed no pressure on financial stability, yet structural vulnerabilities remain. The unemployment rate continues to be low when compared with the EU average and fell slightly (from 7 percent in 2013 to 6.8 percent in 2014), so that borrowers' debt servicing capacity was not impaired. There is significant room for improvement in terms of composition: (i) the employment rate of the population aged 20-64 was 65.7 percent in 2014, below the EU average (69.2 percent in the same year) and the 70 percent target set in the Europe 2020 Strategy and (ii) reaching higher levels of youth employment is still a matter of concern, as both the unemployment rate of the young people aged 15-24 and the NEET rate[7] for the same age group stayed above the EU average in 2014 (Chart 1.2).

The general government deficit remained on a downtrend in 2014, narrowing to 1.5 percent of GDP from 2.2 percent of GDP a year earlier (ESA2010 methodology). In the seven months to July 2015, Romania reported a surplus of 1.06 percent of GDP, as compared with a 0.15 percent of GDP deficit in the same year-ago period (national methodology).

In 2014, Romania fulfilled the medium-term objective assumed under the European Fiscal Compact, one year earlier than planned in the fiscal strategy (the structural deficit stood at 1 percent of GDP). The major challenge to fiscal policy in the period ahead is to achieve stabilisation of the indicator at this level amid (i) significant public investment needs in the sectors contributing most to a sustainable economic growth pattern (education, infrastructure, and healthcare) and (ii) the passing of the new Tax Code with an impact on the volume and composition of budget revenues.

Fiscal discipline strengthened, but there is still room for improvement. Payment discipline of the general government versus the real sector improved in 2014, but the trend failed to extend into the early part of 2015. At end-2014, arrears dropped by 42 percent year on year to lei 126 million, before rising to lei 266 million in the first seven months of 2015. Local governments hold the largest share in total general government arrears, i.e. 94 percent in July 2015.

Chart1.3. Gross public debt and its components*



* ESA2010 methodology

Source: MPF

To keep public sector indebtedness at a prudent level is pivotal for public debt sustainability, as a possible increase could pose a threat to financial sector stability as well (for further details, see Special feature – Romania's public debt sustainability seen from the perspective of financial stability). The public debt ratio stood at 38.1 percent of GDP in May 2015, hovering around 38 percent of GDP in 2014 and the first part of 2015 (Chart 1.3). The banking sector's capacity to grant additional loans to the public sector is limited. Bank exposure

[7] The NEET (*Not in Employment, Education, or Training)* rate is the share of young people who are not in employment, education or training, as a percentage of the total number of young people in the corresponding age group.

to the latter is high and rising, accounting for 22 percent of total bank assets, 68 percent of total domestic public debt and 35 percent of total public debt in May 2015.

1.3. Non-financial private sector indebtedness

Total debt stock of non-financial corporations and households moved slightly up, with resident banks increasing their share of loans to these sectors to the detriment of NBFIs and non-resident banks. Debt breakdown saw mixed developments: (i) leu-denominated loans continued to rise, while loans in foreign currency contracted; (ii) loans to households witnessed a recovery, especially housing loans, reflecting both stronger demand and improved supply conditions thanks to lower lending rates.

A sustainable performance would advocate loans being channelled mostly to companies, those operating in high value-added sectors in particular. The corporate sector's sustainable borrowing potential is sizeable, yet it remains broadly unharnessed, some developments indicating the enlargement of its customer base notwithstanding. Looking ahead, the ongoing balance sheet clean-up should be accompanied by improved selection of borrowers and better tailoring of products and services to their needs.

Developments in indebtedness, total and by creditor

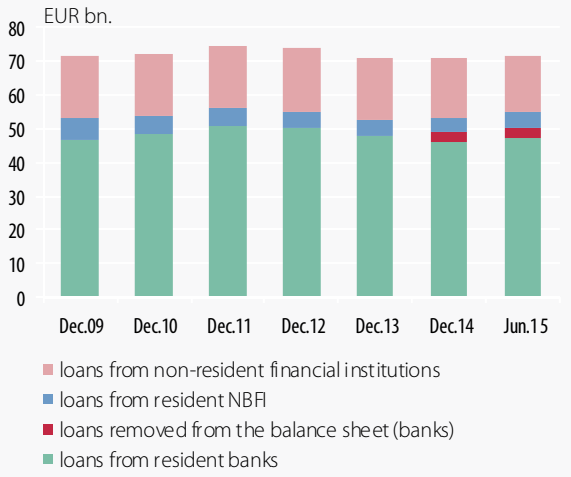
Total corporate and household debt owed to financial institutions (resident and non-resident banks and NBFIs, including bank loans removed from the balance sheet) rose by merely 1 percent[8] from December 2013 to June 2015, reaching EUR 71.7 billion (Chart 1.4). This picture reflects the still nascent trends in extending new loans at aggregate level, on the one hand, and credit institutions' efforts aimed at compressing their portfolios of non-performing loans granted during the credit boom and thereafter, on the other hand.

Resident banks are the main fund provider to the non-financial private sector[9], making up 69.8 percent of its total indebtedness in June 2015, amid the 4.1 percent rise in the period December 2013 – June 2015. Looking at the debt composition, given that banks have been taking measures to clean up their balance sheets since mid-2014, increasingly significant are the non-performing loans removed from the balance sheet, currently accounting for 6.2 percent of credit institutions' on-balance-sheet loans to the non-financial private sector, i.e. EUR 2.9 billion (Chart 1.4). Credit to the private sector, excluding loans removed from the balance sheet, declined by 2 percent in the same period.

8 In this section, the dynamics of lending are calculated by adjusting the nominal stock of foreign currency-denominated loans for exchange rate changes, unless otherwise specified.

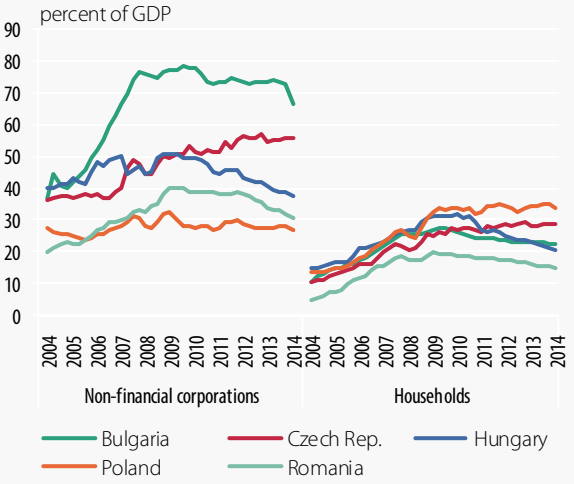
9 In this section, the non-financial private sector refers to non-financial corporations and households.

Chart 1.4. Corporate and household indebtedness by creditor



Source: NBR

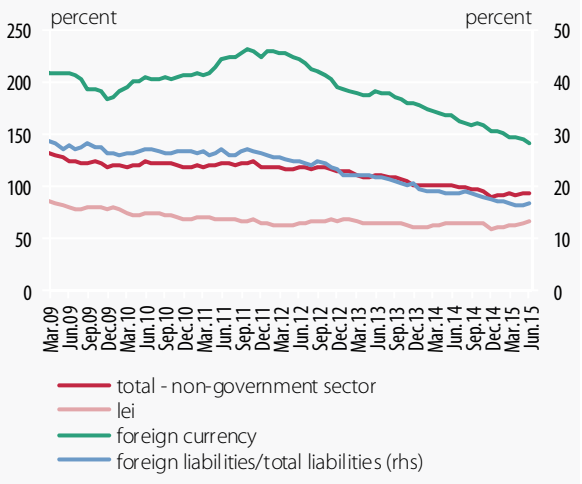
Chart 1.5. Corporate and household indebtedness, regional comparison[10]



Source: ECB, Eurostat, Reuters, NBR calculations

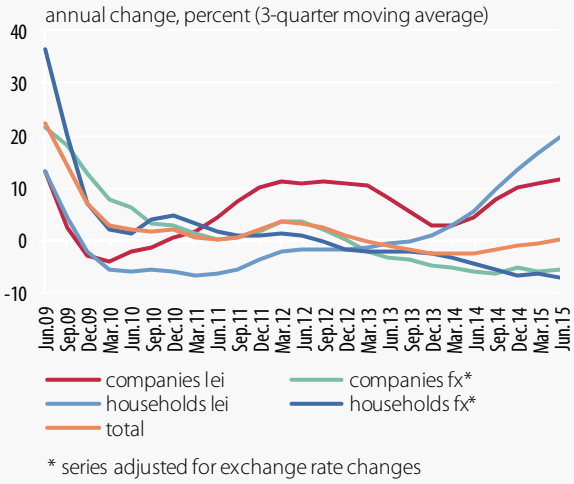
It is highly likely that resident banks will play a more prominent role in private sector financing over the period ahead, thanks to: (i) the further small gaps between EUR and RON funding, which was one of the drivers for many outward-oriented firms to resort to foreign (largely EUR-denominated) financing in the past and (ii) the enhancement of the EU-wide macroprudential framework, also by observing the principle of mutuality and of the level-playing field for borrowers and/or same risk exposures, regardless of the country where the credit institution is doing business.

Chart 1.6. Loan-to-deposit ratio



Source: NBR

Chart 1.7. Growth rate of non-financial private indebtedness from resident and non-resident financial institutions by currency



Source: NBR

The other types of creditors, namely foreign creditors and NBFIs, cut back on their exposure to the non-financial private sector by 6.7 percent and 1.2 percent respectively from December 2013 to June 2015 (Chart 1.4). These entities accounted

10 In order to make a regional comparison, total indebtedness was computed by using: (a) domestic bank loans and (b) foreign loans from financial institutions.

for 23.6 percent and 6.6 percent respectively of corporate and household indebtedness in June 2015.

The banking sector in Romania is in a position favouring sustainable resumption of lending: (i) indebtedness measured by the leverage ratio stood at a prudent 8 percent in June 2015, which compares favourably to the 3 percent threshold under the Basel III framework, and (ii) its resources are adequate in terms of capital and liquidity requirements (for further details, see Section 3.2. Banking sector). Moreover, certain vulnerabilities that marred the banking sector when the financial crisis broke out have faded[11], while the ongoing balance sheet adjustments further work towards strengthening credit institutions' soundness: (i) reliance on foreign funding decreased significantly, as the share of external liabilities in total liabilities contracted by 3.8 percentage points from December 2013 to June 2015, down to 16.6 percent, and (ii) the loan-to-deposit ratio for the non-government sector witnessed a considerable adjustment of 8.2 percentage points to 93.1 percent in June 2015, which is deemed an adequate level from a macroprudential perspective (Chart 1.6). In turn, the overall corporate and household indebtedness in Romania is lower than the regional average (Chart 1.5).

Loans in foreign currency

Providing financing mostly in the local currency is a trend already manifest towards the sustainable lending of the economy (Chart 1.7). The share of new EUR-denominated loans in total new loans to companies and households narrowed to 24.5 percent in 2014 and down to 20.5 percent respectively January through June 2015. As for households, new EUR-denominated business held merely 4.9 percent and 3.4 percent respectively in the same periods. As a result, the share of loans in foreign currency granted to companies and households in the total Romanian banking sector plunged by 8.4 percentage points from December 2013 to June 2015, reaching 52.8 percent. Local currency financing to the private sector was underpinned primarily by the lowering cost of lending in lei to levels comparable to that of EUR-denominated loans following the monetary policy rate being successively cut by a total of 2.25 percentage points from December 2013 to June 2015, down to 1.75 percent. In the same direction acted the central bank's previously implemented regulations aimed at protecting unhedged borrowers, as well as the "First Home" government programme shifting to lending in domestic currency alone as from August 2013.

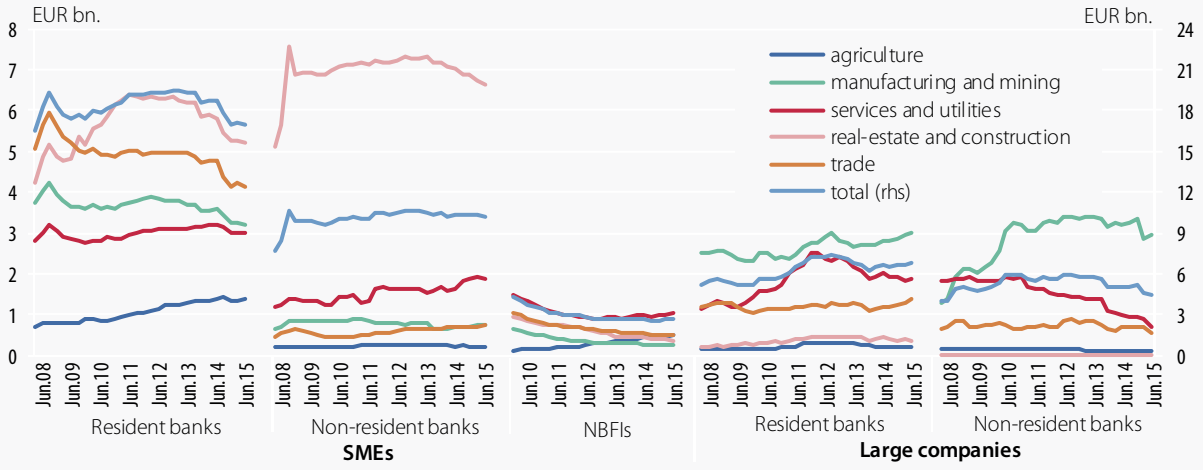
Banks' foreign currency-denominated loan stock, albeit on the wane, still holds the prevailing share, and such loans continue to carry the strongest risks to both firms and households (for details, see Sections 2.1.2 and 2.2.2). These developments support the need for a further highly prudent approach to extending forex loans over the period ahead as well.

[11] Isărescu, M. (2015), speech delivered at the conference titled "*Să înțelegem viitorul. Perspectivele sectorului bancar și ale economiei. Pot băncile schimba viitorul României în bine?*", http://www.bnr.ro/Alocu%C8%9Biune-sus%C8%9Binuta-in-cadrul-conferin%C8%9Bei-SA-IN%C8%9AELEGEM-VIITORUL.-Perspectivele-sectorului-bancar-%C8%99i-ale-economiei.-Pot-bancile-schimba-viitorul-Romaniei-in-bine-12392.aspx.

Loans to non-financial corporations

Corporate financing (excluding loans removed from the balance sheet) saw across-the-board declines for most types of loans. From the perspective of the shift in banks' business model, the adjustment in funding was less pronounced in the case of tradable goods sectors, high-tech firms, tradable services (travel, transportation, telecommunications) or productive sectors with export potential than for the other types of loans. From December 2013 to June 2015, the following developments in corporate financing were discernible: (i) tradable goods sectors witnessed a 0.5 percent increase in loans taken, against the 7.7 percent fall recorded by non-tradables (Chart 1.8); (ii) most of the key economic sectors posted lower financing, with construction being the hardest hit (down 12.9 percent), with the exception of the agricultural sector, which reported a 5.5 percent expansion in funding; (iii) loans to medium high-tech and high-tech companies saw a 10.6 percent decrease, compared with the 0.5 percent rise in the case of low-tech and medium low-tech companies; (iv) knowledge-intensive service companies recorded a sharper reduction in funding than less knowledge-intensive service companies, i.e. -9.5 percent against -5.2 percent; and (v) SMEs saw their financing dropping by 6 percent, a stronger decline than that reported by large companies (-1.5 percent).

Chart 1.8. Loans to SMEs and large companies, from resident banks and NFBIs and non-resident banks



Note: Large companies' loans from NFBIs have not been shown in the chart, as their amounts are small (EUR 0.5 billion).

Source: NBR, MPF

Bank lending to small and medium-sized enterprises remained weak. The number of SMEs that make recourse to resident bank loans is small and falling, accounting for 16.1 percent of total companies in operation[12]. These entities' contribution to economic activity is lower than that of SMEs not having taken any loan from resident banks. The SMEs with bank loans make up 22.6 percent of gross value added generated by non-financial corporations and hold 24.6 percent of their total assets. Moreover, they have on their payrolls 24.9 percent of the staff economy-wide, accounting for around 25.7 percent of corporate turnover (December 2014). Lending

12 The companies reporting positive turnover in 2014 (consistent with the financial statements submitted to the Ministry of Public Finance in 2014): 442,300 entities.

is concentrated on relatively few SMEs, out of which the first 10 percent of the SMEs by the value of bank loans take 79.5 percent of total financing.

The surveys among banks and non-financial corporations conducted by the NBR do not currently indicate a more robust resumption of lending to enterprises. According to the Survey on the access to finance of the non-financial companies in Romania and their capacity to cope with adverse financial conditions, the level of taxation, competition and lack of demand are the most pressing problems for companies in their day-to-day activity. Access to finance[13] is an issue for roughly 16 percent of these entities. The main obstacles faced by companies in accessing funds from banks and/or NFBIs are the requirements regarding the value or type of collateral, the overly high level of interest rates and commissions, and the loan covenants. Furthermore, the survey shows that companies are somewhat wary of (further) taking loans, regardless of their cost (64 percent would not take a loan in lei and 68 percent would not borrow in euro), and intend to keep unchanged or even curb their level of bank debt. Instead of applying for a bank loan, companies rely mainly on internal funds: 44 percent of respondents opted for resorting to retained earnings or the sale of assets as alternative financing sources, including the companies that recorded a decline in profits in the reference period (35 percent of companies in this state).

The Bank Lending Survey paints a similar picture. The balance sheet clean-up efforts by the private sector resulted in the local credit market being kept, with few exceptions, at low levels in terms of both demand and supply. Loan demand from non-financial corporations in the period December 2013 – June 2015 posted mixed developments, without showing a clear trend. Banks' expectations point to a possible rise in corporate loan demand. As for households, credit institutions identified a clear trend towards renewed demand for real-estate loans from December 2013 to June 2015, while in the case of consumer credit, demand was positive in the first part of 2014 and negative thereafter, but rebounded somewhat in 2015. Respondents expect stronger demand for both types of loans to households. On the supply side, credit institutions signalled, albeit feebly, a slight easing of credit standards for the loans extended to both non-financial corporations and households.

Borrowing potential of non-financial corporations

Even though corporate loans are still at low levels, there is a significant, yet unharnessed, sustainable borrowing potential economy-wide. To harness such a potential is all the more important, given the persistence of balance-sheet adjustments at company level[14]. Around 10,000 well-performing companies (selected in terms of profitability and investment criteria) report low indebtedness[15] and they could service a substantial loan volume that might entail, over time, a doubling of the current stock of loans to non-financial corporations. These enterprises play a significant role in the economy. The companies having a sustainable potential for

13 The survey results cover the period October 2014 – March 2015. For further details, go to: http://bnro.ro/PublicationDocuments.aspx?icid=16645.

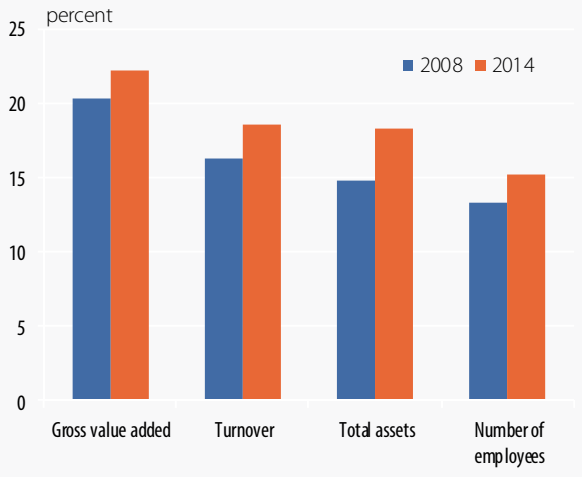
14 Isărescu, M. (2015), "Romania Investors Days" Conference, http://www.bnr.ro/'Romania-Investors-Days'-conference-12554.aspx.

15 Companies reporting a leverage ratio lower than 1 in December 2014, upon submitting their latest financial statements. The borrowing potential was computed by adding the room for debt growth for each company so that the leverage ratio be equal to 1.

borrowing contribute 22.2 percent to the sector's gross value added, account for 18.5 percent of overall turnover and 18.3 percent of total assets of non-financial corporations, and have 15.1 percent of staff on their payrolls (Chart 1.9). Out of all these entities, in June 2015 about 3,450 had outstanding bank loans worth lei 8 billion, making up 7.5 percent of the stock of loans to non-financial corporations. Small and medium-sized enterprises are the bulk of the said entities, on 96 percent, yet by volume large companies may account for some 75 percent of the potential value estimated at aggregate level.

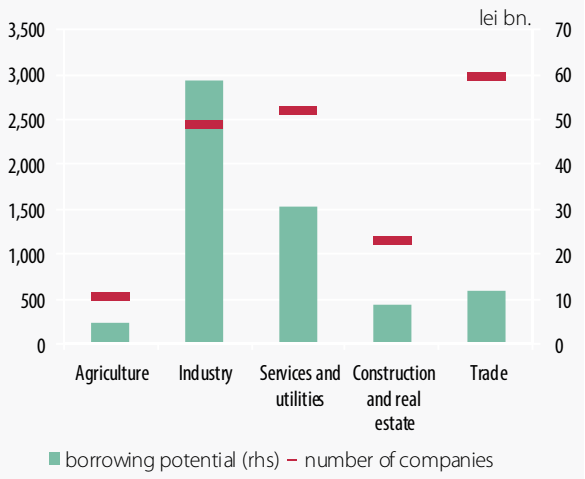
An encouraging sign is that the borrowing potential comes especially from the sectors that may weigh heavily upon Romania's economic growth pattern (Chart 1.10). Industry is the key sector where companies could account for a significant volume of loans, with a cumulated value exceeding that of all other economic sectors, i.e. 51.3 percent of total borrowing potential. Industry comes before services and utilities, whose share in total borrowing potential would be roughly 26.6 percent, ahead of trade on 10.3 percent. The companies that proved a lower capacity to cope with adverse economic conditions (for instance, those in construction and real-estate sectors) are less able to qualify for being granted new loans.

Chart 1.9. The role in economy of non-financial corporations with sustainable borrowing potential



Source: MPF, NBR calculations

Chart 1.10. Potential borrowing volume of the best-performing firms by sector, December 2014



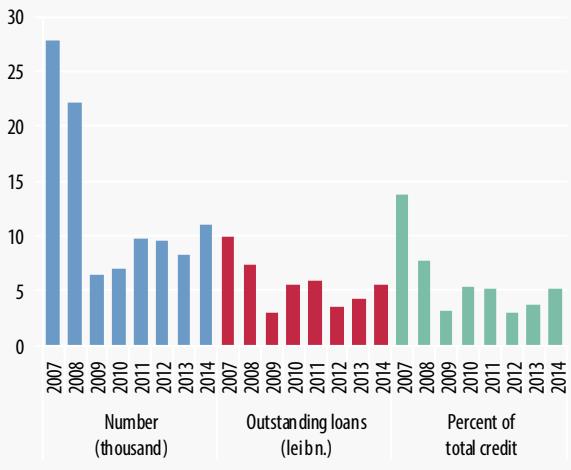
Source: MPF, NBR calculations

Another source of sustainably boosting domestic credit is non-financial corporations' external debt, i.e. resident credit institutions could attract local companies with loans from banks abroad, against the background of the sizeable cut in lending rates on leu-denominated business. The foreign loan stock of these enterprises tops 60 percent of the loans granted by resident banks to local enterprises. Specifically, larger enterprises could be an extremely valuable premium customer base for resident banks with which these firms could enter into beneficial long-term partnerships. External debt of large companies runs at EUR 4.4 billion and that of medium-sized enterprises at EUR 1.1 billion, with both categories holding external debt equivalent to about 23 percent of corporate loans granted by resident banks.

Against this background, credit institutions must persuade companies that entering into partnership with a bank may improve the firms' financial results, as the broader monitoring by a creditor may entail a sounder balance sheet or more efficient management of both material and human resources available. As stated in the previous Reports, with a view to fostering bankable firms' interest in what credit institutions have to offer, the following are needed: (i) to develop tailor-made products; (ii) to put in place special divisions focusing on loans granted to risky entities such as young firms; (iii) to streamline the lending process, etc. Moreover, banks should attach particular attention to the advanced training of loan officers responsible for analysing the applicants' loan projects and the company-specific risks so as to enhance their capacity to select creditworthy customers.

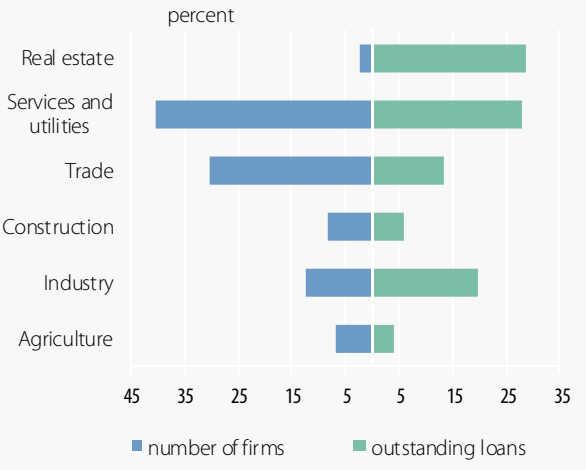
Mention should be made of the steps taken with respect to enlarging the banks' customer base by including the companies that had never taken loans before as well as the start-ups. In 2014, nearly 11,000 new entrants borrowed from resident credit institutions a total of lei 5.5 billion, accounting for 5.2 percent of corporate loans as of end-December 2014 (Chart 1.11). These businesses contributed 5.5 percent to the gross value added generated by non-financial corporations and had roughly 5.6 percent of the sector's staff on their payrolls at end-December 2014. Most of the funding was accessed by real-estate firms (28.7 percent), ahead of companies in manufacturing (19.3 percent), services (17.8 percent) and trade (13.5 percent). In terms of the number of new entrants into the credit market, the bulk is made up of companies in services (3,686), followed by trade and industry (2,855 and 1,139 respectively) (Chart 1.12). By size, small and medium-sized enterprises account for about 85 percent of the loans taken by the new entrants into the credit market.

Chart 1.11. New entrants into the credit market[16] and their importance for bank credit



Source: NBR

Chart 1.12. New entrants into the credit market by sector in terms of loan balance and the number of companies, December 2014



Source: NBR, MPF

[16] A company is deemed to be a new entrant into the credit market if it did not hold such debt instrument in the 24 months prior to applying for the current loan.

Start-ups carry out their activity largely without any bank support. Out of approximately 42,000 start-ups established in 2014, some 814 had outstanding loans from resident banks in June 2015. Their borrowings amounted to lei 1.1 billion, accounting for 1.1 percent of the corporate loan stock in June 2015. Lending to these enterprises is relatively concentrated, given that top-ten companies make up 34.6 percent of total loan value.

1.4. External balance

Romania's international trade and financial relations did not create vulnerabilities for financial stability. The current account deficit remained low, whereas capital flows were similar in composition to the preceding year. The main challenges to financial stability stemming from the companies with a bearing on external balance are related to strengthening the sustainability of the current account deficit, improving the competitiveness of Romania's exports and the capacity of foreign trade companies and foreign-funded companies to withstand potential adverse developments, as well as to increasing the share of such companies with borrowing potential in domestic banks' loan portfolios.

1.4.1. Current account

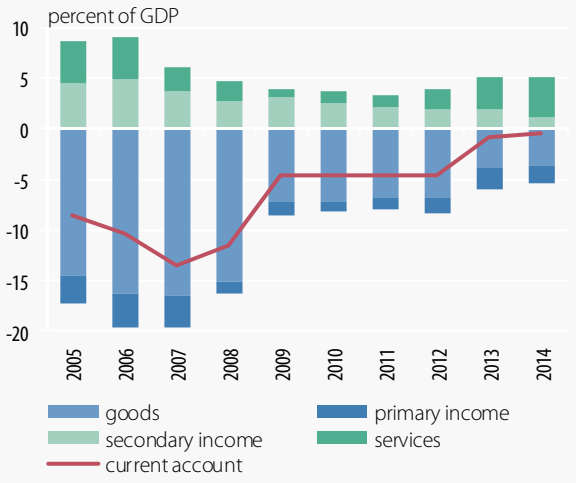
Since the previous Report, foreign trade relations have not been a source of vulnerability for financial stability, but certain challenges have however persisted in regard to: (i) strengthening the sustainability of the current account deficit and the competitiveness of Romania's exports, and (ii) improving the capacity of exporters to withstand shocks stemming from foreign markets, along with boosting lending to these businesses by resident banks instead of external creditors.

Current account deficit and export competitiveness

In 2014, the current account deficit narrowed further, standing at 0.4 percent of GDP (from 0.8 percent of GDP in 2013, Chart 1.13). The last three-year moving average of the current account balance (the scoreboard indicator monitored by the European Commission in the Alert Mechanism Report for the prevention and correction of macroeconomic imbalances in the EU) fell to -1.9 percent of GDP (compared with -3.3 percent of GDP in 2013), remaining below the indicative threshold (-4 percent of GDP).

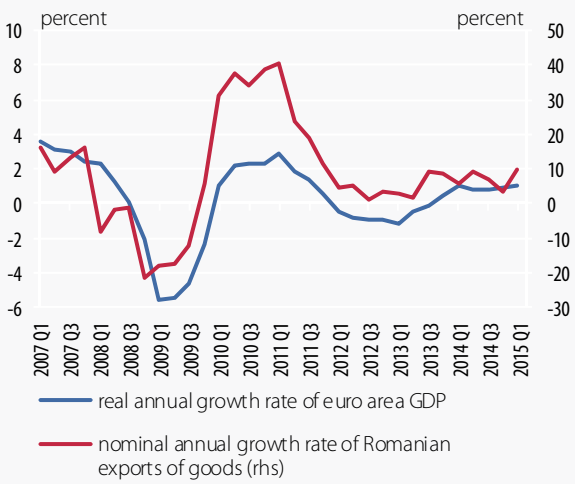
The European Commission's Spring 2015 Economic Forecast indicates a slight worsening in the current account deficit, which is however expected to remain relatively low (0.8 percent of GDP). Euro area developments are a key determinant of the current account deficit in the period ahead, given the strong influence exerted by the economic environment in the euro area on the dynamics of domestic exports (the correlation coefficient between the two series is roughly 72 percent, Chart 1.14). As a matter of fact, the euro area is Romania's main trading partner, accounting for 50 percent of the country's exports of goods in 2014.

Chart 1.13. Current account – total and components



Source: Eurostat, NBR calculations

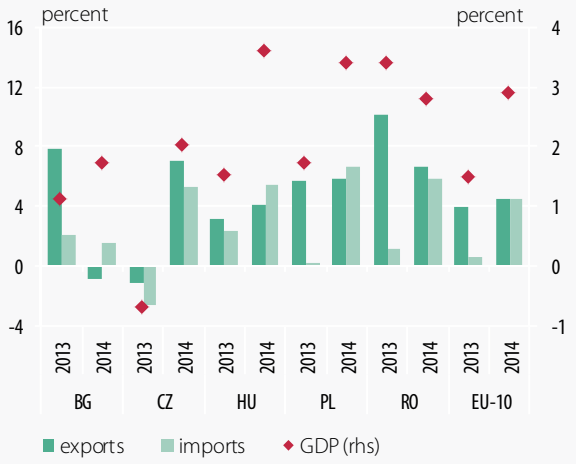
Chart 1.14. Euro area economic growth and Romania's export dynamics



Source: Eurostat, NBR calculations

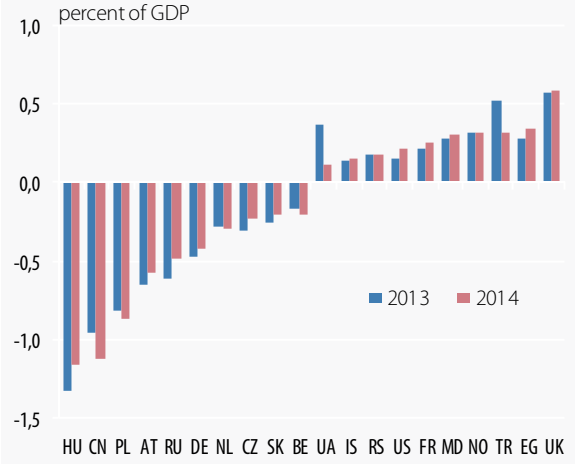
The gain in Romania's export competitiveness was mirrored by a higher growth rate of exports, as well as by a wider share of exported goods with medium to high value added. On the other hand, export concentration at firm level remained high, whereas the geographical spread and product variety were limited.

Chart 1.15. Annual growth rate of exports, imports and GDP in EU-10



Source: Eurostat, NBR calculations

Chart 1.16. Balance on trade in goods with Romania's major trading partners



Source: NIS, NBR calculations

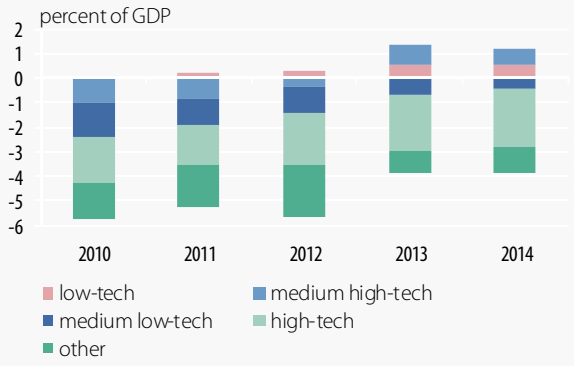
In 2014, Romania's exports posted a 6.6 percent annual growth rate, above the 4.4 percent EU-10 average (Chart 1.15), scoring the second-fastest dynamics after the Czech Republic (whose exports rose by 7.1 percent). Under the circumstances, Romania's export market share worldwide stayed on the upward path it followed over the last two years, inching up to 0.33 percent in 2014 from 0.31 percent in 2013. The country saw an increase in exports to both EU and non-EU markets (8.1 percent and 0.7 percent respectively). Romania's trade balance with a fair number of trading partners improved, irrespective of whether it was positive or negative (Chart 1.16).

Non-EU trading partners play an important part in the sustainability of the current account, as the trade balance with these countries stood at +0.9 percent of GDP in 2014, although down from 1.5 percent in 2013. Romania reported ongoing, albeit narrowing, trade deficit with the EU (3.3 percent of GDP in 2014 versus 3.9 percent a year earlier).

Romania's export market share increased amid the appreciation of the real effective exchange rate and the return to positive territory of unit labour cost dynamics in industry as of the latter half of 2014. These developments highlight a less strong connection between price competitiveness indicators and export dynamics, a phenomenon seen in other countries as well, especially in Central and Eastern Europe[17]. Non-price competitiveness factors are the main pillar of Romania's medium- and long-term external competitiveness. In this respect, it is necessary to find solutions to some of the country's soft spots, such as infrastructure, the institutional framework, business sophistication and innovation.

The increase in Romania's external competitiveness via a wider share of exports with high value added and innovative technology witnessed mixed developments. Thus, medium high-tech goods further held the largest share of Romania's exports (41.5 percent), making a larger contribution to the trade balance, to the amount of EUR 1 billion in 2014, accounting for 0.7 percent of GDP. By contrast, the share of high-tech goods in the country's exports declined marginally to 5.9 percent versus 6.2 percent in the previous year. High-tech goods saw their contribution to the trade deficit widening further to 2.4 percent of GDP (Chart 1.17), amid the decline in exports of these goods by 0.6 percent in annual terms, in conjunction with a 4.7 percent rise in imports.

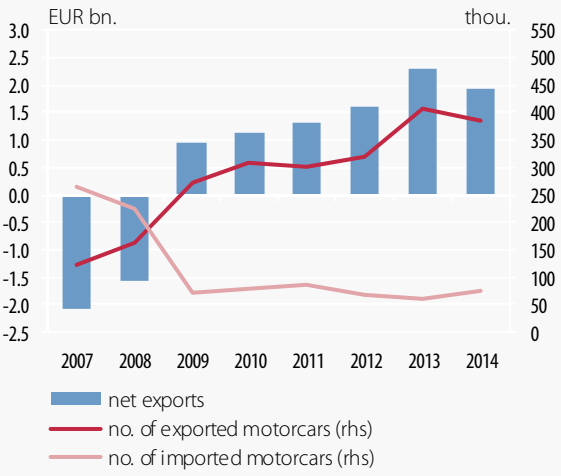
Chart 1.17. Balance on trade in goods by added value



Note: The classification of industries according to their technological intensity and of services according to knowledge intensity was made based on Eurostat aggregation.

Source: NIS, NBR calculations

Chart 1.18. Foreign trade in motorcars



Source: NIS, NBR calculations

17 Competitiveness Research Network (2013), First Year Results. http://www.ecb.europa.eu/home/pdf/research/compnet/CompNet_First_Year_Results.pdf.

Trade in motorcars played a significant part in the favourable developments posted by medium high-tech goods, ending 2014 on a EUR 1.9 billion surplus, i.e. 1.3 percent of GDP (Chart 1.18), given the further large number of units sold (some 386,000 in 2014). The companies in the automotive sector enjoy a better financial standing than the economy-wide average. Specifically, the sector's return on equity stood at 19.2 percent versus 11.2 percent for non-financial corporations as a whole, its leverage ratio is lower (1.24 against 2.22), while the capacity to cover interest costs from earnings and the liquidity indicators are on the rise and significantly higher than those of other companies.

Export concentration at firm level remained high: the top one percent Romanian companies by export value jointly accounted for 56.1 percent of total exports (slightly down from 2013), whereas the top ten percent exporters took about 88 percent of total exports. The top major exporters include mostly companies with majority foreign capital, jointly accounting for 77 percent of total exports.

Looking at the breakdown of exports by geographical spread and product variety, evidence at firm level shows there is room for improvement in sales distribution by destination market or product type. Thus, the geographical diversification of exports is limited: over 50 percent of exporters have a single destination market, whereas less than 20 percent of traders export to more than five destination markets. At the same time, approximately 70 percent of exporters sell less than five types of products. However, there are major differences between high-volume and small-volume exporters, namely the top 10 percent exporters trade 13 types of products and are active in seven destination markets, whereas across the economy exporters focus only on three product types that target a single destination market (median values in 2014). The significantly wider market and product diversification seen at top exporters is most likely one of the underlying factors behind their competitiveness on external markets. Moreover, export diversification in terms of destination markets and products is important as it reduces the country's vulnerability to demand shocks in trade partners or to high export price volatility.

Economic performance of and lending to foreign trade companies

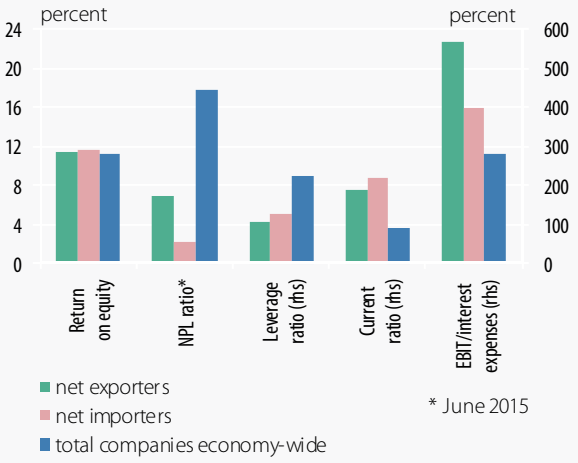
Foreign trade companies make a significant contribution to the creation of value added in the economy (approximately 40 percent in 2014). The financial soundness of foreign trade companies[18] continued to be above the economy-wide average. Return on equity was 11.4 percent for net exporters and 11.6 percent for net importers respectively, compared with the 11.2 percent average for non-financial companies as a whole, whereas the interest coverage ratio, the liquidity position and the leverage ratio stood at comfortable levels (Chart 1.19).

Foreign trade companies were further less important to the domestic banking sector than to the economy. Thus, in June 2015, the share of net exporters' loans in total loans to non-financial corporations was 11.5 percent, whereas loans to net importers

[18] They were divided into net exporters (generating trade surplus) and net importers (generating trade deficit). Only the companies that are engaged in significant exports or imports – worth more than EUR 100,000 in each quarter over a year – on an ongoing basis were taken into account. The above-mentioned businesses accounted for 96 percent of the exports of non-financial corporations and 91 percent of their imports, respectively, in 2014.

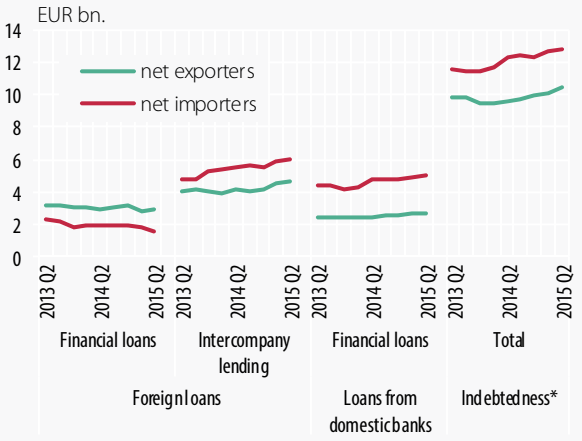
accounted for 21.5 percent of total loans to non-financial corporations. The readings are however higher than at end-2013 (by 1.8 percentage points for net exporters and by 4.7 percentage points for net importers respectively), amid faster dynamics of domestic bank loans to foreign trade companies as from the second half of 2014. Moreover, bank loans hold a relatively low share in the total funding of foreign trade companies, accounting for 26 percent of total financing of net exporters and 40 percent of that of net importers respectively, these companies making recourse mostly to loans from non-resident financial institutions and intercompany lending (Chart 1.20).

Chart 1.19. Indicators for foreign trade companies versus non-financial corporations, December 2014



Source: MPF, NBR, NIS

Chart 1.20. Funding of foreign trade companies



* financing from resident NBFIs not included

Source: NBR, NIS

Behind the domestic banks' stronger interest in funding foreign trade companies stands the latter's debt servicing capacity, which is above the economy-wide average (the non-performing loan ratio[19] of net exporters and net importers stood at 6.9 percent and 2.3 percent respectively, versus 17.9 percent across non-financial corporations as a whole in June 2015).

1.4.2. Capital flows

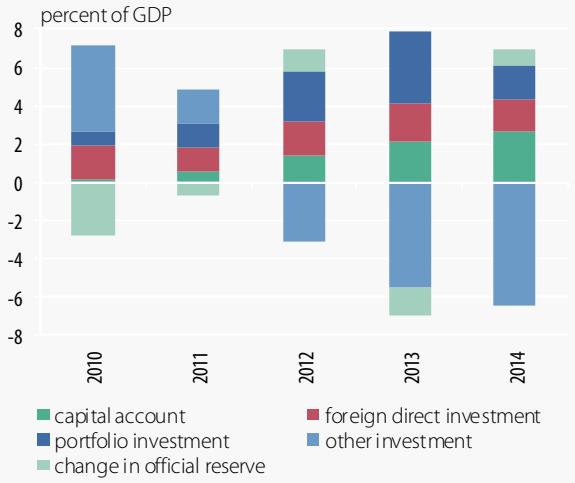
The dynamics and composition of foreign capital flows did not have an impact on financial stability. Romania's external debt stock contracted on both public and private channels. Foreign capital flows targeted to a greater extent the sectors that are able to bolster a sustainable economic growth pattern and foreign-funded companies preserved their capacity to adequately withstand a potential adverse shock.

[19] The non-performing loan ratio is the share of corporate loans past due by more than 90 days and/or for which legal proceedings have been initiated (with firm-level contagion) in total corporate loans.

Dynamics of capital flows

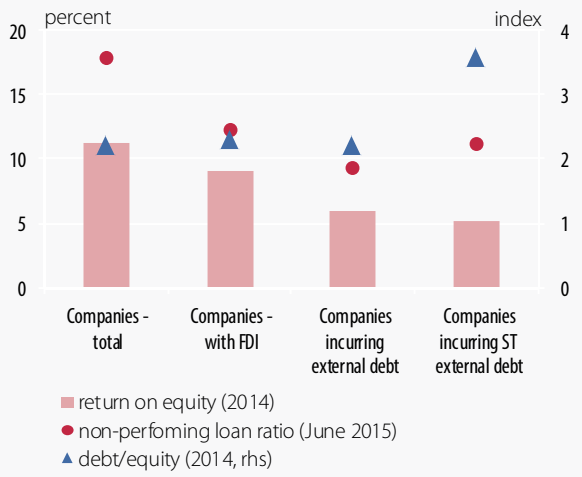
The 2014 capital flows did not put pressure on financial stability. The Romanian economy witnessed sustainable developments in net capital inflows: (i) foreign direct investment (FDI) further made a positive contribution, similar to that seen in the previous years; (ii) the capital account continued to increase, notably on account of the rise in the EU fund absorption rate from 26.5 percent in December 2013 to 44.9 percent in December 2014, and (iii) portfolio investment shrank by approximately 15 percent in 2014 versus 2013, alleviating the domestic economy's vulnerability to sudden changes in foreign investor risk appetite (Chart 1.21).

Chart 1.21. Net foreign capital flows in Romania



Source: NBR

Chart 1.22. Financial standing of direct investment enterprises and companies incurring external debt



Source: NBR, MPF, NTRO

Romania's external debt stock continued to drop December 2013 through June 2015 to EUR 91 billion. The breakdown by debtor shows that the external public debt, including that of monetary authorities, fell by 7 percent, given the repayment of a significant portion of the loan taken from the IMF under the financing arrangement signed by Romania with international institutions, whereas external private debt decreased by 4 percent in the period December 2013 – June 2015. The ratio of external debt to foreign exchange reserves stands at an acceptable level (67 percent in June 2015). The gold stock of the National Bank of Romania has held steady at 103.7 tonnes, being an important asset against the background of economic uncertainty.

Destination of foreign funds

The foreign financing of major business sectors promoting a sustainable economic growth pattern saw a slight increase. In June 2015, the external debt stock of companies in the tradables sector stood at EUR 15.2 billion, up 8 percent against December 2013, whereas companies in medium high-tech and high-tech industries posted a EUR 4 billion external debt, up 4 percent from December 2013.

Companies in the non-tradables sector further held a significant share in external debt (57 percent), with real-estate companies accounting for 29 percent of the total external debt of non-financial corporations (June 2015). Moreover, the debt composition adds to the sector's vulnerability, i.e. the high dependence on foreign funding, with financial institutions holding the largest share (62 percent), compared with 41 percent across the economy and approximately 33 percent for the manufacturing sector (June 2015).

Economic performance of and lending to foreign-funded companies

The composition of non-financial corporations' external debt points to low vulnerability of the real sector, with manageable risks to financial stability. Specifically: (i) the largest component of such debt is the medium- and long-term external debt (65 percent of total debt); (ii) the rollover ratio of short-term external debt is high (over 80 percent), and (iii) non-resident parent undertakings account for a considerable share of the non-financial corporations' external debt (59 percent of total external debt in June 2015). Any component of the real sector that incurs external debt runs a potential currency risk.

Direct investment enterprises have a fairly good capacity to withstand possible adverse developments, posting favourable financial results in 2014. These firms make a significant contribution to economic growth, accounting for 46 percent of the gross value added generated by non-financial corporations. The direct investment enterprises are less vulnerable in the face of a potential foreign funding withdrawal shock. Although a significant share of their funding comes from non-resident financial institutions, these enterprises contracted mostly medium- and long-term funds and are backed to a large extent by parent undertakings. The direct investment enterprises play an important part in foreign trade, generating approximately 82 percent of Romania's exports in 2014. However, looking at their impact on the current account, these companies produce a slight trade deficit (0.15 percent of the 2014 GDP).

Companies incurring external debt, especially over the short term, could affect the non-financial corporations sector via the payment discipline channel should they face a decline in their economic performance. Trade credits taken by foreign-indebted companies hold a sizeable share in domestic firms' total trade credits (27 percent in December 2014) and the total overdue payments of such companies to their trading partners account for 23 percent of total overdue payments to suppliers in the real sector (in December 2014). The number of companies with external debt undergoing insolvency or bankruptcy proceedings is low (6.3 percent in June 2015). The companies with outstanding foreign loans also benefited from significant domestic funding, i.e. lei 28.6 billion in June 2015. The concentration of exposure to companies with external debt across credit institutions is relatively high, as five banks account for 57 percent of these loans. The non-performing loan ratio of these companies stood below the average of the non-financial corporations sector (9.2 percent versus 17.9 percent in June 2015, Chart 1.22).

2. REAL SECTOR

Financial soundness of companies in Romania has continued to improve at aggregate level since the previous Report against the background of robust economic growth, but, in terms of the sector's composition, developments were uneven, featuring significant asymmetries. The firms that can contribute to a better sustainability of the economic growth pattern posted, overall, financial performances above the economy-wide average, but the pace of these positive developments was slower.

The lack of financial discipline remains the firms' main vulnerability. In spite of the amelioration seen over the last year, there is still large room for improvement and measures should be implemented to address particularly firms facing negative net worth. Insolvency diminished, but the negative effects that insolvent firms generated on the economy and the financial system remain significant.

In 2014, the aggregate net result totalled lei 20.9 billion. This reflects the contribution of two categories of firms posting opposite results: those with a net profit in amount of lei 62.9 billion and those with negative net results in amount of lei 42 billion. The volume of losses reported by the non-financial corporations sector continued to be significant in 2014 too, with the rises seen after the international financial crisis outbreak persisting in spite of the notable improvement in the macroeconomic framework. The losses incurred by the non-financial corporations sector in 2014 amounted to lei 42 billion (roughly EUR 9.4 billion), with the private sector making the largest contribution thereto (lei 39 billion or EUR 8.7 billion, i.e. 93 percent of total losses recorded across the economy by firms reporting negative net results). The firms having posted losses for a long time or firms lacking financial discipline distort the competition in real economy and generate negative effects on inflation (due to unpaid bills, business partners are forced to increase prices, and owing to overdue payments, banks put up interest rates). Furthermore, the inflationary loss generated by companies causes a drop in the gross value added across the economy and in GDP respectively.

The average default rate reported by Romanian companies with outstanding bank loans remains on a downward trend. This owes mainly to the positive expectations on the macroeconomic framework evolution as well as to the aggregate improvement in companies' financial soundness. Close monitoring should continue considering the further uneven dynamics of firms' financial performance at microeconomic level.

At aggregate level, households' indebtedness declined, the net creditor position towards the financial system consolidated, and net wealth grew, which allowed for the sector to improve its debt servicing capacity. The risks associated with lending to households have lessened since the previous Report, but the structural characteristics incorporate significant vulnerabilities, especially in terms of borrower income. Given

that indebtedness remains relatively elevated for the individuals with high financial fragility, the macroprudential instruments implemented in the previous years will most likely have to be recalibrated.

With a view to improving especially the capacity of over-indebted low-income households to repay their debts, the National Bank of Romania: (i) enforced regulations designed to cut debt restructuring costs, and (ii) encouraged banks to further seek solutions tailored to suit the broad range of cases in their loan portfolios, in order to support borrowers that have good recovery prospects. Moreover, lest financial system stability should be affected, the National Bank of Romania acted to prevent evergreening by banks, i.e. the provision of additional loans to stressed borrowers, in spite of their not being able to repay outstanding loans.

2.1. Non-financial corporations

In this chapter, the non-financial corporations sector includes all companies whose core business is to produce goods and non-financial services for the market.
The indicators calculated in this chapter differ from those reported in the Financial Accounts (ESA 2010): (i) as ESA 2010 provides the re-classification of certain entities from Non-financial corporations (S.11) into Central government (S.1311) and Local government (S.1313), respectively, based on some indicators on the state's control over the relevant entity and (ii) considering the differences in assessing certain debt instruments (at market value or book value). The decision to analyse the non-financial corporations sector overall originates in the need to capture a fair image of the risks that this sector may pose to financial stability. This approach is in line with the prudential treatment of financial institutions' exposures to this sector.

2.1.1. Non-financial corporations' economic and financial performance

The profitability, indebtedness and liquidity ratios reported by the active firms[20] across the economy continued to ameliorate over 2014 (Chart 2.1), which shows an increasingly higher potential for sustainably resuming lending to companies. Return on equity and return on assets went up marginally (from 11 percent to 11.2 percent and from 3.2 percent to 3.5 percent respectively, in 2013-2014). The development was accompanied by a rise in the profit margin (from 3.8 percent to 4.1 percent) and an increase in the interest coverage ratio[21] (from 2.5 to 2.8 over the same period). Companies' indebtedness shrank slightly (the leverage ratio – calculated as the debt-to-equity ratio – went down from 2.39 in 2013 to 2.22 in 2014) and liquidity indicators improved. The current ratio[22] rose to 90.4 percent from 88.7 percent in the previous year, while the cash ratio climbed to 16.2 percent (compared to 14.4 percent).

20 Firms having submitted their financial statements to the Ministry of Public Finance in 2014.

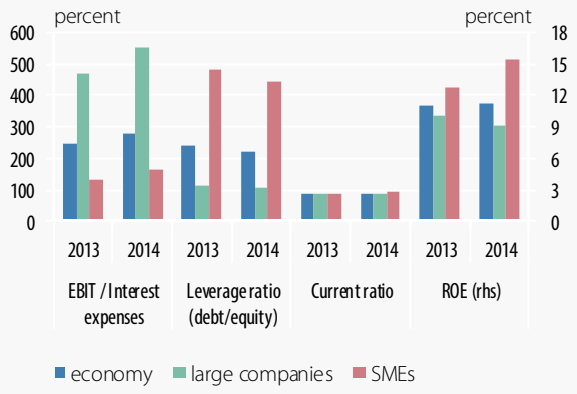
21 The EBIT/interest expenses ratio is calculated only for firms that incurred interest expenses (in 2014, the number of these firms neared 111,000).

22 The current ratio was calculated as a ratio of current assets to liabilities with maturity shorter than one year. The cash ratio was determined as the ratio of highly liquid assets (cash, bank accounts and short-term investments) to liabilities due in less than one year.

In this context, Romanian companies allotted additional amounts for investment, with cash flows earmarked for this purpose increasing by approximately 8.7 percent in 2014 from the previous year.

The aggregate results mask an elevated heterogeneity both at individual level and by type of company. The analysis by company size shows that the SMEs sector posted faster growth rates of turnover and gross value added than large companies; this confirms a more pro-cyclical nature of SMEs, which are capable of making a swifter recovery than large companies after recessions or economic crises thanks to their higher flexibility. These developments were, however, accompanied by a fall in the number of employees across the SMEs sector (-2.7 percent in 2013-2014), while payrolls of large companies stood 1.3 percent higher at end-2014 than at end-2013. For the second year in a row, ROE reported by SMEs surpassed that reported by large companies (15.3 percent compared to 9.1 percent in 2014); nevertheless, this was the result of a higher leverage ratio in the case of SMEs (4.43 versus 1.05). Looking at the structure of SMEs, the vulnerabilities identified in the previous Reports across micro-enterprises have not diminished: (i) the liabilities side of their balance sheets consists overwhelmingly of debts, (ii) their interest coverage ratio has remained below one (0.4) – totally unlike that reported by large companies, which stands comfortably at 5.5, and (iii) the pressure exerted by micro-enterprises on banks' balance sheets is further significant (the non-performing loan ratio[23] stood in this case at 40.5 percent in June 2015, with the share of loans taken by these firms accounting for 22.7 percent of banks' corporate portfolio).

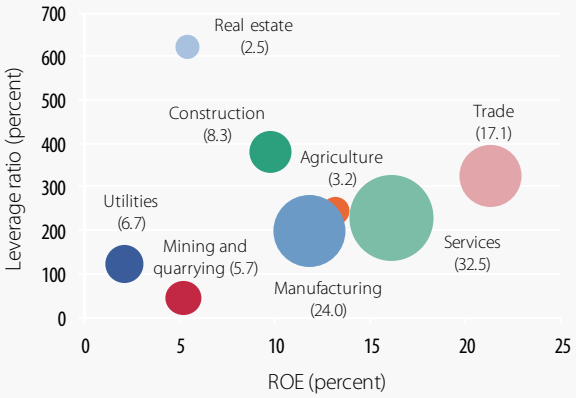
Chart 2.1. Financial soundness indicators for non-financial corporations



Note: The EBIT/interest expenses ratio is calculated only for firms that incurred interest expenses.

Source: MPF, NBR

Chart 2.2. Financial performance of non-financial corporations by sector (2014)



Note: The size of the circles is given by the share of the business sector in the value added generated by non-financial corporations (values in brackets).

Source: MPF, NBR

By business sector, the most dynamic sectors in terms of gross value added and turnover were agriculture (with a 9.2 percent increase in GVA and a 7.9 percent rise in sales) and industry (with a 7.7 percent advance in GVA and a 3 percent pick-up in sales). Based on ROE, agriculture ranks third (13.2 percent in 2014), after trade

[23] The non-performing loan ratio is the share of corporate loans past due by more than 90 days and/or for which legal proceedings have been initiated (with firm-level contagion) in total corporate loans.

(21.4 percent) and services (16.1 percent), Chart 2.2. At the opposite pole, the utilities sector posts the lowest profitability ratio (2.1 percent), while in the real-estate sector ROE stood, for the first time since the outbreak of the financial crisis, in positive territory (5.4 percent in December 2014 versus -4 percent in the previous year) amid better operating results. On the other hand, the liquidity position in the real-estate sector continues to report the lowest level across the economy, with the current ratio coming in at 46.5 percent in 2014, on the decrease compared to the prior year (48.3 percent) and almost half the average reported by non-financial corporations overall (90.4 percent). Given banks' significant exposure to the real-estate sector (15.3 percent in June 2015), the low liquidity level of this business sector may morph into a vulnerability.

State-owned enterprises' role in the economy continued to narrow (their share in added value and turnover declined from 8.2 percent in 2013 to 7.7 percent in 2014 and from 4.6 percent to 4 percent, respectively). This evolution occurred on the backdrop of the contraction in the value added and the number of employees reported by state companies (by 3 percent in 2013-2014) and in the context of a 9 percent fall in sales over the same interval. State-owned firms continue to post a ROE below the economy-wide average (5.2 percent compared to 11.2 percent) and a low liquidity level, with the ratio of current assets to liabilities due in less than one year coming in at 46.5 percent. On the other hand, compared to private companies, state-owned enterprises have a more prudent balance sheet structure, enjoying higher capitalisation than the former. The leverage ratio of these firms was 1.1 compared to 2.7 in the case of private companies with majority domestic capital and to 2.3 in the case of firms with majority foreign capital. Foreign private companies, although accounting for a small number (7.8 percent of total non-financial corporations that were active in 2014), play a major part in the economy, generating over 42 percent of the value added and the turnover across the economy and holding 26 percent of the number of employees. On the other hand, private companies with majority domestic capital, yet much more numerous (over 540 thousand companies, i.e. 90.6 percent of the total number of companies in 2014), generate 45 percent of the value added and slightly over 50 percent of sales.

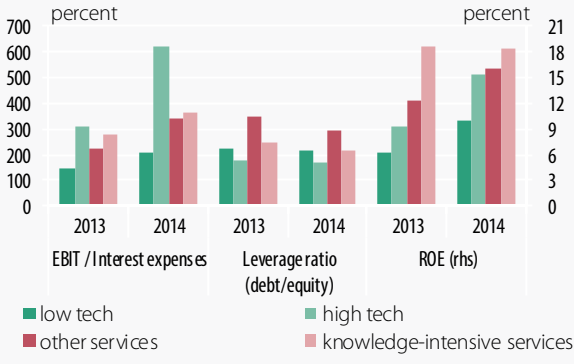
The firms that can contribute to a better sustainability of the economic growth pattern posted, overall, financial performances above the economy-wide average, but the pace of these positive developments was slower. Companies in the tradables sector increased marginally their contribution to the value added in the economy (to 38.8 percent from 38.5 percent in 2013) and to the number of employees (to 37 percent from 36.7 percent). These firms' ROE and interest coverage ratio contracted compared to the previous year (ROE fell to 7.6 percent and the EBIT/interest expenses ratio to 2.97). Firms in the tradables sector post lower indebtedness (the leverage ratio stood at 1.46 in 2014).

Net exporting companies[24] made a relatively steady contribution to value added in the economy (about 18.2 percent in 2014), amid a marginal increase in both the turnover

[24] Only firms having recorded exports or imports worth more than EUR 100,000 in each quarter of 2014 were taken into consideration.

and the number of employees in 2013-2014. These firms' ROE dropped close to the economy-wide average (11.4 percent compared with 11.2 percent), down by 1.7 percentage points versus the previous year (from 13.1 percent). The same as in 2013, the interest coverage ratio posts a comfortable 5.7 level, whereas the leverage ratio for these companies is considerably below that reported by non-financial corporations overall (1.05 compared with 2.22, in December 2014). Net exporting companies' current ratio is higher than the economy-wide average (107.2 percent compared with 90.4 percent, at end-2014).

Chart 2.3. Financial soundness indicators for non-financial corporations by technological intensity



Note: 1) The classification of industries according to their technological intensity and of services according to knowledge intensity was made based on Eurostat aggregation. 2) The EBIT/interest expenses ratio is calculated only for firms that incurred interest expenses.

Source: MPF, NBR

In 2014, firms operating in sectors producing goods and services with high value added and innovative technology improved their performance. The return on equity reported by high-tech and medium high-tech companies picked up to reach 15.3 percent in December 2014 (from 9.4 percent previously, Chart 2.3), while knowledge-intensive service companies saw a relatively unchanged return on equity of 18.3 percent, significantly above the average reported by companies overall (11.2 percent). Moreover, these companies improved their interest coverage capacity (the EBIT/interest expenses ratio posted by firms in the high-tech and medium high-tech sectors rose from 3.1 to 6.2, while that registered by companies in the knowledge-intensive service sector climbed from 2.8 to 3.7 in 2013-2014). On the other hand, the contribution made by the three categories of firms to non-financial corporations' gross value added in 2014 came in at 26.3 percent, slightly down (by 0.4 percentage points) from 2013.

Based on the regions where companies are registered, disparities remain in terms of performance. Specifically, South-West Oltenia has the lowest number of firms (43.9 thousand, i.e. 7.3 percent of the total number of companies in 2014) and makes the smallest contribution to value added in the economy (3.7 percent). Moreover, this region features a low return on equity (3.4 percent) and a low current ratio (85.6 percent compared with the 90.4 percent economy-wide average). București-Ilfov is the region which generates the largest share of value added, i.e. 46.7 percent, holding almost a quarter of the total number of active companies in 2014.

Heterogeneity is also visible across firms that fall within the same category by size, geographical region or business sector. The strong asymmetry in the firms' performance is the usual pattern to be found in most EU countries (CompNet, 2015[25]).

25 P. Lopez-Garcia, F. di Mauro and the CompNet Task Force (2015), "Assessing European competitiveness: the new CompNet micro-based database", *ECB Working Paper Series*, No. 1764, March 2015.

2.1.2. Financial discipline of non-financial corporations

The portfolio of bank loans to non-financial corporations improved in terms of quality in December 2013 – June 2015. This evolution was mainly determined by the stronger balance sheet clean-up, following the NBR's recommendations to credit institutions with a view to ensuring the conditions for sustainably resuming lending. This process materialised into a 5.7 percentage point fall in the non-performing loan ratio for non-financial corporations in December 2013 – June 2015 (from 23.6 percent to 17.9 percent). There is still significant room for cleaning up bank balance sheets, considering that approximately 80 percent of non-performing loans report payments overdue by more than one year and the migration rate of non-performing loans to lower risk buckets is very low.

Although it entered a downward trend, the relatively high non-performing loan ratio contributes further to a great extent to maintaining a fragile pace of lending to companies. It is necessary that, alongside the clean-up of non-performing loans, credit institutions should seek to turn to good account the lending potential that exists across the economy but has not yet been exploited. The downward trend in the non-performing loan ratio is expected to persist in the coming period. Banks have the necessary resources to resume financing of firms, given the adequate levels of solvency, liquidity and provisioning. Total capital ratio stood at 18.1 percent in June 2015, significantly higher than the 8 percent required level, while the coverage ratio of corporate non-performing loans with IFRS provisions came in at 68 percent.

The credit migration matrix by days past due confirms the need for banks to carry on the clean-up of their balance sheets: (i) approximately half of the firms with payments overdue between 16 and 90 days have witnessed a risk profile worsening during one year, and (ii) a very low number of borrowers reporting payments overdue for more than 90 days have seen an improvement in their risk bucket (Table 2.1).

Table 2.1. Credit migration matrix by days past due (June 2014 – June 2015)

%	A	B	C	D	E
A	93.1	1.4	1.5	1.1	2.9
B	42.1	18.9	8.4	10.1	20.6
C	32.8	6.2	15.9	14.7	30.4
D	20.6	5.9	11.4	20.6	41.5
E	2.5	0.4	0.7	1.0	95.4

A – delay of maximum 15 days

B – delay from 16 days to 30 days

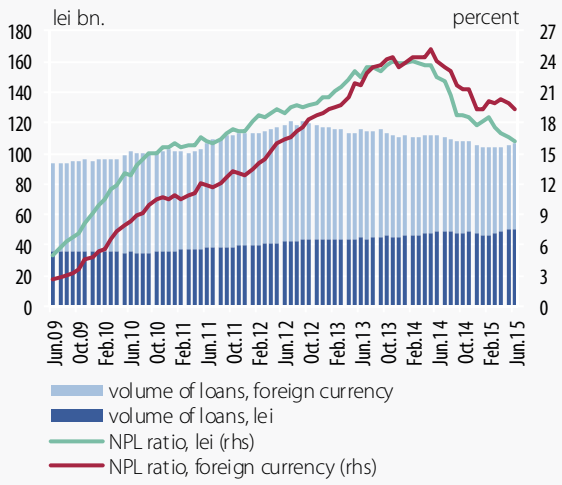
C – delay from 31 days to 60 days

D – delay from 61 days to 90 days

E – delay of more than 90 days

Source: MPF, NBR

Chart 2.4. Non-performing loans by currency

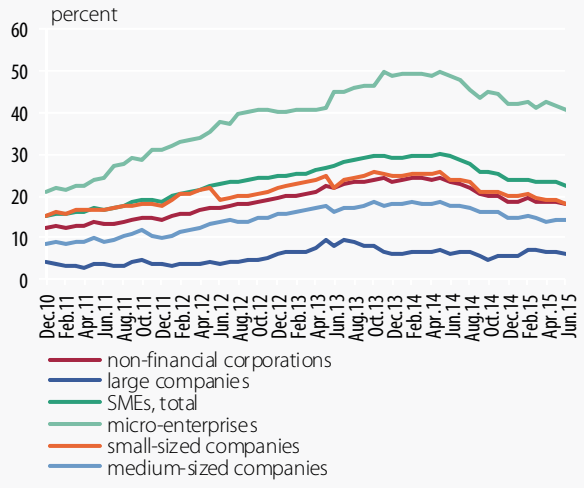


Source: MPF, NBR

The further implementation by banks of a prudent lending policy, with tougher conditions imposed on unhedged firms, is also necessary in order to improve bank asset quality. The risk level of lending in foreign currency supports such an approach, as it is higher than that of lending in domestic currency: (i) the non-performing loan ratio for loans in foreign currency stood at 19.4 percent in June 2015 (compared to 16.2 percent for loans in lei, Chart 2.4); (ii) the spread between the two ratios has steadily grown since the beginning of 2015, and (iii) loans in foreign currency hold 56.4 percent of the volume of non-performing loans in banks' balance sheets. The NPL ratio for loans in euro stood at 19.5 percent in June 2015 (down from 23.4 percent in December 2013), while that for loans in US dollars was 14.2 percent (compared with 18.2 percent at end-2013). The risk posed by the potential difficulties in servicing debt in US dollars (assuming an appreciation of this currency against the leu) is manageable across the Romanian banking sector. The number of companies with outstanding loans in US dollars is low (around 500 in June 2015, an overwhelming share of which are unhedged[26]) and the volume of exposures in US dollars stood at lei 3.2 billion in June 2015 (namely 3.1 percent of total bank loans to non-financial corporations).

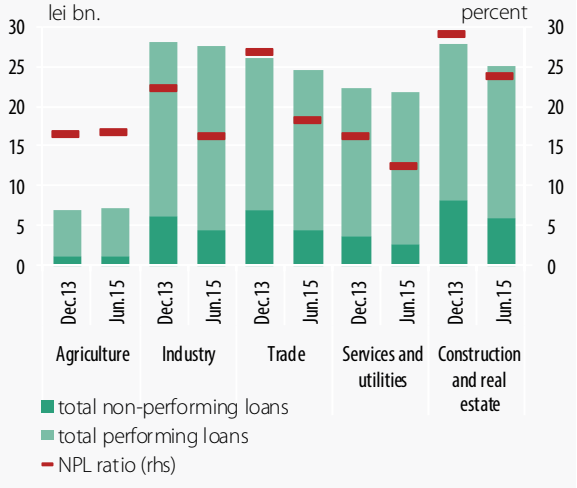
By borrower size, micro-enterprises are the riskiest firms in banks' portfolio, ahead of small-sized companies (Chart 2.5). In both cases, the non-performing loan ratio fell markedly (by more than 6 percentage points in June 2015 compared to December 2013). At the opposite pole are large companies, with a non-performing loan ratio of 6.2 percent, slightly up compared with December 2013 (+0.2 percentage points).

Chart 2.5. Non-performing loan ratio by company size



Source: MPF, NBR

Chart 2.6. Loan stock and non-performing loan ratio by sector



Source: MPF, NBR

By business sector, companies in construction and real estate continue to pose the largest credit risk, with their non-performing loan ratio reporting the highest level

[26] Hedged borrowers are defined as those borrowers for whom net export in 2014 covers the annualised debt service in foreign currency (principal and interest for both domestic and external loans) in the same period. Debt service is estimated as follows: 1) For domestic loans a) it is assumed that maturing credit lines are not renewed (loans are fully repaid at maturity), b) for the rest of loans, it is assumed that they are serviced in equal monthly instalments calculated based on the constant annuity formula. 2) Net external payments made by companies in the period under review are considered for short-term external loans. 3) For medium- and long-term external loans, the following are taken into account: principal repayments and interest payments on these loans in the reviewed period.

(23.9 percent, in June 2015), albeit on a significant decrease versus December 2013 (from 29.2 percent). The lowest non-performing loan ratio was recorded by companies in services and utilities (12.7 percent in June 2015), followed by firms in industry (which are expected to contribute to the sustainable change in the economic growth pattern), i.e. 16.4 percent (Chart 2.6).

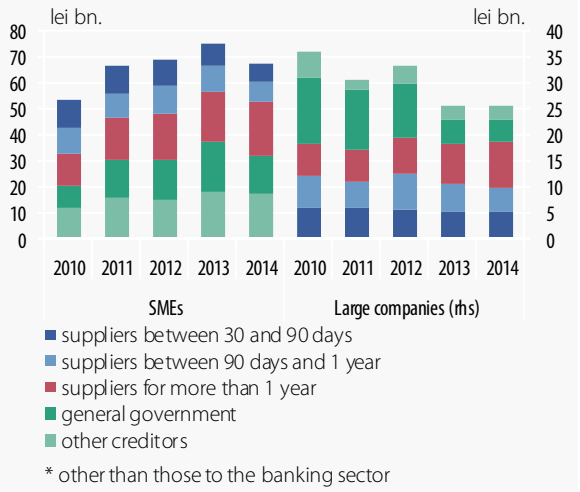
Credit institutions' stronger orientation towards sectors generating a higher value added, that could support the change in the Romanian economic growth pattern, is also warranted by the capacity of the firms in the respective sectors to better service their debts to banks compared to the rest of the economy. The non-performing loan ratio for companies in medium high-tech and high-tech sectors stood at 15.8 percent in June 2015 (down from 19.1 percent at end-2013), while that for firms in the knowledge-intensive service sector fell to 11.7 percent in June 2015 (from 15.8 percent in December 2013). The non-performing loan ratio across low-tech and medium low-tech sectors and less knowledge-intensive service sector stood at 16.7 percent and 16.6 percent respectively (June 2015). Moreover, the risk generated by tradables companies remained significantly below that posed by firms in the non-tradables sector (14.7 percent compared to 19.7 percent, in June 2015).

The drop in the claims on the social security budget and the government budget not collected by companies on the due date contributed most likely to limiting the non-performing loan flow over the last three years. Thus, in 2012, the companies newly classified as non-performing that had significant overdue claims[27] on the government budget generated a 5.4 percent NPL ratio, while in 2013 and 2014 the reported NPL ratios were 3.9 percent and 1.9 percent respectively.

Non-financial corporations' payment discipline in relation to their business partners and the state improved both at aggregate level and by company size. The total volume of overdue payments generated by this sector shrank by approximately 8 percent in 2014 compared to the previous year (to lei 92.5 billion) amid the contraction in overdue payments to both suppliers and the state. A significant proportion of economy-wide arrears is generated by firms that reported net losses in 2014. These firms accumulated overdue payments in amount of lei 61.9 billion, out of which lei 33.5 billion to suppliers (namely 62 percent of total overdue payments to suppliers generated by non-financial corporations overall), lei 14.3 billion to the government budget (namely 77 percent of total overdue payments to the state) and lei 14.2 billion to other creditors (namely 70 percent of these arrears across the economy).

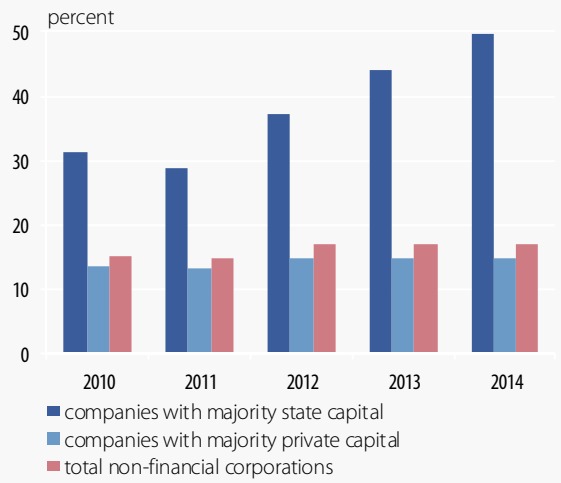
[27] Firms which in 2012 held overdue claims on the social security budget and the government budget exceeding lei 5,000 or firms for which such claims took more than a quarter of total claims.

Chart 2.7. Breakdown of overdue payments* across the economy



Source: MPF, NBR

Chart 2.8. Default rate[28] on commercial liabilities by ownership



Source: MPF, NBR

Payment discipline improved both across large companies and SMEs (Chart 2.7). The total volume of overdue payments reported by large companies diminished by 0.8 percent in 2014, against the background of a 3.3 percent drop in overdue payments to the government budget (to lei 4.2 billion, in December 2014), as well as amid the contraction of overdue payments to other creditors (-10.8 percent), while overdue payments to suppliers went up by 1.4 percent (from lei 18.4 billion in 2013 to lei 18.6 billion in 2014). On the other hand, total overdue payments recorded by SMEs saw a 10.6 percent adjustment, the dynamics being chiefly influenced by the fall in overdue payments to the government budget, as well as by lower overdue payments to suppliers. In this context, SMEs generate 72 percent of the volume of total overdue payments in the economy and 77 percent of the arrears to the government budget, respectively.

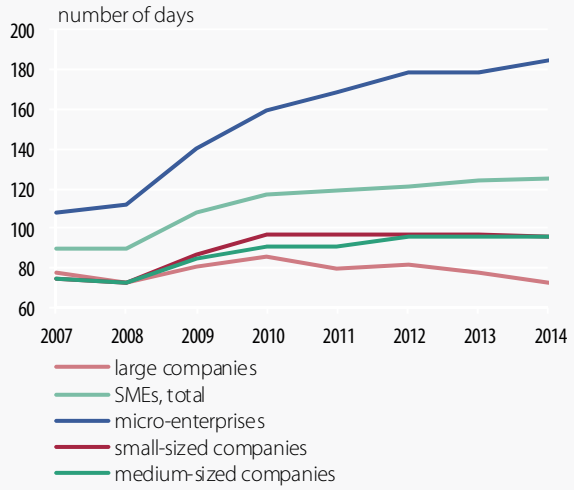
The lower capacity of SMEs to service their debts to both banks and the other partners across the economy (suppliers, the state) is further negatively influenced by the difficulties encountered by these companies in collecting overdue claims, as well as by a lower capacity to cover interest expenses from their earnings. Thus, the receivables collection period reported by SMEs (125 days) continues to exceed that corresponding to large companies, which saw further improvement (from 78 days in 2013 to 73 days in 2014, Chart 2.9).

State-owned enterprises encounter higher difficulties in collecting claims from business partners compared to the other firms in the economy, which affects their capacity to service debts (Chart 2.8). The difficulty faced by state-owned companies in collecting claims exerts pressure on their liquidity level. The receivables collection period is longer than that reported by private companies (144 days compared to 91 days, in December 2014), while the current and quick ratios post considerably lower levels. State-owned firms service debts to their partners in a differentiated manner:

[28] The default rate was calculated as a ratio of the arrears generated by companies in relation to their suppliers to total commercial liabilities incurred by the firms generating the respective overdue payments.

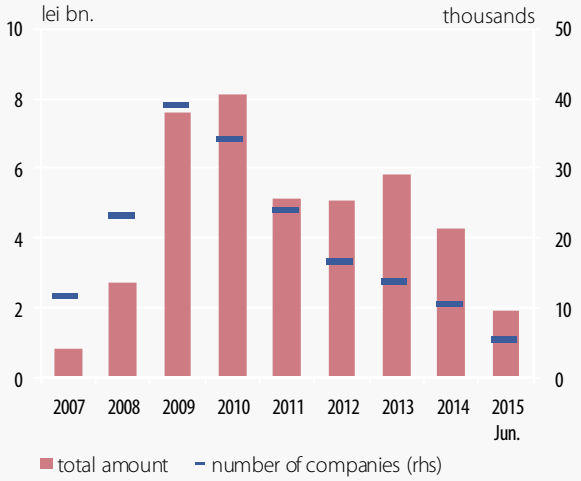
(i) significantly better than private companies regarding their liabilities to banks, and (ii) considerably worse than private companies regarding their liabilities to business partners. The default rate on commercial liabilities of state-owned enterprises in 2009-2014 remained above that posted by private companies (Chart 2.8), while the non-performing loan ratio for bank loans to firms with majority state capital is significantly lower than that for bank loans to private companies (9.2 percent compared to 18.3 percent, in June 2015). State-owned enterprises hold 27.4 percent of total overdue payments of non-financial corporations to the government budget (in December 2014), while overdue payments to business partners come in at 16.7 percent as a share of non-financial corporations' overdue payments to suppliers. At sectoral level, the highest default rates were recorded by private companies in the utilities, agriculture and real-estate sectors (22.3 percent, 21.9 percent and 19.8 percent, respectively). The concentration of companies generating arrears expanded in 2014, given that the top 10 companies, most of which are state-owned, account for 19 percent of the overdue payments to suppliers reported across the economy, compared to 16 percent in the previous year.

Chart 2.9. Receivables collection period



Source: MPF, NBR, NBR calculations

Chart 2.10. New major payment incidents



Source: MPF, PIR, NBR calculations

The volume of major payment incidents generated by non-financial corporations plunged in 2014 versus the previous year by approximately 26.2 percent to lei 4.3 billion, whereas the number of firms producing such incidents stood, for the first time over the last years, below the values seen at the beginning of the financial crisis, after a 22.6 percent decline in 2014 against the preceding year (to approximately 11 thousand firms, Chart 2.10). The concentration of payment indiscipline remains elevated, with the top 100 companies generating approximately 59 percent of the volume of major payment incidents. These trends persisted in the first six months of 2015, with the volume of major payment incidents contracting by 5 percent from the same year-earlier period.

The volume of losses reported by the non-financial corporations sector continued to be significant in 2014 too, with the rises seen after the international financial crisis outbreak persisting in spite of the notable improvement in the macroeconomic

framework (Chart 2.11). The losses incurred by the non-financial corporations sector in 2014 amounted to lei 42 billion (roughly EUR 9.4 billion), with the private sector making the largest contribution thereto (lei 39 billion or EUR 8.7 billion, i.e. 93 percent of total losses recorded across the economy by firms reporting negative net results). Total losses of state-owned enterprises which report negative net results amount to lei 3 billion (approximately EUR 0.7 billion). A large number of firms posted net losses in 2014 (about 245 thousand firms, i.e. over 40 percent of the total number of companies). The firms having posted losses for a long time or firms whose financial discipline is low distort the competition in real economy and generate second-round negative effects on inflation (due to unpaid bills, business partners are forced to increase prices, and owing to overdue payments, banks put up interest rates). Furthermore, the loss generated by companies causes a drop in the gross value added across the economy and in GDP respectively.

Chart 2.11. Aggregate loss of firms with negative net results by ownership (nominal values)

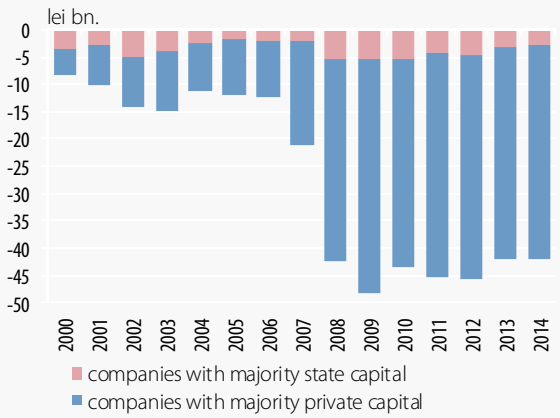
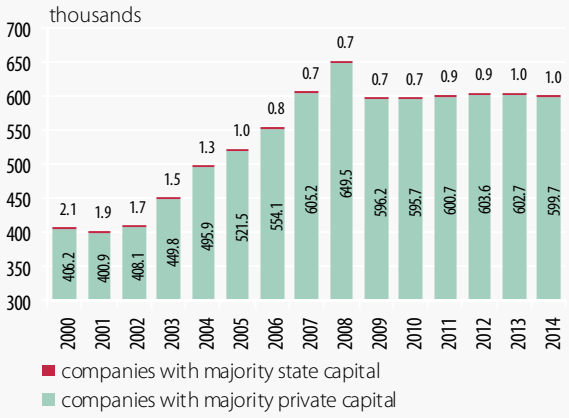


Chart 2.12. Number of firms by ownership



Note: To the firms that annually submit their financial statements to the MPF add undisciplined firms which do not submit their financial statements (estimated by the MPF at approximately 10 percent).

Source: NTRO, MPF, NBR calculations

Over the last years, the number and role of state-owned enterprises across the economy has diminished considerably in favour of private companies, with the number of economic agents with majority state capital shrinking to a half and the number of private companies across the economy rising by 48 percent in 2000-2014 (Chart 2.12).

The number of private companies incurring losses went up markedly compared to 2000 (by more than 88 thousand to 244.6 thousand, accounting for 41 percent of private companies). However, the number is on the decrease compared to 2009, when the number of private firms reporting losses across the economy reached an all-time high (341 thousand). Firms carrying out activity on the books only (with a zero turnover) hold an important share of private economic agents reporting losses, amounting to over 67 thousand in 2014.

Moreover, a significant share of the losses seen in 2014 is accounted for by firms which consistently reported negative financial results. Over 42 percent of the companies that posted losses in 2014 have faced losses over the last three years. These firms generate almost half of the aggregate loss (lei 20.3 billion).

Firms with negative net results operate mainly in trade (38 percent, 2014) and services and utilities sectors (37 percent), yet the largest losses are posted by services and utilities (lei 12.8 billion, i.e. 31 percent of the aggregate loss) and industry (lei 12.1 billion, i.e. 29 percent). By size, the overwhelming majority of firms reporting losses are micro-enterprises (231.5 thousand).

The aggregate result shows high concentration, with only 342 large companies accounting for more than a quarter of total losses reported across the economy (lei 10.6 billion). By territorial distribution, the counties with the largest number of firms reporting negative net results in 2014 are Bucharest (24 percent), Cluj (5.4 percent), Timiș (4.7 percent) and Constanța (4.6 percent).

Incurring losses repeatedly leads to capital erosion and, hence, to higher indebtedness. A significant proportion (around 75 percent) of loss-making firms reported negative net worth in 2014. Across the economy, there are 285.6 thousand firms with negative equity (48 percent of the total number of firms), while almost one third of companies have posted negative equity over the last three years.

A paradox emerges, considering the high frequency of loans granted by private shareholders to their own loss-making firms. At end-2014, the balance on these loans came in at lei 87.3 billion (accounting for 24 percent of the total debt reported by those companies), of which lei 63.9 billion worth of loans directly from shareholders and lei 23.4 billion worth of loans from affiliates of the same group of companies.

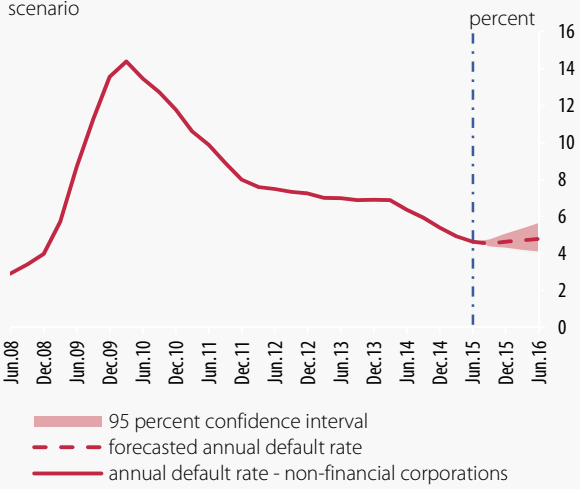
There is an important direct relationship between the volume of losses, financial discipline and economic growth. Companies generating losses have a negative impact on the economic activity through: (i) a decline in the gross value added generated by the non-financial corporations sector and, implicitly, in the gross domestic product; (ii) lower government budget receipts, and (iii) distorted relationships between business partners owing to the worsening of payment discipline across the economy. The significant and consistent improvement in the trade, fiscal and accounting legislation, including through the implementation of the best practices in the field at European level, may help diminish this vulnerability across the non-financial corporations sector.

Box 3. Probability of default of non-financial corporations in Romania

The average default rate reported by Romanian companies with outstanding bank loans remains on a downward trend according to the macroeconomic baseline scenario, reaching 4.6 percent in June 2015, compared with 5.4 percent in December 2014 and 6.9 percent in December 2013 (Chart A). This owes mainly to the positive expectations on the macroeconomic framework evolution, as well as to the agregate improvement in companies' financial soundness. In this context, the average default rate stood for the first time below the level seen at the outbreak of the financial crisis in Romania. However, close monitoring should continue considering the further uneven dynamics of firms' financial performance at microeconomic level and the fact that the average probability of default on a

one-year horizon is estimated to pick up slightly to 4.8 percent in June 2016, assuming the macroeconomic framework stays within the expected parameters.

Chart A. The annual default rate across the non-financial corporations sector according to the macroeconomic baseline scenario



Source: NBR calculations

The probability of default was calculated on a 12-month horizon for non-financial corporations with outstanding bank loans reporting no payments overdue for more than 90 days over the last 12 months. The individual probability of default (PD) is calibrated by using the annual default rate (the percentage of newly-defaulted companies in the last 12 months). The model was developed in two stages, as follows:

I. a model was built for estimating the probability of default of the non-financial corporations sector with a view to assessing the quality of the portfolio of corporate loans;

II. a connection/link was established between the PD model and a macroeconomic module, with the aim to capture the impact of macroeconomic developments passed through to the banking sector via non-financial corporations. The scenario underlying the (baseline) macroeconomic projection is that discussed in the August 2015 Inflation Report.

A logit model was used for determining the probability of default. In order to obtain the final specification of the model, apart from winsorising, additional filters and discriminatory power tests were applied on a pool of candidate explanatory variables and intermediate default models[29]. The variables included in the specification used in this model were the leverage ratio (debt/equity), the interest coverage ratio, ROE, debt-to-value added ratio, and four dummy variables related to bank debt service of non-financial corporations (<15 days past due, 15-30 days past due, 30-60 days past due, 60-90 days past due).

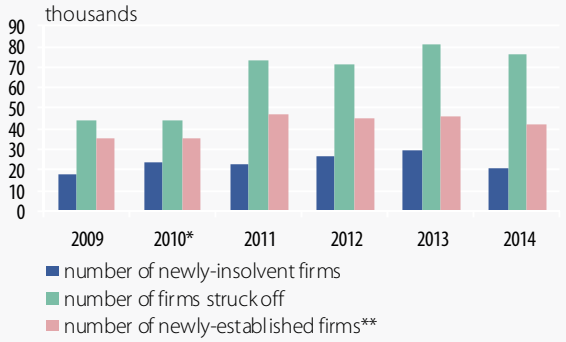
The approach used for the macroeconomic module is a Merton model with a latent factor, which includes a default threshold dependent on the state of the economy. The role of this module is to estimate a future default rate that would incorporate the developments in macroeconomic variables, namely the GDP growth rate and the real effective exchange rate (REER). The link with the PD model is ensured via the calibration method, which shifts the distribution of the PDs in order to capture the macroeconomic context.

[29] For further methodological details, see Costeiu, A. and Neagu, F. (2013), "Bridging the Banking Sector with the Real Economy. A Financial Stability Perspective", *ECB Working Paper Series*, No. 1592, https://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1592.pdf?5fe4120138ff31abc23085eb335ed7d9

2.1.3. Developments in non-financial corporations' insolvency

Apart from the weaker results posted by many companies, insolvency is another important phenomenon that contributes sizeably to the persistently high level of losses in the economy, given its low efficiency (Chart 2.13).

Chart 2.13. Number of newly-established firms and insolvency cases



* other 127.3 thousand firms struck off based on GEO No. 44/2008 provisions add to the 43.8 thousand firms struck off in 2010

** provided that firms submitted their financial statements to the MPF in the respective year

Source: MPF, NTRO, NBR

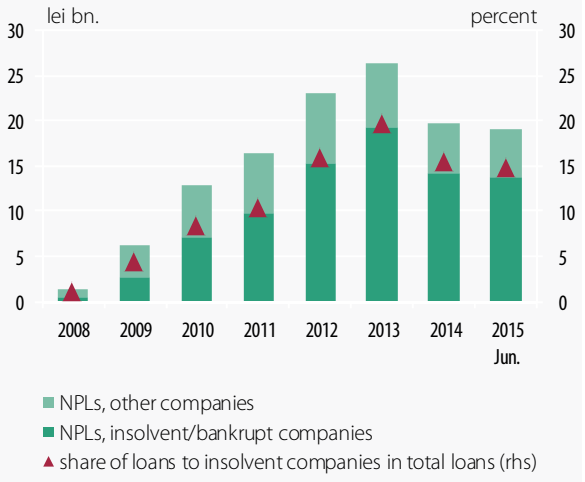
Companies in Romania resort more frequently to insolvency proceedings than firms in other European countries (Creditreform Economic Research Unit, 2012), but the efficiency of the process is rather low[30]. The World Bank ranks Romania among the worst-performing ten countries in Europe in terms of how easy it is to resolve insolvency. Insolvent firms play a relatively small direct part in fuelling economic growth, but may significantly affect financial stability via worsening payment discipline across the economy and loss making in the banking sector.

The number of firms undergoing insolvency proceedings in June 2015 amounted to 45.2 thousand (accounting for 7.5 percent of the total number of non-financial corporations which submitted their financial statements to the Ministry of Public Finance in 2014).
The insolvency phenomenon has seen marked improvement since 2014: (i) the number of newly-insolvent companies in 2014 plunged by 30 percent versus 2013 to 20.6 thousand, while (ii) in January-June 2015, less than 6 thousand firms entered insolvency proceedings, i.e. half the figure recorded in the same year-earlier period. Insolvent companies' role in the economic activity is modest. The firms undergoing insolvency proceedings in June 2015 have on their payrolls 4.5 percent of the number of employees in the non-financial corporations sector, generate 2.7 percent of gross value added and hold 8.3 percent of firms' total assets.

Although their direct role in the economy is contained, insolvent firms play a significant part in payment discipline in the economy. Companies undergoing insolvency proceedings in June 2015 cause considerable distortions in the payment mechanism across the economy, generating a third of the overdue payments to suppliers (lei 17.7 billion) and 68 percent of the payments overdue to the state and other creditors (lei 26.5 billion) economy-wide at end-2014. Most late payments generated by insolvent companies were overdue for more than one year (81 percent of overdue payments to suppliers, December 2014).

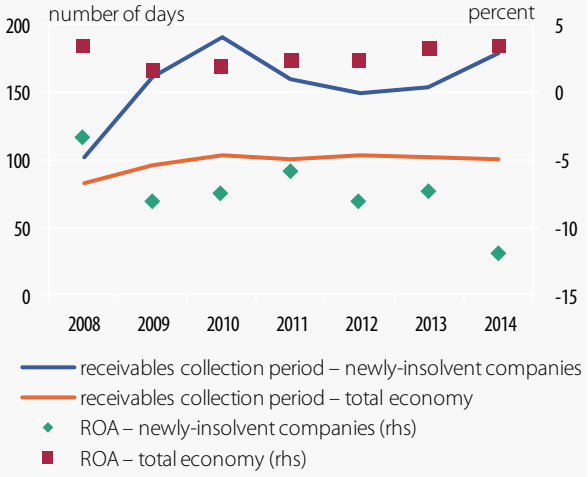
30 For further details, see Mihai, I. and Tarța, A. (2015) "The Role of the Insolvency Framework in Strengthening the Payment Discipline and in Developing the Credit Market in Romania", *Central Bank Journal of Law and Finance*, No. 2/2015.

Chart 2.14. Non-performing loans generated by insolvent/bankrupt companies



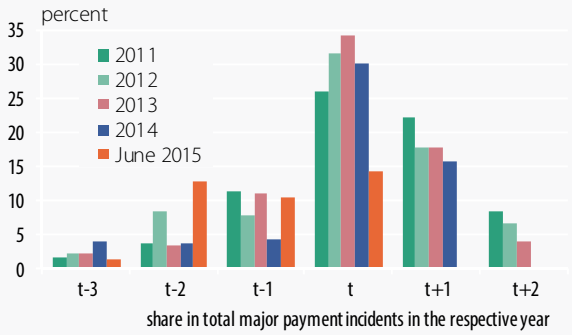
Source: NTRO, MPF, CCR, NBR calculations

Chart 2.15. The financial soundness of newly-insolvent companies in the year before entering insolvency proceedings



Source: NTRO, NBR calculations

Chart 2.16. Major payment incidents generated by insolvent companies, by year of entering insolvency proceedings



Note: t represents the year when insolvency proceedings were initiated. For example, in 2014, 30 percent of the total major payment incidents were generated by companies that entered insolvency proceedings in the same year, 4.1 percent of the incidents were generated by firms that became insolvent in 2013 (the blue bar in t-1 section) and 15.6 percent by firms that were to become insolvent in January-June 2015 (the blue bar in t+1 section).

Source: NTRO, MPF, CCR, NBR calculations

Insolvent firms' role in generating major payment incidents in the economy increased slightly: in June 2015, the firms undergoing insolvency proceedings carried 46 percent of the volume of major payment incidents (lei 0.9 billion), up from 2014, when their share was 43 percent. The negative effects caused by these firms in the economy are significant not only at the moment of initiating insolvency proceedings: a substantial proportion of the volume of major payment incidents (about 18 percent, average values for 2011-June 2015) is generated by companies one year before insolvency proceedings are opened. For instance, in 2014, 30 percent of the volume of major payment incidents across the economy came from firms which started insolvency proceedings the same year, while 15.6 percent of major payment incidents were generated by firms that were to declare themselves insolvent in January-June 2015 (Chart 2.16). These are reasons for the information collected by the National Bank of Romania via the Payment Incidents Register to be more widely accessed by firms in order to check on their present or potential business partners.

Insolvent firms also generate the largest share of non-performing loans in banks' balance sheets: 73 percent in June 2015 (similarly to 2013 and 2014, Chart 2.14), although they account for under 15 percent of the volume of loans taken. Net of these exposures, the non-performing loan ratio in the banking sector would stand below 6 percent in June 2015. The probability that insolvent firms' non-performing loans may become performing again is very low, which warrants the National Bank of Romania's recommendations to credit institutions to continue the balance sheet clean-up. In June 2015, a considerable part of the loans to insolvent companies had been non-performing for more than a year (about 75 percent of total loans to insolvent

companies). Based on the collateral associated with such loans, real-estate collateral was the most frequently used (roughly 87 percent of loans had, inter alia, real-estate collateral). Only 6.1 percent of the loans granted to insolvent firms were not collateralised (in June 2015). Companies undergoing insolvency proceedings may also cause negative effects on external creditors, given that they have outstanding loans from external financial institutions in amount of EUR 1.3 billion and loans from parent undertakings worth EUR 0.9 billion (in June 2015).

Insolvent companies are overwhelmingly private enterprises with majority domestic capital (over 80 percent) and mainly micro-enterprises (89 percent in June 2015). By business sector, they operate in the services and trade sectors (about 60 percent), but companies in industry also hold a relatively significant share in the number of insolvent firms compared to their representation across the economy. The share of industrial companies in total insolvent companies is 17 percent in May 2015 against 10 percent in total firms across the economy. A substantial share of total insolvent firms as well as of companies newly declared insolvent starting in 2014 is accounted for by companies set up during the economic boom, namely in 2000-2008 (over 50 percent of firms).

Companies undergoing insolvency proceedings face financial difficulties long before becoming insolvent: a quarter of the firms declared insolvent during January 2008 – June 2015 had been inactive in the year preceding the insolvency declaration (their turnover amounted to zero), 75 percent of them had had negative net worth in the year before, and more than a third had had negative equity in the previous three years (technical insolvency). Besides, in the year prior to the initiation of insolvency proceedings, these firms reported negative profitability as well as a significantly lower asset use efficiency than the rest of the companies (asset turnover of newly-insolvent firms is about 16 percent lower than the economy-wide average, average values in 2008-2014), Chart 2.15. At the same time, the receivables collection period reported by these firms compares unfavourably with the sector's average, exceeding by 1.6 times that recorded by non-financial corporations overall (average values in 2008-2014). Insolvent companies feature high indebtedness and a precarious liquidity position prior to the year when they are declared insolvent. These characteristics advocate the implementation of swift, flexible solutions for the market exit of unviable firms. A feasible approach should be to consistently abide by the provisions of Law No. 31/1990 on commercial companies as regards the steps to be taken when the net assets of a company fall below the required threshold. Such a measure would also lead to an improved payment discipline in the economy.

The low efficiency of insolvency proceedings is also linked to their being relatively lengthy. The average duration of insolvency for the companies that were wound up January 2014 through June 2015 was approximately 18 months, varying substantially across the sectors in which they operated (firms in industry reported a longer average duration of insolvency proceedings, i.e. 22 months). The new regulations on insolvency passed in 2014 should lead to a shorter duration of corporate insolvency. Nevertheless, the impact of the legal changes will be felt over the longer term, given that a significant number of companies declared insolvent still fall under the scope of former regulations (out of 45.2 thousand insolvent companies in June 2015, only

26.4 thousand firms entered insolvency proceedings in January 2014 – June 2015). Consequently, the clean-up of unviable businesses and the reduction of non-performing loans via insolvency arrangements will most likely proceed at a slow pace economy-wide.

As the experience of the last decade has shown, companies declared insolvent generally fail to recover and are eventually wound up. Restructuring is rarely used, as only a small number of firms that entered insolvency proceedings were reorganised. Companies undergoing a judicial reorganisation procedure account for 5.9 percent of the firms that entered insolvency proceedings January 2014 through June 2015. These companies are typically larger enterprises (in terms of asset size, number of employees and turnover) that post a lower level of indebtedness than the other insolvent firms. Out-of-court workouts are infrequent, as 570 insolvency proceedings were annulled in January 2014 – June 2015.

2.1.4. Risks generated by the commercial real-estate sector and mortgage-backed lending to non-financial corporations

Romanian banks' exposure to assets correlated with the real-estate market[31] is further high, i.e. 74.2 percent of the stock of loans to non-financial corporations in June 2015, down 2.8 percentage points from December 2013), which might advocate the introduction of macroprudential measures with a view to mitigating this concentration risk. Such exposure is widespread across the domestic banking sector (the Herfindahl-Hirschman concentration index stood at 759[32] in June 2015). The developments in the credit risk associated with the said exposures indicate that the real-estate collateral does not guarantee the borrower's higher debt-servicing capacity. The non-performing loan ratio for the portfolio of mortgage-backed loans came in at 22.2 percent in June 2015 (Chart 2.17), above the economy-wide average (17.9 percent) and significantly higher than that of loans without real-estate collateral (7.6 percent).

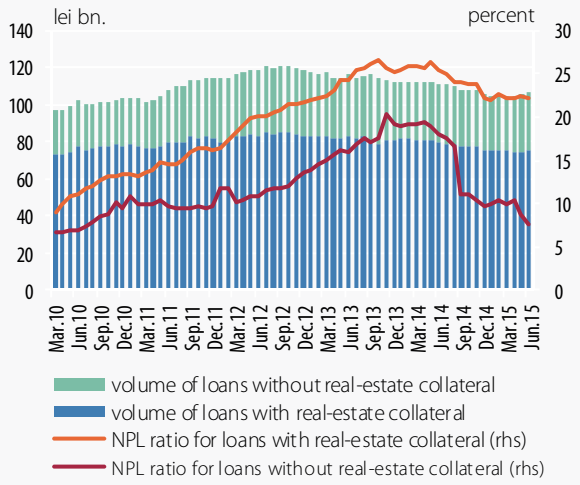
Close monitoring of the potential currency risk is warranted, given that more than half of the exposure to assets correlated with the real-estate market is in foreign currency and the NPL ratio for foreign-currency denominated exposures to the real-estate market is higher than that for leu-denominated exposures, i.e. 23 percent versus 21 percent in June 2015.

Credit institutions have a significant direct exposure to companies in the construction and real-estate sectors, loans granted to these firms holding 23.5 percent of the stock of loans to non-financial corporations in June 2015. The credit risk from exposures to construction remains high, with the NPL ratio standing at 39.3 percent in June 2015, down from 43.2 percent in December 2013. On the other hand, the NPL ratio posted by real-estate companies came in at 15.6 percent, being substantially lower than at end-2013, i.e. down by 5.7 percentage points.

31 The loans considered included the loans granted to companies in the construction and real-estate sectors and mortgage-backed loans (other than those granted to the aforementioned sectors).

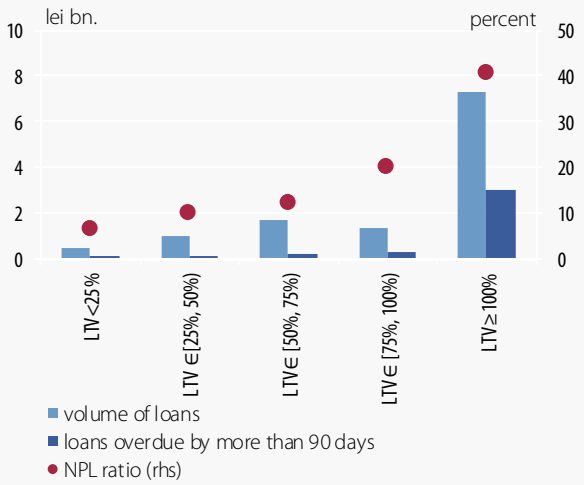
32 The threshold beyond which the Herfindahl-Hirschman index signals a concentration problem is 1,800.

Chart 2.17. Developments in lending and the NPL ratio – real-estate collateral



Source: CCR, NBR calculations

Chart 2.18. NPL ratio by LTV bucket in June 2015[33]



Source: CCR, NBR calculations

The developments in the construction and real-estate sectors should further be monitored, given the vulnerabilities shown during the crisis. The companies operating in the said sectors report high levels of indebtedness, notably above the economy-wide average (the leverage ratio for real-estate companies stood at 6.2 in December 2014 and that for firms in construction was 3.8, compared with 2.2 economy-wide). Moreover, companies in the aforementioned sectors continued to show loose payment discipline, as they accounted for approximately 16 percent of the total overdue payments of non-financial corporations in 2014, similarly to the previous year. These firms generate a significant share of major payment incidents across the economy (22 percent, down however from over 40 percent in 2013). In 2015 H1, major payment incidents produced by firms in the construction and real-estate sectors held 17 percent of the total volume of such incidents, almost half of the share taken in the same year-earlier period.

The NPL ratio and the loan-to-value (LTV) ratio continued to be tightly linked. The riskiest loans are those with an LTV ratio above one (loans past due by more than 90 days account for 40.8 percent of the said loans), while in the case of loans with an LTV ratio below one, the share of loans overdue by more than 90 days is substantially lower (13.3 percent in June 2015, Chart 2.18).

Companies operating in the real-estate and construction sectors are also vulnerable with respect to their financing structure, being exposed to the risk of shifts in international investor sentiment. These firms account for 32 percent of the total external debt of the real sector, with externally indebted real-estate companies tending to underperform economically (for further details, see Section 1.4.2. Capital flows).

33 Loans backed solely by mortgage.

2.2. Households

2.2.1. Households' balance sheet and saving behaviour

Aggregate household indebtedness fell moderately in the period under review and, while it generally stands below the levels posted across the EU, the risks associated with low-income households becoming overindebted and the fast-paced dynamics of lending call for monitoring. The favourable macroeconomic picture contributed to a decrease in the short foreign currency position and to households' net wealth remaining on an uptrend, albeit at a slow pace. Moreover, the changes in the demographic structure may exert additional pressure on financial stability in the medium to long run via the developments in lending and saving.

Household indebtedness[34]

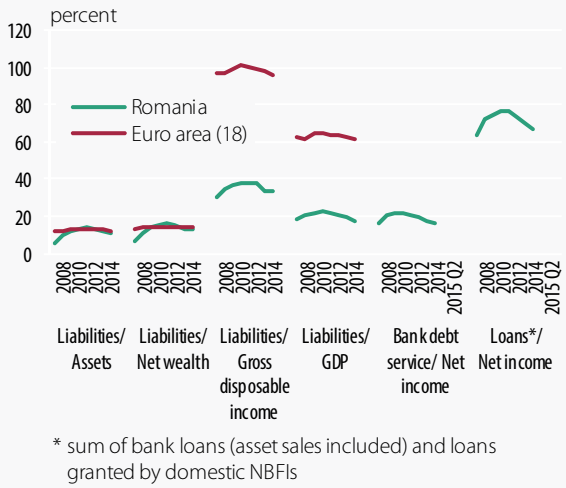
Aggregate household indebtedness amounts to lei 118 billion (of which lei 113 billion owed to banks and lei 5 billion to NBFIs, June 2015), the ratio of bank debt service to net income declining by 2.8 percentage points in the reviewed period (December 2013 – June 2015, Chart 2.19). Behind the drop in aggregate household indebtedness indicators stood: (i) balance sheet factors, such as debt reduction following the lower flow of lending than the volume of loans that reached maturity or were removed from banks' balance sheets; (ii) macroeconomic factors, like the rise in households' net income (the economy-wide minimum wage included) and net wealth; (iii) monetary factors, namely the fall in interest rates to historical lows, and (iv) fiscal factors, i.e. the cut in the VAT rate.

Household indebtedness is significant from the perspective of the number of persons with outstanding loans from banks and NBFIs. At present, 4.3 million individuals have outstanding loans from these financial institutions (of which 1.4 million have credit cards), accounting for 47 percent of the economically active population (June 2015). On average, a borrower has 1.6 loans from banks and NBFIs and 20 percent of bank borrowers have loans from at least two banks (June 2015).

At an individual level, the risks stemming from the structural characteristics of household indebtedness remain important, translating into: (i) the asymmetry of indebtedness distribution across income brackets (Chart 2.20); (ii) the further prevalence of foreign currency-denominated loans, and (iii) the predominance of consumer loans.

[34] It includes banks' on-balance sheet exposures, their asset sales, exposures of domestic NBFIs and banks' off-balance sheet exposures. Unlike on-balance sheet exposures, which consist solely of the amount of outstanding principal, off-balance sheet exposures also comprise the related claims, in line with the FINREP framework at solo level.

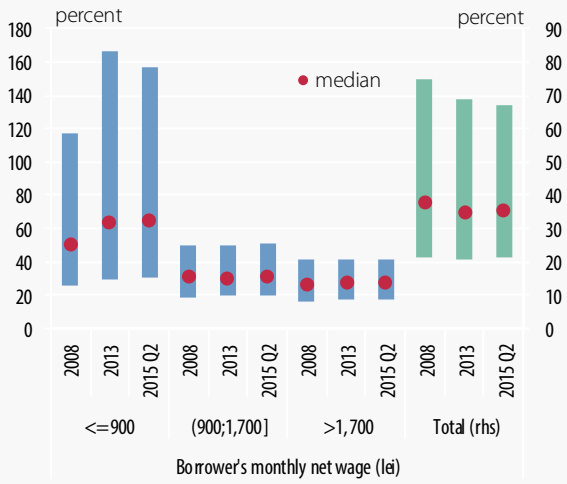
Chart 2.19. Household indebtedness – aggregate indicators[35]



* sum of bank loans (asset sales included) and loans granted by domestic NBFIs

Source: ECB, NBR, NIS

Chart 2.20. Distribution of household indebtedness to banks by monthly net wage[36] (individual data)



Source: NBR, CB, MPF

Borrowers with an income below the economy-wide minimum wage exhibit the largest asymmetry of the debt service-to-income (DSTI) ratio. The corresponding DSTI ratio stands at 65 percent as compared with 35 percent for the household sector as a whole (median value, June 2015, Chart 2.20). In addition, around 40 percent of employees with outstanding bank loans belong to this household segment (Chart 2.21, June 2015), although they account for less than a third of the exposure, i.e. 29 percent of employees' bank loans. The aforementioned aspects, along with the fact that the said borrowers show the highest risk of payment default, lead to increased financial frailty and sensitivity to interest rate, exchange rate and income shocks. This sensitivity was confirmed during 2008-2015, borrowers with an income below the economy-wide minimum wage posting an increasing level of indebtedness compared to 2008, due to a drop in the earnings of borrowers previously included in higher income brackets and a rise in the amounts to be repaid, as well as to a higher degree of indebtedness for new debtors than in 2008. Once the loans to below-minimum wage earners outstanding in 2008 reached maturity, the share of such borrowers narrowed and lending targeted particularly above-average income earners (Chart 2.21).

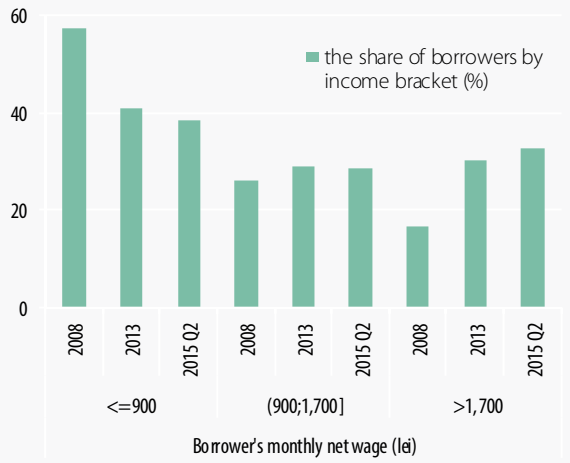
With a view to improving the capacity of over-indebted low-income households to repay their debts, the National Bank of Romania: (i) enforced regulations designed to cut debt restructuring costs, (ii) contributed its expertise, at the request of the Ministry of Public Finance, to setting out the technical criteria for the implementation of legal measures aimed at reducing the debt service for households and (iii) encouraged banks to further seek solutions tailored to suit the broad range of cases in their loan portfolios, in order to support borrowers that have good recovery prospects.

35 Net income is estimated as the sum of net wages, social security benefits, workers' remittances from abroad and transfers. Unlike net income, gross disposable income also includes the self-consumption component, which is not, however, generally used for loan repayment. Debts are the total sum of household loans in compliance with the financial accounts (including the related claims).

36 Indebtedness was calculated only for households with bank loans, based on individual data. Constant annuities were used and co-borrowers were not considered.

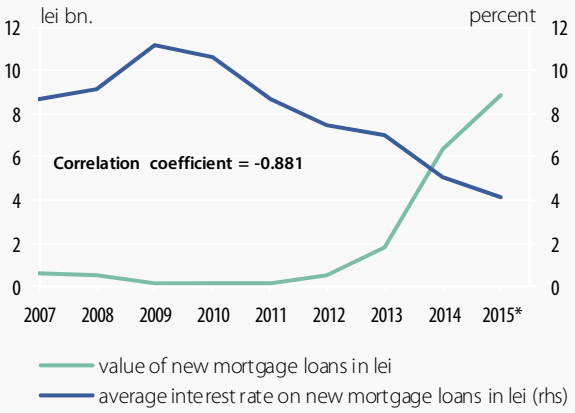
Moreover, lest financial system stability should be affected, the NBR acted to prevent evergreening by banks, i.e. the provision of additional loans to stressed borrowers, in spite of their not being able to repay outstanding loans.

Chart 2.21. Distribution of the number of borrowers, natural entities, by monthly net wage (individual data)



Source: NBR, CB, MPF

Chart 2.22. Correlation between the value and the average interest rate of new mortgage loans in lei



* January-June, annualised data on the value of mortgage loans; January-July, data on the average interest rate

Source: NBR

Foreign currency-denominated loans are further the main component of household indebtedness, albeit on a decline, on the back of the positive developments in leu-denominated loans, which hold 95.7 percent of the new loans granted in the period under review. The stock of foreign currency loans extended by banks (including asset sales) and NBFIs accounted for 55 percent of total loans to households (June 2015), down 11 percentage points during December 2013 – June 2015. CHF-denominated lending to households did not pose any systemic risk following the appreciation of the Swiss franc versus the domestic currency in early 2015 (Box 4).

Consumer loans are further prevalent in the loan portfolios of banks and NBFIs, having however a significantly smaller share also amid the faster-paced removal of non-performing loans from banks' balance sheets. Consequently, the share of real-estate loans grew steadily in the reviewed period, from 37.5 percent in December 2013 to 44 percent in June 2015 (data also include asset sales by banks). The "First Home" programme made an additional substantial contribution to the higher share of real-estate loans (Box 5).

The declining interest rate on mortgage loans has stimulated the extension of new loans in recent years (Chart 2.22). The correlation coefficient between the volume of new leu-denominated mortgage loans and the interest rate on such loans stood at approximately -0.881 during 2007-2015. More than 90 percent of mortgage loans were granted at a variable interest rate.

Households face mixed prospects regarding their capacity to take credit. On the one hand, households' perception of their financial standing in the coming year turned

positive again in January 2015, after posting negative values for more than five years. On the other hand, negative expectations persist with regard to unemployment.

Credit institutions estimate that households' demand for loans, particularly real-estate loans, will rise further. Moreover, the level of household endowment with durables points to the sector's dormant potential for purchasing such goods. Durables bought in the boom phase of the credit cycle tend to have depreciated, which could prompt households into buying new ones. The residual maturity of the consumer loans granted during 2004-2008 is 2.4 years (median value, June 2015). The purchase of these goods could help boost consumer loan demand.

Box 4. CHF-denominated lending[37]

CHF-denominated loans to the non-government sector do not pose any systemic risk, holding a low share of GDP (1.3 percent in June 2015) and a small and declining weight in total non-government credit (4.1 percent in June 2015). This compares with a share of CHF-denominated loans in total non-government loans of 14.9 percent in the case of Poland and 6.2 percent in that of Hungary respectively (March 2015).

A significant fall in the number of CHF-denominated loans can be seen against end-2014, i.e. around 19 percent in December 2014 – June 2015, this trend gaining momentum in the last months. The decrease in the number of loans owes primarily to the implementation of measures for the conversion of these loans into a different currency, as well as to their repayment, removal from banks' balance sheets or sale.

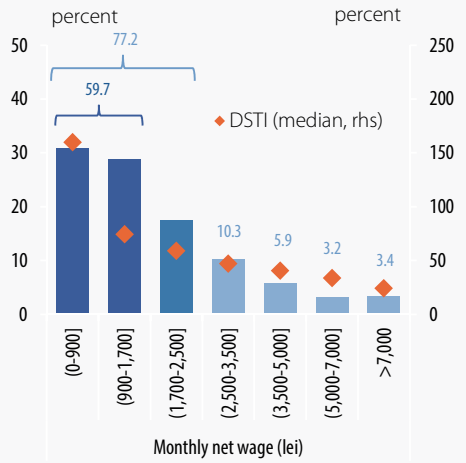
Swiss franc-denominated loans mainly consist of mortgage-backed loans (93 percent in June 2015, of which almost 40 percent are real-estate loans), being usually long-term loans. Their average residual maturity, i.e. 12.6 years in June 2015, is significantly higher than that of leu-denominated loans. Nevertheless, approximately 45 percent of CHF-denominated loans have a residual maturity of less than 10 years, accounting however for 10 percent of total exposures.

Households benefiting from CHF-denominated loans are not homogeneous, but highly asymmetric. The risks associated with this type of loan stem from the appreciation of the Swiss franc versus the euro, the financial standing of certain categories of borrowers with CHF-denominated loans, as well as from the adjustments in the value of the collateral against which the loans were provided. The latter factor can be accounted for by the fact that most CHF-denominated loans were granted in a period marked by sharply rising housing prices (2007-2008).

[37] For further details, see "Analysis on CHF-denominated loans", February 2015, http://www.bnr.ro/DocumentInformation.aspx?idDocument=19454&directLink=1

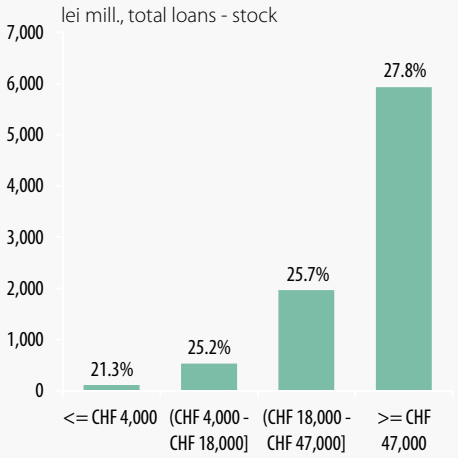
Borrowers with outstanding CHF-denominated loans post a significant and increasing level of indebtedness (DSTI ratio), i.e. approximately 70 percent in June 2015 (median value), up 11 percentage points from December 2008. The breakdown of such borrowers by income brackets reveals substantial differences. Borrowers whose monthly net income is below lei 900 are overindebted following both the adverse developments in their income and the appreciation of the Swiss franc. Furthermore, about 60 percent of the borrowers that took CHF-denominated loans and account for 43 percent of such exposures are below-average wage earners (Chart A). The said borrowers were generally extended small-value loans. In addition, around 30 percent of borrowers have above-average outstanding loans worth more than CHF 47,000 each, holding two thirds of the stock of loans (Chart B).

Chart A. Distribution of borrowers with CHF-denominated loans by monthly net wage[38] (June 2015)



Source: NBR, CB, MPF

Chart B. Distribution of borrowers with CHF-denominated loans by loan size (June 2015)



Source: NBR, CB

CHF-denominated loans exerted greater pressure on borrowers than the other foreign currency-denominated loans as a result of the shock triggered by the strengthening of the Swiss franc in early 2015. The NPL ratio for these loans stood at 15.8 percent versus 9.7 percent in the case of foreign currency loans to households in June 2015. On the other hand, the CHF-denominated loan portfolio witnessed the sharpest drop in the NPL ratio as compared with that posted in December 2013 (2.2 percentage points against 0.7 percentage points for EUR-denominated loans), also due to the stepped-up conversion and/or restructuring of CHF-denominated loans.

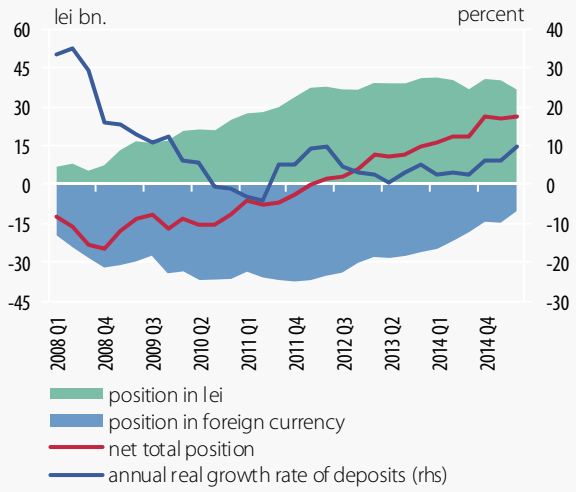
There are certain aspects that could reduce households' capacity to take credit. On the one hand, the long maturity of outstanding loans across all age groups limits borrowers' demand for new loans, given that loans mature when they are over 60. On the other hand, the large share of consumer spending in household income (67 percent in 2014) and the difficulty to comply with sound eligibility criteria lower the capacity of the economically active population that has not taken any loans so far to successfully apply for one.

38 The income used refers to December 2014. The DSTI ratio was calculated without considering co-borrowers.

Net creditor position

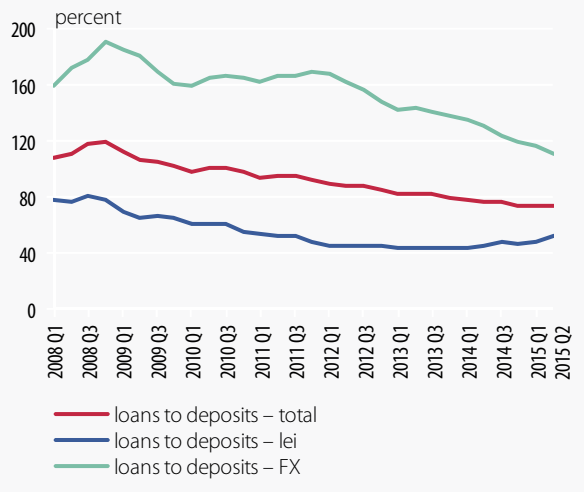
Households' net creditor position vis-à-vis the financial system improved in 2014 and 2015 H1 (Chart 2.23) following a rise in bank saving in nominal terms, i.e. up 9 percent, tantamount to lei 11.7 billion, and a decrease in the stock of loans to households, down 0.3 percent in the period under review (lei 0.4 billion). Saving kept on increasing despite the cut in deposit rates and households' loan-to-deposit ratio saw an improvement (Chart 2.24). Also, households' short foreign currency position towards the financial system witnessed a significant adjustment, i.e. by 60.2 percent, to lei 10.4 billion, December 2013 through June 2015.

Chart 2.23. Households' position vis-à-vis banks (asset sales included) and NBFIs



Source: NBR

Chart 2.24. Loan-to-deposit ratio for households



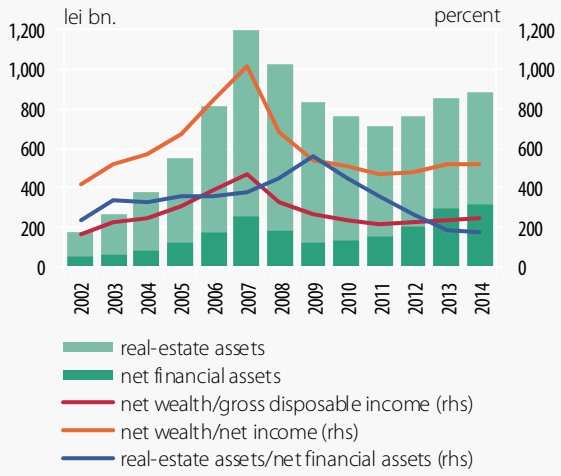
Source: NBR

The favourable developments in households' net creditor position and short foreign currency position vis-à-vis the financial system need to be regarded with caution, taking into consideration the following features: (i) the different asymmetries between the saving and the borrowing behaviour respectively; thus, saving is more important for above-average earners, whereas indebtedness is concentrated among low-income earners; (ii) the widening income inequality: the individuals with the top 20 percent of incomes earned an income that was 6.6 times larger than that of those with the bottom 20 percent of incomes in December 2013, rising slightly from 6.3 times in the same year-ago period; (iii) according to the indicators computed by the European Commission, the outlook for saving points to its remaining modest and below that in other countries in the region (the Czech Republic, Poland, Slovakia and Slovenia) in the coming year.

Households' net wealth

Households' net wealth stuck to the uptrend that had started in 2012, yet at a moderate pace (up 3 percent in 2014 from 2013, Chart 2.25). Behind the expansion stood both the 2.5 percent pick-up in financial and real-estate assets and the 2.8 percent reduction in liabilities. Real-estate assets further hold a substantial share of households' net wealth, albeit on the decline following the significant price adjustments that have occurred from 2009 to present. In 2014, the said weight was 64 percent of the net wealth versus 85 percent in 2009. In Romania, net wealth per person was approximately lei 44,000 in 2014, 13 times lower than in the euro area. Debt per person stood at around lei 6,000. In 2014, households' assets accounted for 156 percent of GDP, while their liabilities made up 17.8 percent of GDP.

Chart 2.25. Households' net wealth



Source: NBR, NIS, FSA

Households' liquidity improved in 2014. Thus, liquid financial assets[39] held a wider share in total financial assets, i.e. 42 percent, on the back of the rise in bank deposits and cash. Moreover, risk-free liquid assets account for a sizeable and stable share in total financial assets (36 percent in 2014).

Box 5. Sensitivity analysis of the loans extended under the "First Home" programme

The "First Home" programme was launched in 2009 and it has a social nature, as it makes it easier for the youth to purchase or build a house by taking out a loan. Its major advantages are: (i) the provision by the government of a guarantee for 50 percent of the loan's value; (ii) a capped interest rate margin; (iii) the requirement to advance 5 percent of the house's price. The programme bolstered real-estate lending during the recession and afterwards. The mandatory shift to lending in domestic currency alone under this scheme as of August 2013 had a key role in narrowing the currency mismatch in the balance sheets of credit institutions and households' foreign currency position.

The programme made an important contribution to the recovery of household lending when it was launched and, starting in 2013, to the step-up in loans in local currency. January 2014 through June 2015, banks granted approximately 60 percent of the new real-estate bank loans under this scheme, and the corresponding share of leu-denominated loans was similar, i.e. 63 percent. Since the implementation of the "First Home" programme, 147,567 loans amounting to lei 24.5 billion were extended, making up around a fifth of household loans and 51 percent of real-estate loans

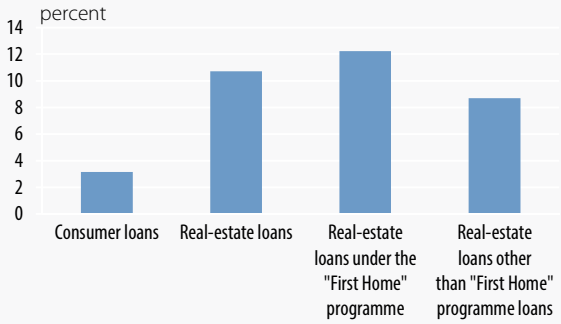
[39] Liquid financial assets consist of: cash, bank deposits, securities, liquid shares and investment fund shares or units. Risk-free liquid assets include: cash, bank deposits and securities (specifically government securities).

(June 2015). The period from January 2014 to June 2015 also witnessed a significant increase in real-estate loans other than those granted under the "First Home" programme.

In the context of interest rates at historical lows, the major attraction of the loans extended under this programme is the lower advance required, i.e. 5 percent of the price of the purchased house. Between January 2014 and June 2015, banks charged an interest rate similar to that set under the aforementioned scheme on about 30 percent of the new leu-denominated real-estate loans (the comparison took into account a cap of around 4 percent on the annualised interest rate on leu-denominated loans granted under the "First Home" programme, corresponding to the 90th percentile of the distribution of the interest rate on the said loans).

Accepting a higher LTV ratio in the case of loans extended under the "First Home" programme implicitly impacts borrowers' saving behaviour and their vulnerability to future shocks. The higher vulnerability of borrowers with outstanding loans under the "First Home" programme is associated with: (i) a long residual maturity that increases interest rate sensitivity and (ii) a higher level of indebtedness[40] than that of borrowers with real-estate loans that did not resort to the programme (about 42 percent against 38 percent, median value, June 2015). The features of the said programme mitigate some vulnerabilities by: (i) limiting the risk of real-estate speculations, given that buyers cannot sell the housing unit in the first five years after the purchase; (ii) capping the maximum amounts borrowers can take, and (iii) undertaking a tighter check on borrowers. Nevertheless, an assessment is needed to gauge the usefulness of the "First Home" programme under the current terms and the context in which it still creates higher value added than the entailing vulnerabilities.

Chart A. Change in the level of indebtedness under a stress scenario* (June 2015)



* The shocks were set based on the levels specified in NBR Regulation No. 17/2012 on certain lending conditions, as well as in similar analyses conducted across the EU. They referred to: a 2 percentage point increase in the interest rate and a 6 percent decrease in the monthly net wage. The shocks under analysis trigger an ongoing adjustment in the period following their occurrence, entailing a recalculation of the debt service for the whole period remaining to maturity.

Source: NBR, CB, MPF

The risks arising from the loans granted under this programme could increase in the period ahead in the event of a rise in the interest rate. An analysis of indebtedness sensitivity to higher interest rates points to a significant impact on the loans extended under the said scheme. The stress scenario under analysis assumes a 2 percentage point interest rate shock and a 6 percent borrower income shock. This scenario could lead to an increase in the DSTI ratio (median value) by 12 percentage points for borrowers with outstanding loans under the "First Home" programme and by 9 percentage points

40 The level of indebtedness is computed for borrowers with outstanding real-estate loans under the "First Home" programme and borrowers with real-estate loans that were not extended under this scheme respectively by considering also their other financial debts if applicable.

for those with other real-estate loans versus 4 percentage points on average for the whole portfolio (Chart A). However, for a fifth of the borrowers with loans under the above-mentioned programme, the monthly instalments after applying these shocks are relatively close to the instalments set at the beginning of the loan contracts, with monthly instalments returning to the levels mentioned at the time the loans were taken.

Demographic structure

The changes in the demographic structure may pose medium to long-term risks to financial stability. Romania's population is currently aging, on the back of youth migration, lower fertility and increased longevity. In the absence of demographic policy measures, prospects are not encouraging. Estimates[41] of the performance of indicators by 2030 show: (i) a decrease in population by 4.5 percent; (ii) a rise in the old-age dependency ratio[42] to 33 percent from 24 percent in 2013, and (iii) a significant increase in the median age to 45 years. The structural issues concerning demographic developments may impact financial stability via at least two channels, namely: (1) the macroeconomic channel, following the changes in labour force and labour productivity, as well as the pressures on public expenditure (particularly health and pension spending) and (2) credit institutions' strategies in response to the adjustments in the volume and composition of saving and of household demand for financial products.

2.2.2. Households' capacity to service debt

The credit risk stemming from bank loans to households contracted. The non-performing loan ratio fell by almost 3 percentage points December 2013 through June 2015 (to 7.5 percent from 10.2 percent, Chart 2.26). The drop in the volume of non-performing loans owed both to the clean-up of banks' balance sheets and the slower deterioration of the loan portfolio quality.

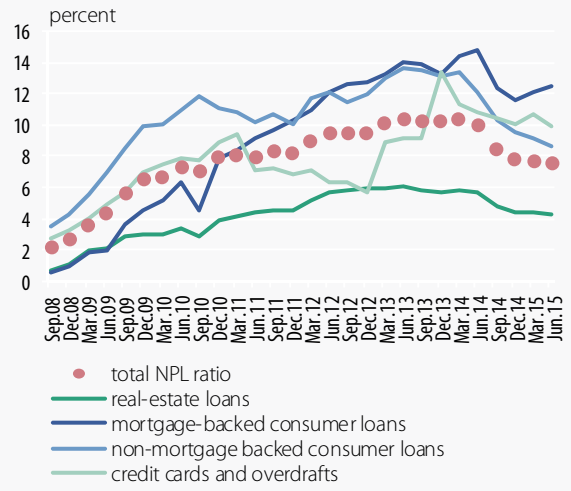
Banks equally resorted to non-performing loan sales and removal from their balance sheets. In the period under review, banks removed from their balance sheets[43] household loans amounting to about lei 1.6 billion and sold off non-performing loans worth lei 1.53 billion, whereas the volume of new non-performing loans fell by 25 percent. In the absence of balance sheet clean-ups, the NPL ratio for households would have stood at around 9 percent as compared with 7.5 percent in June 2015 (Chart 2.27). The removal of loans from the balance sheets of credit institutions was aimed at non-mortgage backed consumer loans (about 68 percent of these loans) and foreign currency-denominated loans (69 percent of total off-balance sheet loans in June 2015). Conversely, loan portfolio sales generally concerned mortgage-backed loans (around 70 percent) and implicitly foreign currency loans (approximately 90 percent) and loans past due by more than 90 days (over 95 percent of total loan sales).

41 According to Eurostat, NIS and United Nations Population Division statistics.

42 The old-age dependency ratio is the ratio of older dependents (people older than 65 years) to the working-age population (people aged 15-64).

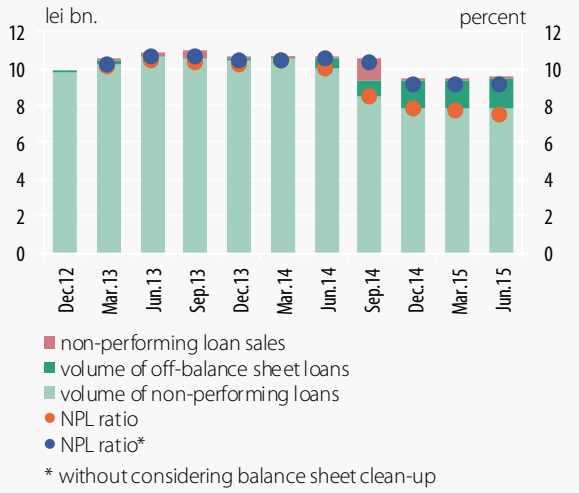
43 In this section, the analysis of loans removed from banks' balance sheets is based on the data reported to the CCR and the CB, given that they allow for a breakdown of such exposures. Off-balance sheet loans consist solely of the principal amount. The inclusion of related claims and claims accumulated after the removal from the balance sheets pushes up the value of these loans to approximately lei 2.3 billion.

Chart 2.26. Banks' NPL ratio by loan type



Source: NBR, CB

Chart 2.27. Breakdown of non-performing loans



Source: NBR, CB

Debt rescheduling did not play a key role in the improvement of bank asset quality. Rescheduled loans for financially stressed borrowers held about 7.6 percent of the loan portfolio, 38 percent of them being non-performing loans (in June 2015, similarly to December 2013). Nevertheless, non-mortgage backed consumer loans account for the largest share of rescheduled non-performing loans, i.e. 45 percent.

Recent developments point to a moderate improvement in households' payment capacity. On the one hand, the plunge in the number of borrowers who were more than 90 days overdue on payments for the first time and the slight increase in the migration rate of loans 1-90 days past due to lower risk buckets suggest a drop in the NPL ratio also in the coming period. Thus, January 2014 through June 2015 the number of borrowers whose loans were newly classified as non-performing fell by around 20 percent as compared with the period between January 2013 and June 2014, while the migration rate of loans overdue up to 90 days rose to 87.9 percent in the period January 2014 – June 2015 from 84.8 percent on average in 2013. On the other hand, the further low migration rate of non-performing loans to lower risk buckets, i.e. 5.3 percent (the average for January 2014 – June 2015), and the higher share of loans remaining non-performing for more than two years (69 percent in June 2015, up from 41 percent in December 2013) are indicative of persistent non-performance, emphasising the need to continue bank balance sheet clean-ups.

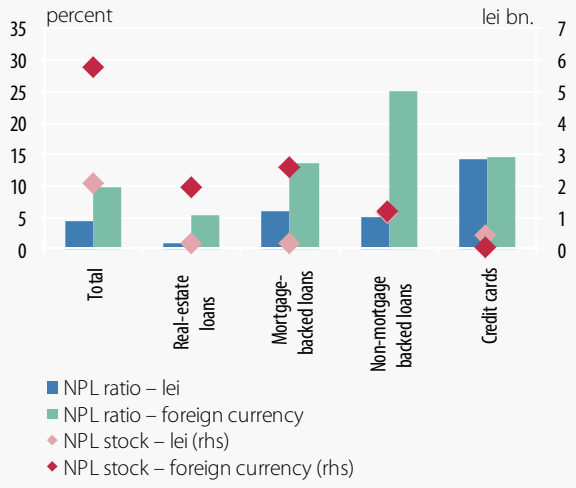
Foreign currency-denominated loans further pose the greatest risks. The differential between their NPL ratio and that for leu-denominated loans is high, i.e. 5.1 percentage points in June 2015. All types of loans paint a similar picture, with non-mortgage backed consumer loans reporting the largest differential (Chart 2.28). Foreign currency loans account for the wider share of the non-performing loan stock (74 percent in June 2015). Moreover, borrowers with foreign currency-denominated loans post a higher level of indebtedness than that of borrowers with domestic currency loans (48 percent as compared with 31 percent, DSTI median values, June 2015[44]).

[44] Credit cards and overdrafts were not included.

The aforementioned developments warrant ongoing enhanced prudence in the future as well as regards foreign currency lending, with potential recalibration of the current LTV and DSTI macroprudential instruments in order to incorporate the currency risk movements that have occurred over the past years.

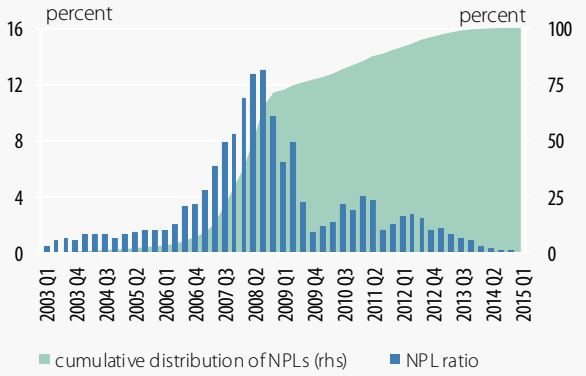
One of the lessons from the recent global financial crisis is that banks should maintain appropriate lending standards throughout the business cycle. Inadequate lending from a prudential perspective can be manageable over the short term, backed temporarily by the upward trend in the business cycle, but it will most likely become unsustainable in the medium run. The loans granted by 2008 currently account for approximately 70 percent of total non-performing loans (Chart 2.29). The loans originated in 2007-2008 were generally mortgage-backed loans mostly granted over an extended period (the original maturity stood at 24.5 years). At present, the NPL ratio for this portfolio is 15.4 percent (June 2015).

Grafic 2.28. Banks' NPL ratio by loan type and currency, June 2015



Source: NBR, CB

Chart 2.29. NPL ratio by the quarter of credit agreement (2003 Q1 – 2015 Q1) over a three-year moving window

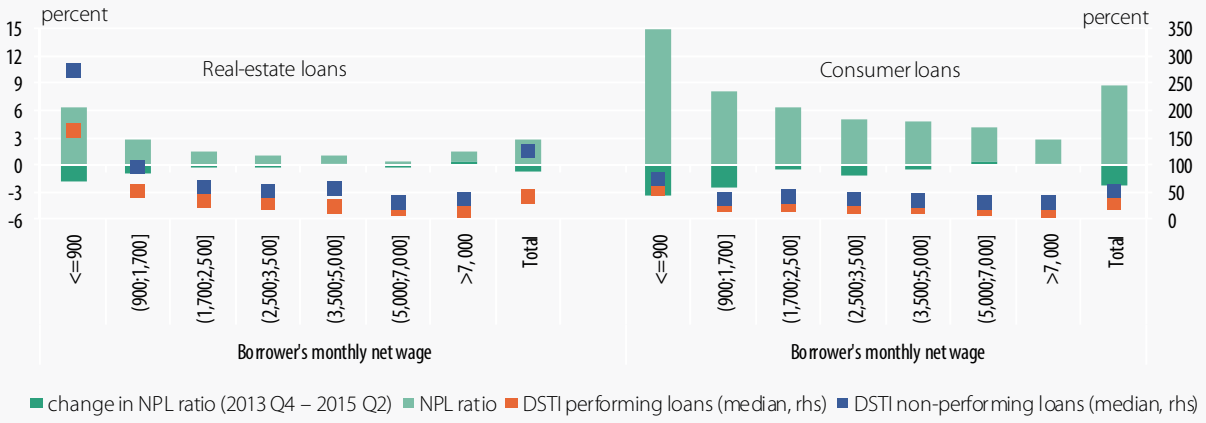


Note: The NPL ratio for each quarter is the ratio of loans past due by more than 90 days at least once in a three-year period after the date of credit agreement to the volume of loans granted in that quarter.

Source: NBR, CB

Individuals' level of indebtedness measured by the debt service-to-income ratio is a good indicator of borrowers' payment capacity (Chart 2.30). Borrowers with loans more than 90 days overdue have a substantially higher DSTI ratio than borrowers without overdue payments (56 percent versus 35 percent in June 2015). This holds for all wage brackets. Borrowers with an income below the economy-wide minimum wage (lei 900 per month) further pose the greatest risk to the banking sector, posting higher DSTI and NPL ratios, i.e. 65 percent and 11.5 percent respectively in June 2015.

Chart 2.30. NPL ratio by monthly net wage bracket



Note: Wage earnings refer to December 2014 and the coverage ratio is around 75 percent in terms of total exposures and 65 percent in terms of the number of borrowers (June 2015). The debt service-to-income (DSTI) ratio is the ratio of bank debt service to the borrower's monthly net wage, without considering co-borrowers.

Source: NBR, CB, MPF

The Romanian banking sector enjoys appropriate coverage against the risks stemming from lending to households. The total capital ratio was on the rise (18.1 percent in June 2015) and the coverage ratio of household non-performing loans with IFRS provisions was adequate (68.1 percent in June 2015). The value of the collateral further exceeded that of real-estate loans and the loan-to value (LTV) ratio remained broadly unchanged in the reviewed period (87 percent, according to the May 2015 Bank Lending Survey).

2.2.3. Risks generated by the residential real-estate sector and mortgage-backed lending to households

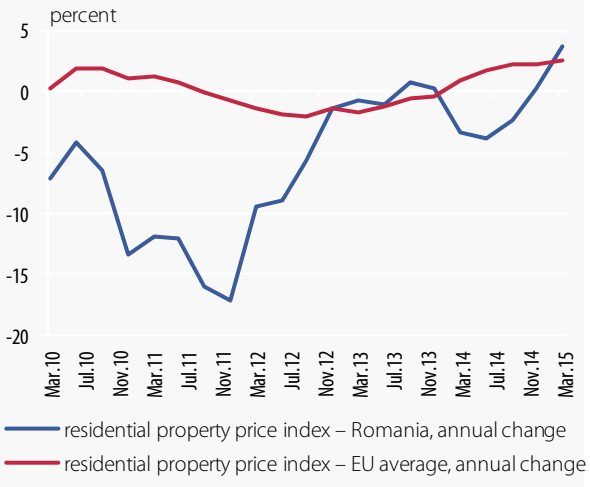
The real-estate market witnessed mixed developments in the period under review (December 2013 – March 2015). On the one hand, prices of residential property increased markedly in 2015 Q1 (up 3.7 percent, Chart 2.31), strengthening the upward trend that had started at end-2014. The fast-paced dynamics of house prices could hint at potential problems over the medium term, given that there are already certain EU Member States (Estonia or Hungary) in which these prices have risen above the indicative threshold set by the European Commission, i.e. a 6 percent year-on-year change in house prices. On the other hand, the number of real-estate transactions fell in 2014 (down 4 percent year on year), staying however at a level similar to that recorded prior to 2009.

The dynamics of the real-estate market in Romania have been bolstered by both demand and supply side factors. Household intention to purchase a house has remained relatively stable, yet banks expect a higher demand in the coming period (according to the August 2015 Bank Lending Survey). In addition, starting in 2015, there has been a step-up in construction activity, particularly residential construction. The volume of investment in new construction works rose by 16.2 percent in nominal terms in 2015 Q1.

The domestic banking sector is further under pressure from the mortgage-backed loan portfolio[45] following the latter's deteriorating quality. This calls for prudent monitoring with a view to potentially recalibrating the macroprudential measures on sustainable household lending that are already in place. Banks have substantial exposure to the residential real-estate sector. Mortgage-backed loans to households amount to lei 70.2 billion (of which loans worth lei 54 billion are in foreign currency), accounting for 67 percent of total bank loans to households (June 2015), up 3.5 percentage points from the level posted in December 2013. Such exposures are broadly based across the banking sector[46]. As far as real-estate loans extended by NBFIs are concerned, their share has narrowed substantially in the recent period, to 18.2 percent in June 2015 from 28.5 percent in December 2013.

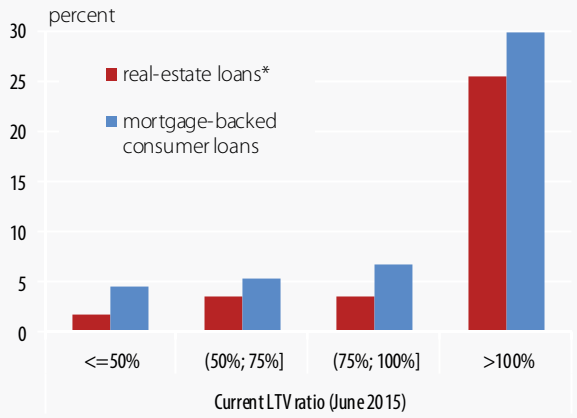
The current risks to the banking sector stemming from household lending backed by real-estate collateral remain significant. The high residual maturity of this loan portfolio may put pressure on the banking system in case of interest rate shocks. Thus, the residual maturity of mortgage-backed loans was 18.5 years in June 2015. Moreover, the large share of real-estate foreign currency loans is further a vulnerability, although its intensity diminished somewhat. These loans hold 77 percent of the total stock of real-estate loans, down from 92 percent December 2013 through June 2015. Both the shift to leu-denominated lending under the "First Home" programme and the decline in funding costs in domestic currency to levels similar to those in foreign currency contributed to the decreasing share of foreign currency-denominated loans.

Chart 2.31. Developments in residential property prices



Source: NIS, Eurostat, NBR calculations

Chart 2.32. NPL ratio by current LTV ratio (June 2015)



* The analysis did not take into account the loans granted under the "First Home" programme.

Source: NBR

The mortgage-backed loan portfolio poses considerable credit risk owing to the changes in the quality of mortgage-backed consumer loans and of loans granted during 2007-2008. The NPL ratio for mortgage-backed loans currently stands at 6.9 percent, with non-performing loans being mostly mortgage-backed consumer

45 This consisted of real-estate loans and mortgage-backed consumer loans to households (including real-estate loan sales).

46 The Herfindahl-Hirschman concentration index for these exposures stood at 970, below the threshold (1,800) beyond which it signals a concentration problem (June 2015).

loans (58 percent of non-performing mortgage-backed loans in June 2015). The NPL ratio for mortgage-backed consumer loans is 12.5 percent against a merely 4.3 percent in the case of real-estate loans (June 2015, Chart 2.26).

With a view to dealing with non-performing exposures from mortgage-backed loans, banks resorted to asset sales (worth approximately lei 1.1 billion) to a larger extent than to the removal of loans from their balance sheets (tantamount to lei 548 million in June 2015 versus lei 0.3 million at end-2013). The loss given default (LGD) for real-estate loans rose slightly (from 23 percent to 25 percent in the reviewed period), whereas that for mortgage-backed consumer loans remained around 35 percent.

The recent developments in bank loan quality show that the request for real-estate collateral does not mitigate the credit risk. Thus, a comparison of the NPL ratio for mortgage-backed consumer loans with that for non-collateralised consumer loans (after adjusting it by taking into consideration also the loans that were removed from banks' balance sheets) did not produce markedly different readings (13.5 percent versus 12.9 percent respectively).

The analysis of loans by their current LTV ratio shows that borrowers having taken mortgage-backed loans with an above-one LTV exhibit lower payment capacity (Chart 2.32). Both real-estate loans and mortgage-backed consumer loans with an above-one LTV post a substantially higher NPL ratio, i.e. 25.5 percent and 29.8 percent respectively. As regards non-performing real-estate loans, an important factor in the declining payment capacity is the stronger deterioration of the value of the real-estate collateral. LTV is subject to sharper adjustment in the case of non-performing loans than for performing loans.

The above-mentioned evidence pleads for a reassessment of the macroprudential framework in place. In fact, many European countries are concerned with this issue and the European Systemic Risk Board decided that two of the intermediate objectives of the new macroprudential policy framework should be defined in connection with real-estate market risks (for further details, see Section 5.2. The NBR's macroprudential objectives and the instruments of macroprudential policy for achieving the objectives), namely: (1) to mitigate and prevent excessive credit growth and leverage and (2) to limit direct and indirect exposure concentrations. The proposed macroprudential instruments target borrowers and creditors alike. The requirements for creditors are used in a uniform and consistent manner, in line with the Basel III Accord, which was implemented into EU law via the CRD IV/CRR package. National authorities may establish, together with the specific capital requirements, a systemic capital requirement – if the risk is not cyclical and it is not covered by standard measures – or set exposure limits on a certain segment.

3. THE FINANCIAL SYSTEM

Financial intermediation declined further, with Romania still showing the lowest level in the EU after having recorded the fastest pace of decrease in the past four years. Among the financial system components, the banking sector continued to witness the largest adjustments. The authorities' policies have to ensure favourable conditions for the resumption of financial intermediation, also by avoiding measures that might distort the role of financial institutions in the society.

The evolution of the banking sector has led to the strengthening of its resilience in case of unfavourable developments. Bank prudential indicators further posted adequate levels, standing significantly above the minimum required thresholds. Satisfactory solvency and liquidity ensured the smooth management of emerging international tensions (such as the crisis in Greece). The stress tests conducted by the NBR on a regular basis confirm the proper capital and liquidity adequacy. Credit institutions' reliance on foreign financing continued to decline in an orderly manner, the loan-to-deposit ratio reaching a level that no longer poses macroprudential risks.

The balance sheet clean-up accelerated, leading to a significant reduction of the NPL ratio. Banks' efforts in this area affected their current profitability, but contributed to the resumption of sustainable lending. Profit re-entered positive territory in the first part of 2015, but it remains at a modest level mainly due to: (i) the structural balance sheet changes generated by the shift to low risk-assets; (ii) the weak lending in recent years (especially to non-financial corporations), and (iii) the interest margin adjustments.

Foreign currency loans in banks' portfolios, albeit on a decline, still prevail and are further the riskiest among the loans extended to both companies and households. Recently, loans have been mainly granted in domestic currency, which has helped reduce the currency risk markedly. The share of new EUR-denominated loans to households became marginal (less than 5 percent in 2014).

The non-bank financial sector have witnessed mixed developments: the insurance sector has been struggling with undercapitalisation issues, aggravated by the decline in activity, the NBFIs have shared the same problems with banks regarding the weak loan demand and the poorer portfolio quality, while private pension funds and investment funds have recorded sustained business development. The probability of systemic risk emerging from the non-bank financial sector is relatively low, but on the rise. The current low interest rate environment may be a vulnerability that will put pressure on the non-bank financial sector.

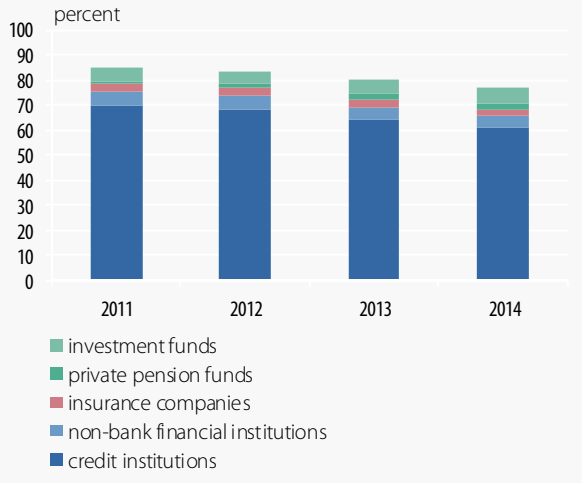
The domestic financial markets (money market, foreign exchange market, government securities market and capital market) have remained robust, evolving in

line with regional markets, regardless of the challenges that have occurred since the previous Financial Stability Report. The narrowing spreads against Europe's benchmark indices, the lower volatility along with the shrinking risk premium are factors that can contribute to strengthening the external perception of the Romanian economy as an emerging financial market attractive to institutional investors. The same as in Europe, the main risks to the stability of domestic financial markets are associated with concerns over the fragility of global economic growth and the tense episodes at regional level.

3.1. Structure of the financial system

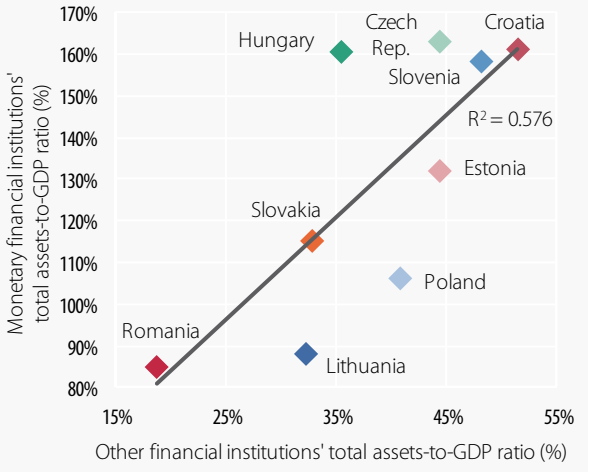
Financial intermediation declined further, with Romania still showing the lowest level in the EU. The aggregate drop came from mixed developments of the main financial system components, i.e. the banking sector continued to witness significant adjustments, whereas pension funds and investment funds reported increases. The authorities' policies have to ensure favourable conditions for the resumption of financial intermediation, also by avoiding measures that might distort the role of financial institutions in the society.

Chart 3.1. Structure of the Romanian financial system (assets as a share of GDP)



Source: NBR, FSA

Chart 3.2. Relative sizes of banking and non-bank financial sectors in CEE countries

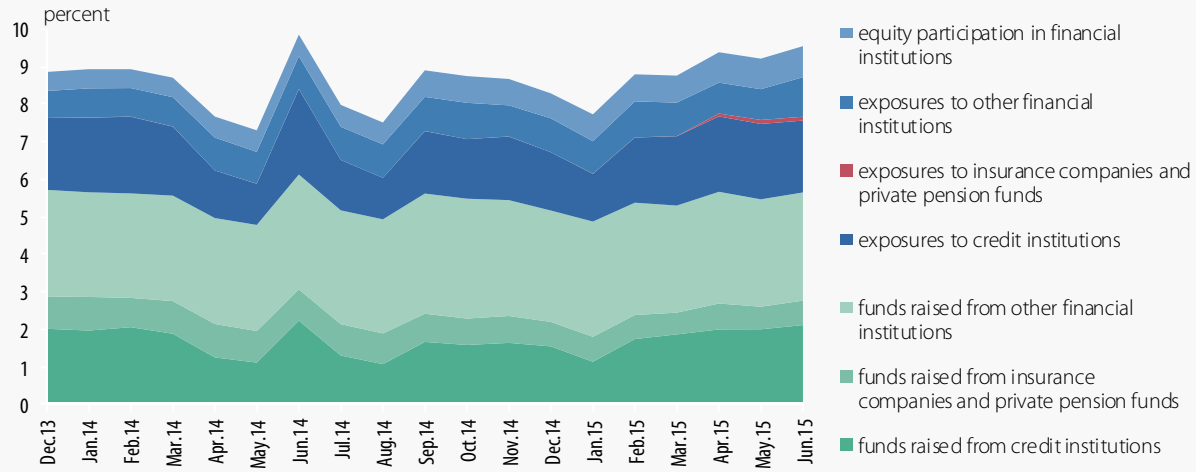


Source: ECB, national financial accounts

The share of the financial system's assets in GDP decreased by 4.1 percentage points in 2014 compared with 2013 to reach 77.4 percent (Chart 3.1). Financial intermediation declined at the fastest pace in the past four years. Future developments are closely monitored, given that Romania posts the lowest level of financial intermediation in the EU (Chart 3.2). Romania's financial system is still dominated by the banking sector, which accounts for about 78 percent of total assets, ahead of investment funds (7.9 percent), NBFIs (5.9 percent), pension funds and insurance companies (3.7 percent and 3.5 percent respectively, at end-2014).

Deleveraging is manifest both in the euro area and in the CEE countries, but its size varies depending on the development of the financial system in these regions. In recent years, the pace of deleveraging was more pronounced in the euro area, due to the fall in the overall volume of financial assets and in the context of modest GDP growth in the region. In contrast, financial intermediation in countries such as Poland or the Czech Republic was stable or even increased.

Chart 3.3. The share of exposures to and funds raised from domestic financial institutions in the balance sheet of credit institutions

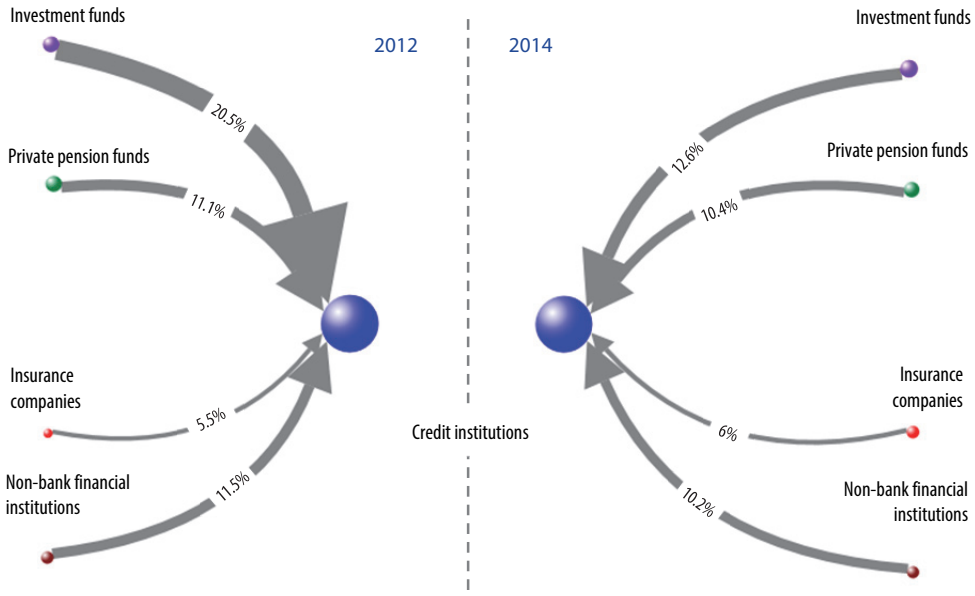


Source: NBR, FSA

Heterogeneity also characterises the development of the non-bank financial sector in relation to the banking sector, with countries (such as Poland and Lithuania) that feature more developed non-bank financial sectors compared with the rest of the countries in the sample. The share of monetary financial institutions in GDP stands below 90 percent in the case of Romania, while it exceeds 150 percent in the Czech Republic, Hungary and Slovenia, the situation being similar for the non-bank financial sector development.

The direct contagion risk in the Romanian financial system works asymmetrically. The contagion risk is relatively moderate from NBFIs to credit institutions and relatively high in the opposite direction, from banks to NBFIs. The exposures to the rest of financial sectors do not exceed 4 percent of bank assets, while the funds raised from these sectors account for 5.5 percent of bank liabilities (Chart 3.3). Under these circumstances, the potential adverse developments generated by insurance companies or private pension funds would have a manageable impact on the banking sector.

Chart 3.4. The share of exposures to credit institutions in the assets of financial sectors

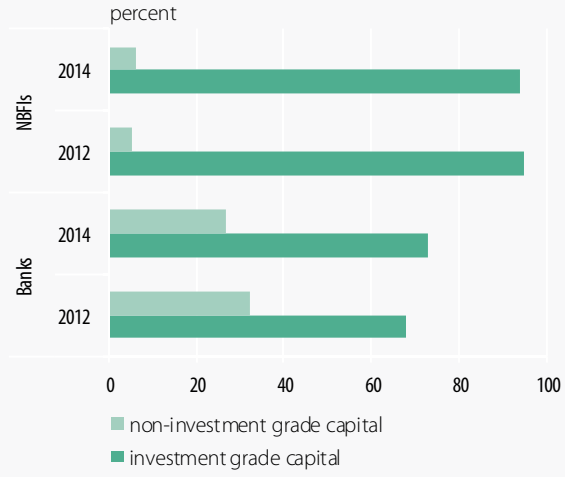


Note: The size of the circles stands for the relative share of the financial system's components, while the arrows show the shares of exposures of each non-bank financial sector to credit institutions.

Source: NBR, FSA

On the other hand, exposures to credit institutions in the balance sheets of domestic financial institutions are significant (Chart 3.4). The diversification of exposures in order to reduce dependency could prove useful. The dynamic analysis of the share of exposures shows a decrease in the dispersion of this indicator over the reviewed period. Thus, it is worth noting a sustained drop in the exposures of investment funds to the banking sector (from over 20 percent in 2012 to less than 15 percent at end-2014) and an increase in the share of exposures of insurance companies to credit institutions in Romania.

Chart 3.5. Share capital by country of origin



Source: NBR

The quality of shareholding in the Romanian financial system was further appropriate, leaving room for improvement especially in the banking sector. The share capital of credit institutions in Romania improved in recent years, as illustrated by the larger share of capital from investment grade countries (73 percent at end-2014, from 67.9 percent in 2012). The quality of NBFIs' share capital decreased slightly, yet the share of foreign investors from investment grade countries further exceeded 93 percent at end-2014.

The local and international financial environment characterised by low interest rates has mixed implications for the domestic financial system: the effects are mostly positive for the banking sector and negative for the non-bank financial sector.

Box 6. The impact of a low interest rate environment on the financial sector

Maintaining low interest rate levels improves the profitability of credit institutions as a result of: i) the maturity mismatch of interest rate risk-sensitive assets and liabilities, with a slower revaluation of assets at the new interest rate level (Section 3.2.6. Market risk) and of ii) a decline in the NPL ratio via reducing borrowers' debt service.
A significant interest rate hike may increase the occurrence of defaults of borrowers with variable interest rate loans, in particular for lending products with long residual maturity, such as real estate loans and, primarily, loans taken under the "First Home" programme.

The expectations of future interest rate increases hamper the recent positive trend seen in leu-denominated loans and may influence credit institutions' decisions regarding the allocation between various classes of exposures, with negative effects on sovereign debt holdings.

The local and European financial environment characterised by low interest rates contributed to a reduction in the profitability of private pension funds in Romania. The impact of a low interest rate environment on the insurance system is particularly relevant in the case of life insurers and varies depending on their business model, the duration mismatch between assets and liabilities or the opportunities for diversifying interest rate sensitive exposures. Moreover, low nominal interest rates can amplify procyclicality as investors take higher risks in order to preserve yields, thereby contributing to the build-up of vulnerabilities that can generate negative effects on the entire sector. In the long run, the local and European economic environment witnessing low interest rate levels can contribute to a reduction in the profitability of private pension funds and can affect the capacity of insurance companies to obtain profit by limiting investment income. The combined effects are all the more important for the two sectors, as they are not offset by an increase in demand for related financial products.

The low interest rate economic environment generates the "search for yield" behaviour of investors on the capital market. With interest rates at historical lows, investors' shift to variable-income securities, which are higher-yielding, yet riskier assets, may fuel the volatility of stock indices, reducing their resilience to external shocks. In contrast, investment funds recorded an upward trend in activity, being seen as an alternative to bank savings in the context of declining deposit rates.

Moreover, the uncertainties surrounding the future interest rate developments are likely to contribute to hindering the development of interest rate swap operations needed to implement hedging strategies; unlike in the past, the emergence of potential inflationary episodes may affect the debt servicing capacity of housing loans, due to the increase in the share of leu-denominated loans. The very low euro area interest rates may boost the "search-for-yield" activities, with potentially adverse effects on the exchange rate given the asynchrony of the ECB monetary policy with that in the US (a consequence of different macroeconomic developments).

3.2. Banking sector

3.2.1. Structural developments

The structural developments in the banking sector since the previous Report contributed to strengthening financial stability. In 2015, bank mergers gained momentum, on the background of a further moderate degree of concentration that lies slightly below the European average. The cuts in bank staff levels and the number of territorial units in order to reduce operating expenses continued at the fast pace seen in previous years, with potentially negative effects on financial intermediation, due to the more difficult access of companies and households to financial services. The needs to increase the coverage of banking services and improve bank staff training are arguments for rethinking the policies to optimise operating costs.

Table 3.1. Structural indicators of the Romanian banking system

end of period

	2008	2009	2010	2011	2012	2013	2014	2015 Jun.
Number of credit institutions	43	42	42	41	40	40	40	40
Number of credit institutions with majority private capital	41	40	40	39	38	38	38	38
Number of banks with majority foreign capital,	37	35	35	34	34	34	34	34
of which:								
– foreign bank branches	10	10	9	8	8	9	9	9
Assets of banks with majority private capital/Total assets (%)	94.6	92.5	92.4	91.6	91.6	91.5	91.3	91.6
Assets of banks with foreign capital/Total assets (%)	88.2	85.3	85.0	83.0	89.8	90.0	89.9	90.2
Assets of top five banks/Total assets (%)	54.3	52.4	52.7	54.6	54.7	54.4	54.2	55.3
Herfindahl-Hirschman index (points)	926	857	871	878	852	821	797	812

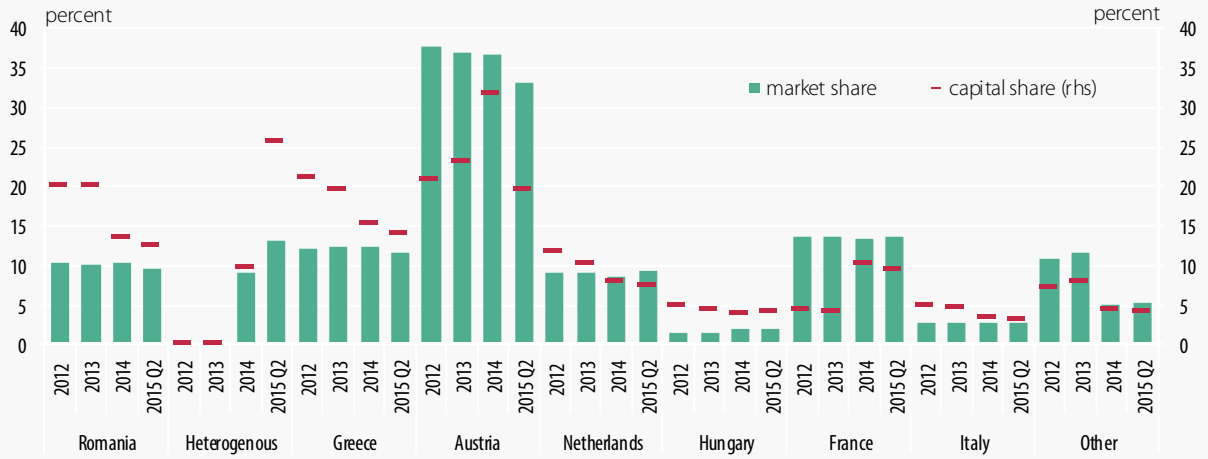
Source: NBR

Although the number of credit institutions remained unchanged (40 credit institutions, of which 31 are Romanian legal entities and 9 are foreign bank branches – Table 3.1)[47], their classification according to the origin of capital saw significant changes. The market share of banks with majority Romanian capital halved[48] (to less than 10 percent of total bank assets) and that of banks with Austrian capital followed a downward trend, as a result of mergers and balance sheet clean-up operations (Chart 3.6).

47 To the 40 credit institutions added 556 foreign financial institutions that notified the central bank of their intention to directly conduct banking activities in Romania.

48 Due to the shift of Banca Transilvania from the category of banks with majority domestic capital to the category of banks with majority foreign capital, following the acquisition of shares by the International Finance Corporation.

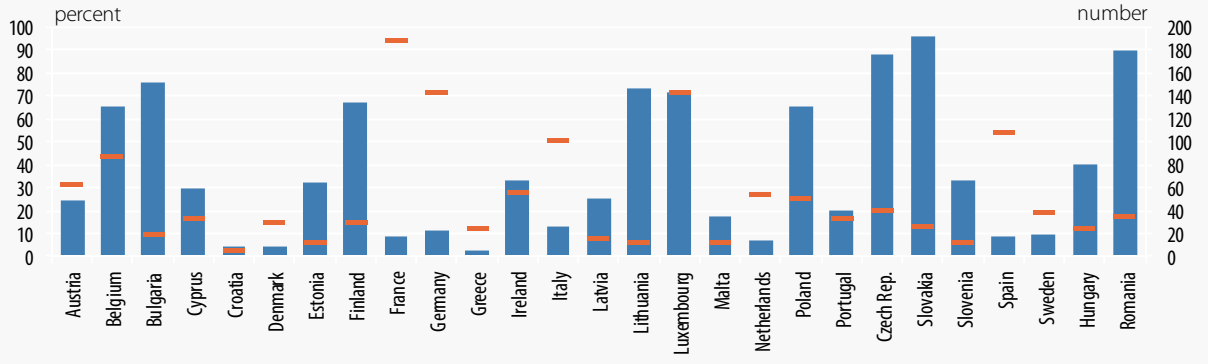
Chart 3.6. Credit institutions' share capital as a percentage of total capital and their market share by country of origin



Source: NBR

The Romanian banking sector consists mainly of credit institutions originating in European countries. The 34 credit institutions with foreign capital (mostly from EU Member States) account for over 90 percent of the Romanian banking sector's assets, which makes Romania rank second in the EU classification by foreign ownership (Chart 3.7).

Chart 3.7. Market share and number of credit institutions with foreign capital (international comparison)

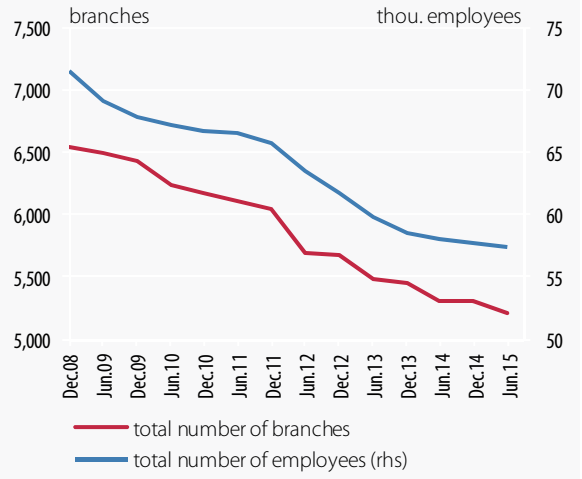


Note: 2014 data were available for EU Member States and June 2015 data were available for Romania.

Source: NBR, ECB (Structural Indicators for the EU Banking Sector)

Given the balance sheet adjustment on account of weak lending activity, as well as of removal of non-performing loans from the balance sheet, the optimisation of operating costs by cutting the number of units and bank staff levels continued at a steady pace during the period since the previous Report.

Chart 3.8. Number of bank branches and employees

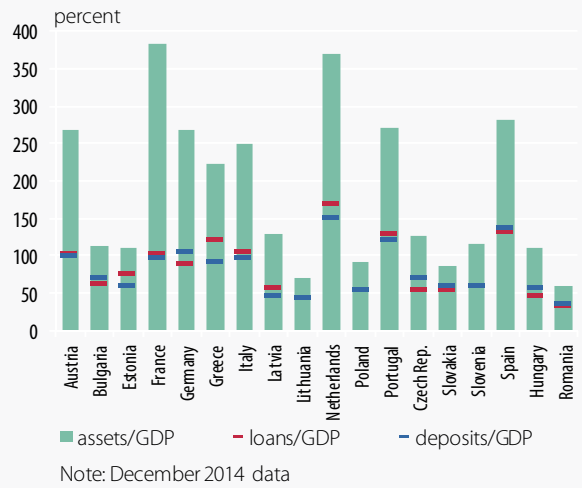


Source: NBR

The further slow lending dynamics and households' increased preference for online financial services led to the territorial network rescaling. During June 2014 – June 2015, the number of bank branches dropped by 105 to 5,203 units and the number of payrolls in the banking system decreased by 669 to around 57,300 (Chart 3.8).

The restructuring of activity illustrated by the smaller number of bank branches and employees has a negative impact on households' access to banking services. In the Romanian banking sector, a bank branch provides services to an average of 3,760 persons, well above the European average of 2,450 persons. Moreover, among the EU countries, Romania reports the lowest number of bank staff relative to population, with one bank employee providing services to an average of 345 persons (the EU average is 175 persons per bank employee). On the other hand, there is room for improving the efficiency of bank personnel. In Romania, a bank employee manages assets worth about EUR 1.5 million, while the EU average exceeds EUR 10 million. The rise in the value added of bank services (a process that is also possible if the level of training of bank employees improves and the coverage of banking services increases) will alleviate the aforementioned efficiency constraints.

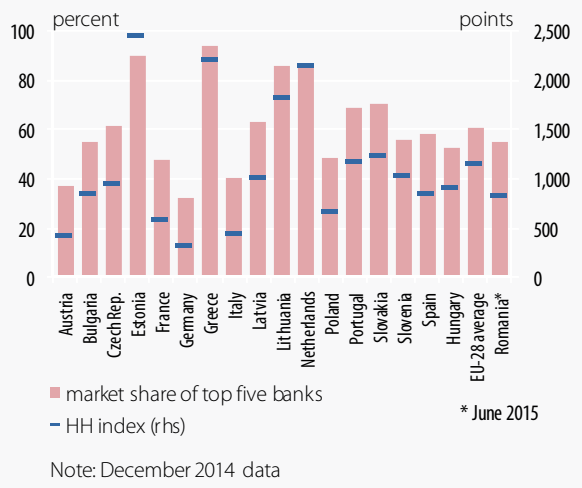
Chart 3.9. Financial intermediation (international comparison)



Note: December 2014 data

Source: NBR, ECB (Structural Indicators for the EU Banking Sector)

Chart 3.10. Asset concentration (international comparison)



Note: December 2014 data

Source: NBR, ECB (Structural Indicators for the EU Banking Sector)

Two of the indicators used to determine the level of financial intermediation (assets-to-GDP ratio and loans-to-GDP ratio) stuck to the downward path they had embarked on in 2011, while the deposits-to-GDP ratio remained relatively steady over the past year. Compared with the other EU countries, Romania posts the lowest level of financial intermediation, with bank assets accounting for about 60 percent of GDP at end-2014 (Chart 3.9).

The concentration of the Romanian banking sector is further moderate, standing slightly below the EU average (Chart 3.10). The market share of the top five banks in total bank assets is 55.3 percent. In terms of size, in June 2015, large and medium-sized banks held 68.2 percent and 25.1 percent respectively of total bank assets.

3.2.2. Aggregate balance sheet of credit institutions

Since the previous Financial Stability Report, the Romanian banking sector has undergone a significant period of non-performing loan resolution and strengthening financial stability by raising funds from the domestic market, households in particular. These developments, along with the significant liquidity released into the system by cutting the minimum reserve requirements ratio (in the context of the continued harmonisation of the reserve requirements mechanism with the ECB standards in the field) could pave the way for the sustainable resumption of lending, especially in domestic currency.

The large stocks of highly liquid assets and the appropriate level of capital and reserves rank further among the strengths of credit institutions operating in Romania. These holdings allow banks to smoothly cope with the vulnerabilities associated with foreign financing fluctuations and the implementation of the new prudential requirements for liquidity standards in the EU banking sector.

3.2.2.1. Dynamics of bank assets

In the period since the previous Financial Stability Report, the dynamics of aggregate bank assets[49] reflected mainly the mixed influences from: (i) the step-up in NPL resolution starting with 2014 Q3 (credit institutions began cleaning up their balance sheets in April 2014, at the recommendation of the NBR) and (ii) the strengthening of domestic saving. The additional funds taken from the local market fully offset the decline in the volume of credit lines extended by parent banks to their subsidiaries in Romania.

The breakdown by asset reveals three major trends:

(i) the slight recovery of lending to the private sector in 2015 Q2, after the significant contraction in the loan stock amid measures on the removal of non-performing loans from banks' balance sheets and/or loan sales. This evolution was spurred by the improvement in asset quality, the further downward trend in interest rates and the relative increase in both supply and demand (Section 3.2.4. Loans and credit risk);

(ii) credit institutions' further interest in government securities, as suggested by the larger exposures to the government sector both in volume and as a share in the on-balance sheet assets (Table 3.2). In the period ahead, government credit might witness a gradual adjustment, having regard to the European Commission's initiative[50]

[49] According to monetary statistics, bank assets (gross) totalled lei 403.8 billion at end-June 2015, up 1.5 percent (3.1 percent in real terms) over the same year-earlier period.

[50] The ESRB Report on the regulatory treatment of sovereign exposures published on 10 March 2015.

concerning the regulatory treatment of sovereign exposures by removing the exemption of sovereign exposures from the large exposures regime and the introduction of a capital requirement for concentration risk (Section 3.2.6. Market risk);

(iii) the contraction in claims on the NBR (to a volume less than half the balance recorded at end-December 2008), due to the lower minimum reserve requirement ratios[51] and the fall in non-residents' deposits. However, the share of this balance sheet item in the asset portfolio remains significant, reflecting the prudential nature of these assets.

Table 3.2. Asset structure of credit institutions operating in Romania

percent of total assets

	2008 Dec.	2009 Dec.	2010 Dec.	2011 Dec.	2012 Dec.	2013 Dec.	2014 Jun.	2014 Dec.	2015 Jun.
Domestic assets, *of which:*	98.0	96.6	96.8	97.7	97.2	97.0	95.7	95.3	94.6
Claims on the NBR and credit institutions, *of which:*	23.8	18.6	16.5	15.3	13.4	14.9	12.0	13.1	10.5
– claims on the NBR	21.8	15.8	14.2	13.7	11.9	12.9	9.7	11.6	8.6
Claims on the domestic non-bank sector, *of which:*	63.4	67.6	70.1	74.5	75.2	73.2	74.3	73.2	75.0
– claims on the government sector	5.0	12.7	15.7	17.7	19.5	19.7	20.2	21.1	21.7
– claims on legal entities*	29.2	27.4	27.9	30.3	30.0	28.2	28.7	26.9	27.3
– claims on households	29.2	27.5	26.5	26.5	25.8	25.3	25.5	25.2	26.0
Other assets	10.8	10.3	10.3	7.9	8.6	9.0	9.4	9.0	9.1
Foreign assets	2.0	3.4	3.2	2.3	2.8	3.0	4.3	4.7	5.4

* including non-financial corporations and non-monetary financial institutions

Note: Due to rounding, some totals may not correspond to the sum of the separate figures.

Source: NBR – Aggregate monetary balance sheet of credit institutions

Even though the foreign exposure of the Romanian banking sector followed an upward path, it further held a marginal weight in aggregate assets. About 43 percent of foreign investments recorded at end-June 2015 were made with euro area credit institutions and took the form of loans with an agreed maturity of up to and including one year; more than one third (34 percent) of these loans were denominated in euro, while almost 10 percent were made in the form of cash in euro and other currencies.

3.2.2.2. Developments in own, raised and borrowed funds

Deposits from residents, non-government clients, continued to strengthen their prevailing share in the structure of aggregate bank liabilities (Table 3.3). These deposits totalled nearly lei 231.0 billion in June 2015, up 7.9 percent (9.6 percent in real terms) year on year, despite the protracted decline in average interest rates. For most credit institutions operating in Romania, local deposits became a major source of funding, gradually replacing foreign liabilities.

[51] During the reviewed period, the NBR lowered the minimum reserve requirement ratios in July, October, November 2014 and May 2015 (Section 3.2.4. Loans and credit risk).

Table 3.3. Liability structure of credit institutions operating in Romania

percent of total liabilities

	2008 Dec.	2009 Dec.	2010 Dec.	2011 Dec.	2012 Dec.	2013 Dec.	2014 Jun.	2014 Dec.	2015 Jun.
Domestic liabilities, *of which:*	69.3	73.6	73.2	73.5	76.8	79.5	81.3	82.3	83.4
– interbank deposits	2.1	5.4	3.4	3.4	4.6	2.3	2.2	1.5	2.3
– government deposits	3.1	2.1	1.7	1.4	1.3	1.3	1.4	1.5	1.7
– deposits from legal entities*	20.2	19.3	19.0	19.0	18.5	21.0	21.0	23.5	22.2
– deposits from households	24.4	26.7	27.0	28.7	30.2	31.7	32.9	34.1	35.0
– capital and reserves	10.6	12.0	14.2	16.2	18.0	19.4	19.5	18.0	18.1
– other liabilities	8.9	8.1	7.9	4.8	4.2	3.8	4.4	3.8	4.1
Foreign liabilities	30.7	26.4	26.8	26.5	23.2	20.5	18.7	17.7	16.6

* including non-financial corporations and non-monetary financial institutions

Note: Due to rounding, some totals may not correspond to the sum of the separate figures.

Source: NBR – Aggregate monetary balance sheet of credit institutions

The two main categories of depositors, households in particular, contributed to the favourable developments in the domestic deposit base. Larger volumes were mainly recorded by leu-denominated deposits[52], which helped consolidate the share of this component in total deposits (up to 65.8 percent in June 2015). The trends were particularly correlated with the growth in households' real disposable income, as well as with budget payments to the agricultural sector and higher amounts received from the government budget on account of VAT refunds in the case of companies. Since December 2010, households have maintained their net creditor position towards the banking sector; this position was exclusively supported by the evolution of leu-denominated deposits.

Looking at the breakdown by maturity, deposits with maturity of up to one year continued to hold a prevailing share (93 percent of the volume of deposits taken from non-bank clients, or around 53 percent of total bank liabilities in June 2015). This potential vulnerability is mitigated, to a large extent, by the prevalence of household deposits in total deposits, which are generally characterised by a good stability in terms of the degree of permanence.

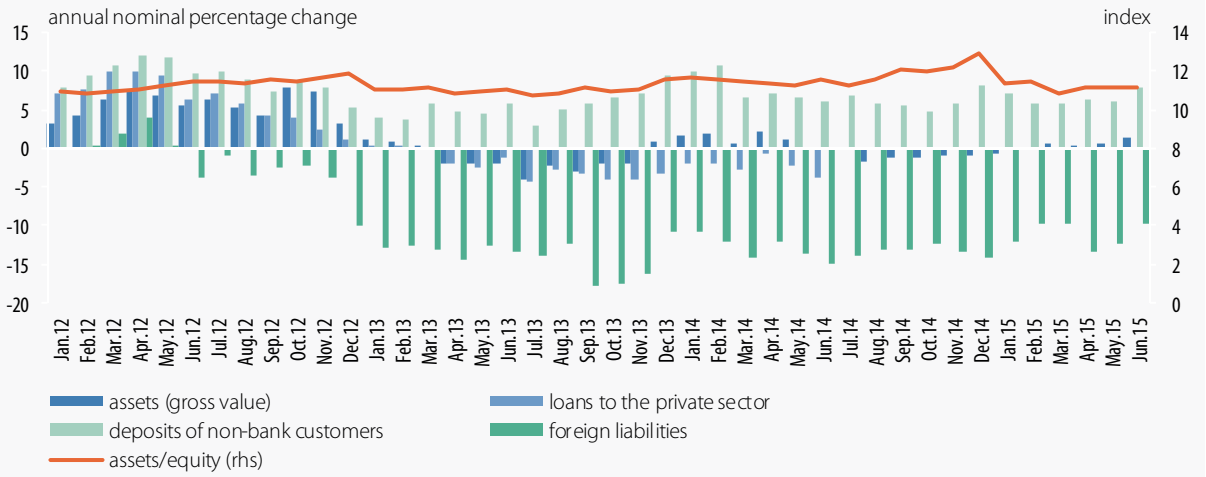
Own funds remained at an appropriate level both in terms of volume and as a share in the bank asset financing structure. The dominant position of share capital ensures the high quality of these sources as regards their capacity to absorb potential unexpected losses, including in the context of NPL resolution initiated in 2014 (Section 3.2.3. Capital adequacy).

Foreign financing, albeit on the wane, continued to hold an important share in balance sheet liabilities. The annual rate of decline of these liabilities slowed down in the period under review (-9.8 percent in June 2015 from -15.0 percent in June 2014). Overall, the drop in foreign liabilities was driven by a small number of credit institutions with foreign capital (but holding a large weight in the system), while the additional raised funds had mostly small volumes (Section 3.2.5. Liquidity risk).

52 June 2014 through June 2015, household deposits increased by lei 10.6 billion (to lei 141.4 billion), 62 percent of the growth being accounted for by the leu-denominated component; in the case of companies, the stock of deposits rose by lei 7.2 billion (to lei 75.1 billion), of which about 81 percent on the back of the leu-denominated component.

As shown in Chart 3.11, cross-border deleveraging continued to unfold in an orderly manner.

Chart 3.11. Developments in the main indicators relevant to assessing the magnitude of deleveraging



Source: NBR

3.2.3. Capital adequacy

The Romanian banking sector continues to report adequate capital ratios, also due to the central bank's proactive use of regulatory and supervisory instruments. High loss-absorption capacity plays a crucial role in the context of a macroeconomic environment featuring low interest rates and heightened competition.

3.2.3.1. Developments in own funds of banks, Romanian legal entities

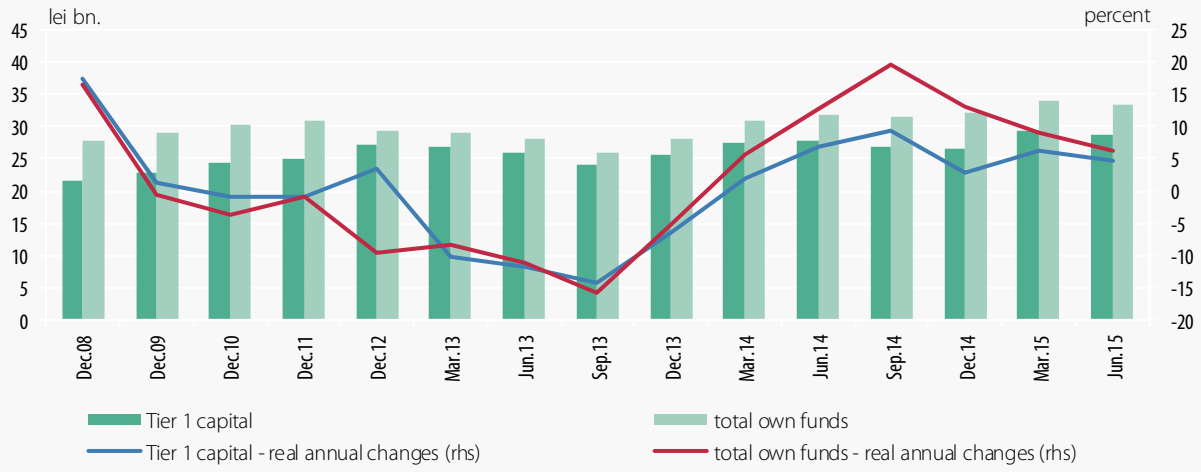
The own funds[53] of banks (Chart 3.12) further posted favourable developments[54] June 2014 through June 2015, despite the accounting losses recorded by several banks at the end of the 2014 financial year, mainly on account of: (i) the 40 percent drop, starting with 2015, in the volume of deductions from own funds generated by nationally regulated prudential filters (following the gradual implementation of the CRD IV/CRR regulatory framework); (ii) the ongoing efforts to increase share capital through new capital contributions and profit retention[55]; (iii) further weak lending activity. These developments ensured appropriate capital ratios that exceeded by far the minimum required levels.

53 The volume of own funds of banks, Romanian legal entities, was lei 33.3 billion in June 2015, up from the levels recorded in December 2014 (lei 32.1 billion) and June 2014 (lei 31.9 billion) respectively.

54 The real annual growth rate of total own funds equalled 13.1 percent in December 2014 and 6.1 percent in June 2015.

55 Capital increases amounted to the equivalent of EUR 502 million in 2014 and EUR 520 million in 2015 H1. New capital contributions of shareholders (the equivalent of EUR 394 million in 2014 and EUR 366 million in 2015 H1) were the main source of capital increase, ahead of retained earnings (the equivalent of EUR 87 million in 2014 and EUR 1.6 million in 2015).

Chart 3.12. Total own funds and Tier 1 capital

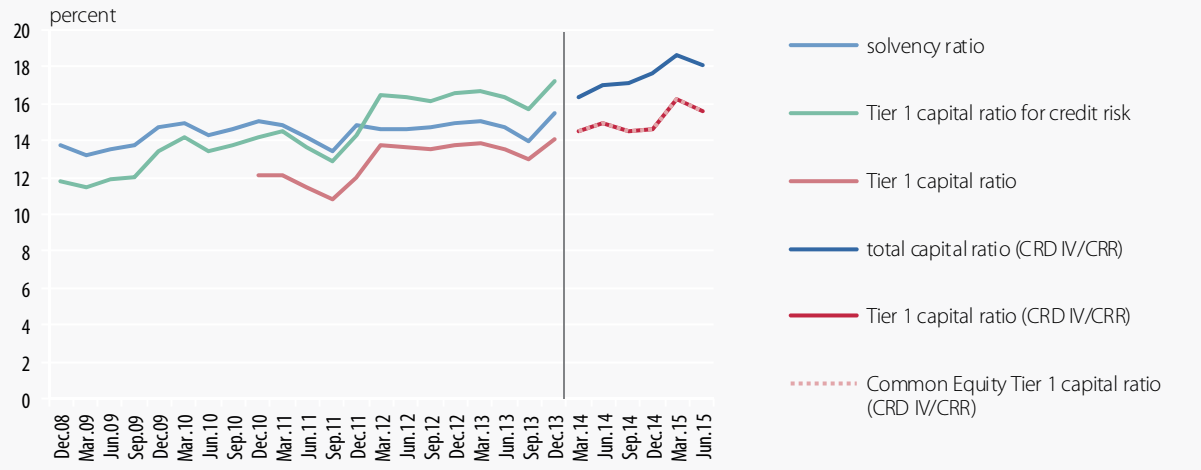


Source: NBR, NIS

3.2.3.2. Analysis of capital adequacy indicators

Capital adequacy indicators witnessed an upward trend during June 2014 – June 2015 (Chart 3.13).

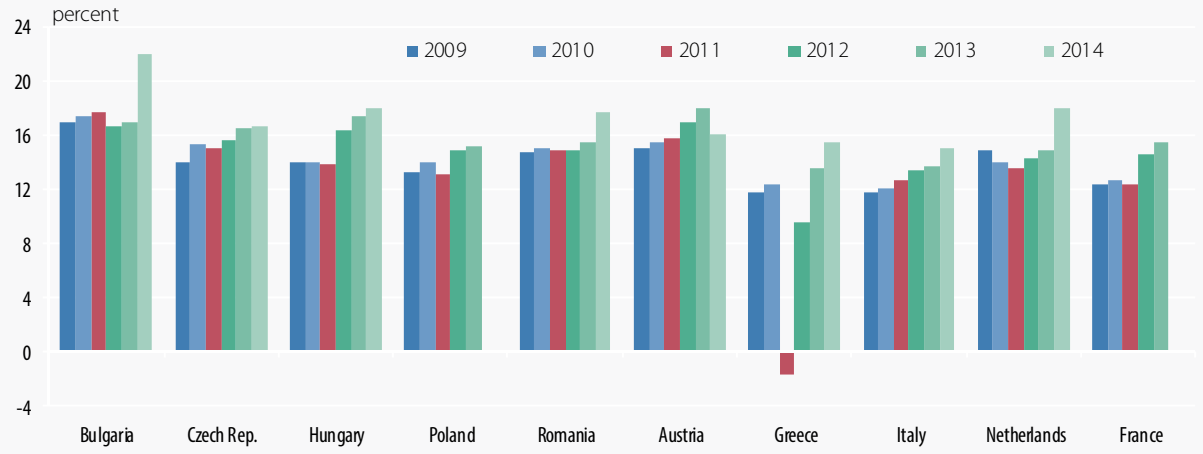
Chart 3.13. Capital adequacy indicators



Source: NBR

The implementation of the new CRD IV/CRR regulatory framework as from 1 January 2014 helped strengthen the capital position of EU banking sectors (Chart 3.14). The capitalisation of the Romanian banking sector is similar to that of countries in the region, comparing favourably with most countries of origin having subsidiaries in Romania.

Chart 3.14. Comparative developments in solvency ratio

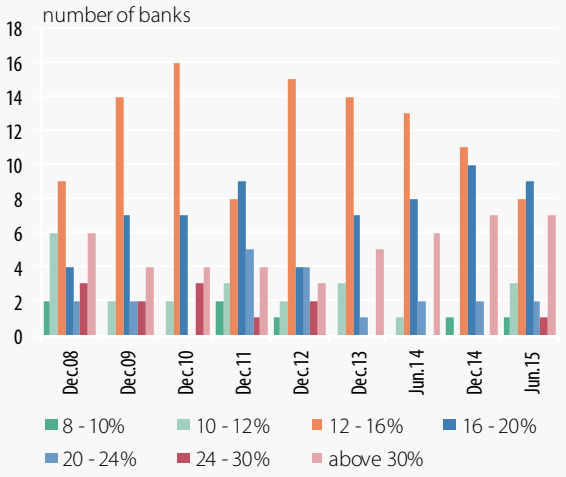


Source: IMF (Financial Soundness Indicators, FSI Tables, April 2015); NBR calculations

Bank distribution by total capital ratio (Chart 3.15) posted mixed developments, generated, on the one hand, by the large volume of accounting losses reported in 2014 by certain credit institutions and, on the other hand, by the significant capital increases in the current year.

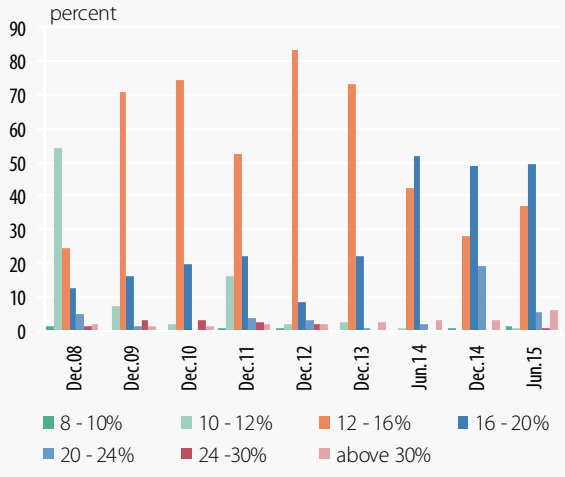
Bank asset distribution by total capital ratio (Chart 3.16) indicates that most bank assets are held by banks with a total capital ratio in the 12 percent – 20 percent range.

Chart 3.15. Bank distribution by total capital ratio



Source: NBR

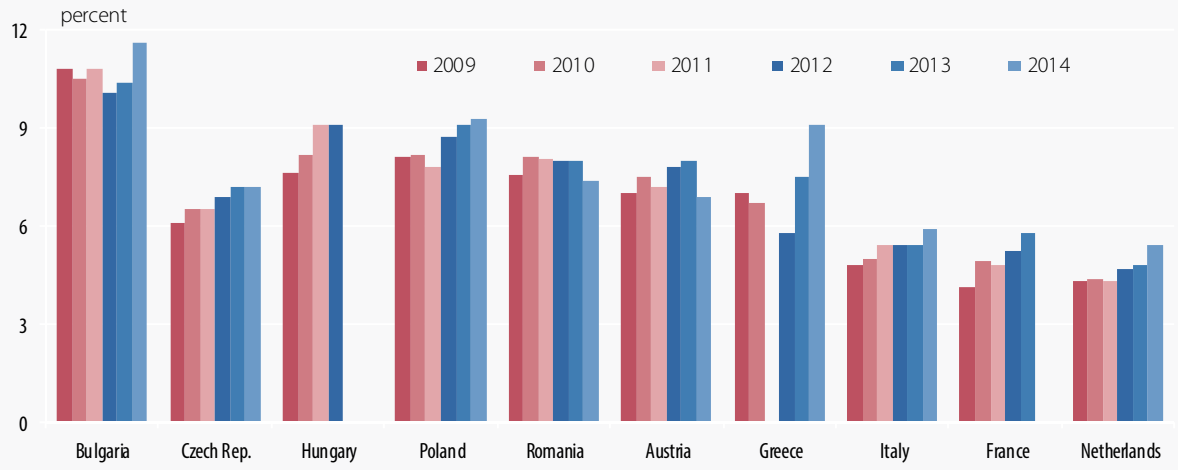
Chart 3.16. Bank asset distribution by total capital ratio



Source: NBR

The structure of capital requirements remained consistent with that seen in the previous periods. Capital requirements for credit risk accounted for the largest share, i.e. 82.6 percent, ahead of capital requirements for operational risk (14.9 percent) and market risk (2.4 percent). Capital requirements for the adjustment of credit risk assessment held only a marginal share in total capital requirements for regulated risks, i.e. 0.1 percent.

Chart 3.17. Comparative developments in leverage ratio



Source: IMF (Financial Soundness Indicators, FSI Tables, April 2015); NBR calculations

The leverage ratio calculated for the Romanian banking sector further stood at an appropriate level (8.0 percent in June 2015), following the substantial increases in shareholders' capital contributions. The EU legislation requires the compulsory use of this indicator as a macroprudential instrument, in view of mitigating the risk of excessive leverage, starting with 2018. At EU level, the leverage ratio witnessed mixed developments (Chart 3.17), the Romanian banking sector faring better than most countries of origin of capital of foreign bank subsidiaries.

3.2.3.3. Results of the solvency stress test of the banking sector

The National Bank of Romania performs regularly stress tests of credit institutions' capital adequacy based on macroeconomic scenarios envisaging the potential developments of the main risk factors: economic growth, exchange rate, interbank interest rates, risk premium, real estate market prices. The stress tests imply both estimating credit institutions' operating results according to the analysed scenarios (including the effects of unrealised losses on capital) and capturing the impact of scenarios on adjustments for impairment of financial assets (provisions). Stress tests are conducted for microprudential purposes, as well as for identifying the main systemic risk factors.

The latest solvency stress test of credit institutions covered a 12-quarter horizon (2015 Q1 – 2017 Q4) and was based on two macroeconomic scenarios: a baseline scenario, consistent with the European Commission's winter forecast for 2015-2016 (the data for 2017 are not official, representing an extrapolation of trends) and an adverse scenario envisaging the application of shocks similar in size with those used in the solvency stress test developed by the European Banking Authority and the European Central Bank in 2014. The adverse scenario foresees: (i) an economic recession in the first two years under review (annual economic decline of 1.15 percent in 2015 and 0.81 percent in 2016), followed by a slight recovery in 2017 (economic growth of 1.33 percent at end-2017); (ii) a 15 percent persistent shock on the EUR/RON exchange rate; (iii) a relatively steady unemployment rate in the context of economic

contraction correlated with the exchange rate depreciation; (iv) a significant inflation rate increase (to 3.82 percent in 2015 Q4) as a result of the domestic currency depreciation, partially offset by the negative output gap; (v) a shock applied to interest rates on new leu-denominated loans and deposits that gradually fades towards the end of the assessment horizon and (vi) a persistent shock applied to interest rates on new EUR-denominated loans and deposits. The results of stress tests are used in credit institutions' supervision and financial stability assessments.

According to the baseline scenario, the solvency ratio would witness favourable developments over the assessment horizon amid the lower adjustments for impairment of financial assets. However, a static balance sheet assumption implies losses that, for certain credit institutions, would result in the decline in Common Equity Tier 1 capital ratio and total capital ratio below the minimum required levels, with a strong effect being manifest particularly in the third year of analysis. Credit institutions that would face difficulties are small-sized and have low operating profitability.

According to the adverse scenario, total capital ratio would drop markedly (by about 3 percentage points to 14.4 percent). Certain vulnerabilities are identified in the case of small- and medium-sized credit institutions. The main factors behind these developments were: (i) the large volume of adjustments for impairment of financial assets (total expenses in excess of lei 14.5 billion during the three years); (ii) the erosion of operating profit amid the narrowing interest margins; (iii) the zero growth assumption of the volume of new loans (severe hypothesis for estimating credit institutions' operating profit). The decrease in operating profit (especially due to the slow lending dynamics in recent years, credit institutions' scale of activities aimed at non-performing asset resolution, and the historically low interest rate environment) is the main reason for the vulnerabilities encountered by certain credit institutions. The balance sheet of certain credit institutions shows an inadequate proportion of high-yield financial assets (loans to non-financial corporations, retail loans – other than housing loans, high risk bonds). In the absence of lending resumption, compared with previous years, credit institutions have a lower capacity to cover credit risk losses without affecting the capital position (i.e. from the current profit).

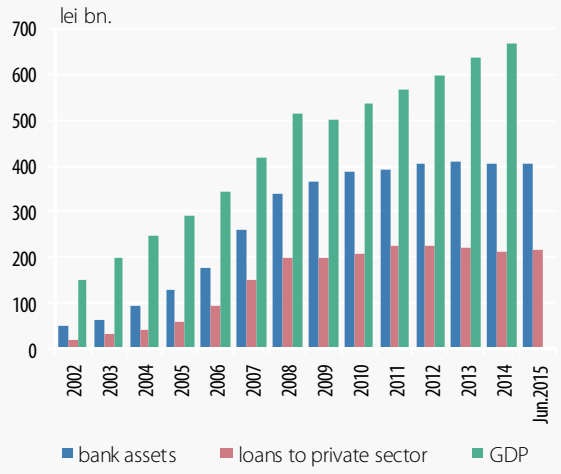
3.2.4. Loans and credit risk

The NBR continued to actively support the sustainable resumption of lending to the real sector by resorting to monetary policy instruments. The signals sent to the banking sector resulted in increased local currency-denominated financing flows at historically low interest rates. The prudential measures on foreign currency lending led to the steady decline in the stock of foreign currency-denominated loans, which helped mitigate the vulnerabilities in banks' balance sheets. The NBR's recommendations on banks' balance sheet clean-up translated into the marked decline in the NPL ratio, which provides a sustainable basis for the resumption of lending to the economy. The high coverage by IFRS-compliant adjustments for impairment is an important factor to reduce credit risk. Potential unexpected losses that may arise from credit risk becoming manifest can be covered by the substantial capital reserves of credit institutions.

3.2.4.1. Main credit developments

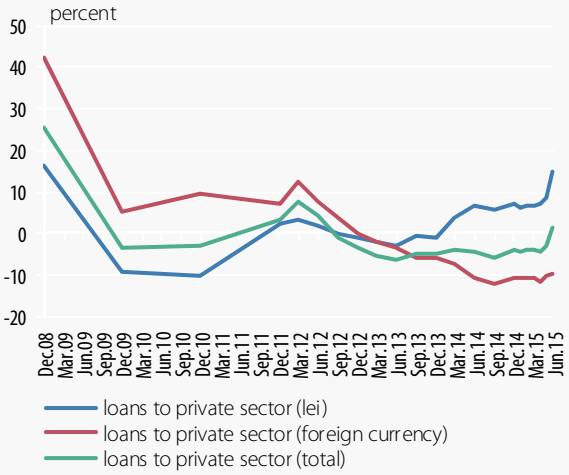
In 2014, the loan stock saw a decline (Chart 3.18), mainly as a result of banks' efforts to clean up their balance sheets by removing the carrying amount of unrecoverable loans fully or partly covered by adjustments for impairment[56]. In the current year, lending to the real sector increased[57], amid the narrowing of the negative output gap and the strengthening of the domestic macroeconomic environment. The supply-side factors restricting the flow of loans to the economy are further the balance sheet adjustment to the prudential capital adequacy and liquidity requirements imposed by the CRD IV/CRR regulatory framework, as well as a cautious lending stance against the background of an insufficiently identified eligible demand.

Chart 3.18. Bank assets and loans to private sector



Source: NBR, NIS

Chart 3.19. Annual real growth rate of loans to private sector



Source: NBR, NIS

The NBR continued to support the sustainable resumption of lending to the real sector, by resorting to monetary policy instruments: a) the policy rate was cut by 175 basis points during the period under review (from 3.5 percent in June 2014 to 1.75 percent in June 2015), as a signal for commercial banks to reduce the cost of leu-denominated loans along with the improvement in the domestic macroeconomic environment; b) the minimum reserve requirements ratio on leu-denominated liabilities of credit institutions was gradually cut from 12 percent to 8 percent, while that on foreign-currency denominated liabilities was lowered from 18 percent to 14 percent, with a view to increasing the volume of resources available for lending to the real economy.

The monetary policy measures adopted by the NBR in the reviewed period had as a result the fall, between June 2014 and June 2015, in banks' average interest rates on new leu-denominated loans to historically low levels, i.e. from 8.4 percent in June

56 The balance sheet clean-up operations also led to the drop in the volume of bank assets. In December 2014, bank assets totalled lei 405.3 billion (down from lei 408.7 billion in December 2013). At the end of 2015 H1, bank assets stood at lei 403.8 billion (according to monetary statistics).

57 At end-June 2015, loans to the private sector amounted to lei 215.1 billion, up from lei 211.1 billion at end-2014, but below the level recorded before the balance sheet clean-up (lei 218.5 billion at end-2013).

2014 to 6.5 percent for household loans and from 6.0 percent to 4.9 percent for loans to non-financial corporations. The interest rate level varies depending on the type of loans offered by credit institutions, namely on the credit risk level. In the case of new leu-denominated loans to households, the average interest rate on housing loans (4.0 percent in June 2015, down from 5.2 percent in June 2014) stood lower than that on consumer loans (7.9 percent in June 2015, down from 10.2 percent in June 2014). As regards new leu-denominated loans to non-financial corporations, the average interest rate on loans to large companies (4.2 percent in June 2015, down from 5.1 percent in June 2014 for loans exceeding the equivalent of EUR 1 million) was lower than that on loans to smaller companies (5.4 percent in June 2015, down from 6.8 percent in June 2014 for loans in amount of up to the equivalent of EUR 1 million), as a result of differences in profit generating capacity, market share and bargaining power.

Table 3.4. The main components of loans to the private sector

lei bn.

	2011 Dec.	2012 Dec.	2013 Dec.	2014 Jun.	2014 Dec.	2015 Jun.
Total loans to the private sector, *of which:*	223.0	225.8	218.5	215.4	211.2	215.1
Leu-denominated loans, *of which:*	81.7	84.7	85.3	90.4	92.1	102.4
– short-term	30.1	33.4	29.3	30.2	27.5	28.8
– medium-term	19.5	22.1	27.9	31.7	33.5	37.9
– long-term	32.0	29.2	28.1	28.6	31.1	35.6
Foreign currency-denominated loans, *of which:*	141.4	141.1	133.1	124.9	119.1	112.7
– short-term	22.6	21.3	17.9	15.8	13.7	12.4
– medium-term	24.8	24.8	23.3	22.8	21.3	19.6
– long-term	93.9	95.0	91.9	86.4	84.1	80.6

Source: NBR

Since the previous Financial Stability Report, loans to the private sector (Table 3.4) saw the following developments:

(a) the reversal of the downward trend that had started in 2012 Q3 (Chart 3.19), with the annual rate of change entering positive territory (1.4 percent) in June 2015. This development was triggered by leu-denominated loans, which kept on posting a growth pace of about 7 percent during June 2014 – April 2015, reaching a 15 percent peak in June 2015 (amid increased medium- and long-term lending facilities to non-financial corporations and households). The uptrend in leu-denominated loans to the private sector is likely to facilitate the transmission of monetary policy impulses to the banking sector, thereby contributing to the alleviation of vulnerabilities in banks' balance sheets.

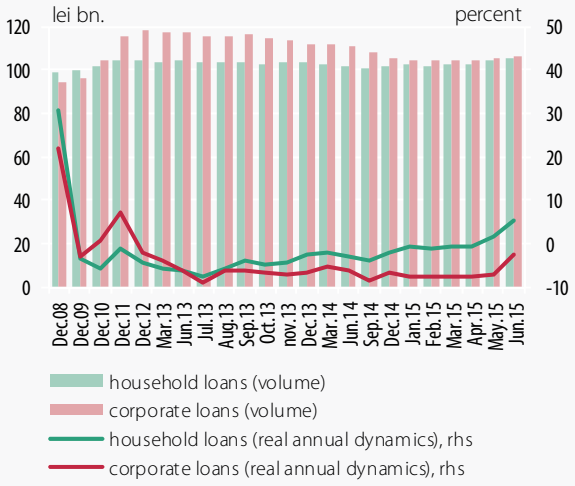
(b) the further contraction in foreign currency-denominated loans, which had begun in December 2012 (proceeding at a relatively constant pace of -11 percent during the period since the previous Report), as a result of the legislative amendments consisting in the implementation of ESRB Recommendation on lending in foreign currencies (ESRB/2011/1). The prudential provisions are aimed at limiting lenders' exposure to credit and market risks. The enforcement of regulations in all EU Member States was

intended to ensure a level playing field and reduce regulatory arbitrage. The effect of nationally adopted measures translated into the notable drop in the share of foreign currency-denominated loans in total loans to the private sector (down 5.6 percentage points in June 2014 through June 2015, to 52.4 percent at the end of 2015 H1).

(c) the change in the maturity composition of non-government loans, by increasing the share of long-term loans (up to 54 percent of total credit to the private sector in June 2015), a trend that was more visible for leu-denominated loans (up 3.2 percentage points during June 2014 – June 2015), but that was also manifest in the case of foreign currency-denominated loans (up 2.4 percentage points), due to the pick-up in housing loans to households and in investment and equipment loans to non-financial corporations.

(d) the further downtrend in loans to non-financial corporations[58] (-2.7 percent, in real terms), the flow of new leu-denominated loans failing to offset the reduction in foreign currency-denominated loans (Chart 3.20). In contrast, household loans[59] recorded an upward path, with a significant real annual rate of increase of 5.2 percent in June 2015, on account of the higher volume of leu-denominated loans (housing loans in particular).

Chart 3.20. The annual dynamics of private sector loan components



Source: NBR

The modest lending developments have been in line with those reported by other EU countries, where the annual dynamics of loans remained in negative territory between 2012 and 2014[60]. Credit contraction in the euro area reached a trough in early 2014, followed by a gradual recovery in loan dynamics towards the end of the period, mainly due to positive developments in loans to non-financial corporations (the annual rate of change of credit granted by monetary financial institutions stood at -0.1 percent in December 2014 versus -2.0 percent in December 2013). The return of lending to positive territory on the back of corporate loans is also revealed by the euro area bank lending surveys, which show that the rising demand, lower financing costs and stiffer competition helped ease lending standards in the case of both non-financial corporations and households (for housing loans).

58 Corporate loans decreased from lei 110.6 billion in June 2014 to lei 106.0 billion in June 2015.

59 The stock of loans to households increased from lei 101.4 billion in June 2014 to lei 105.0 billion in June 2015.

60 European Central Bank – Annual Report 2014.

Table 3.5. The average bank interest rates on outstanding loans and deposits

percent

	2011 Dec.	2012 Dec.	2013 Dec.	2014 Jun.	2014 Dec.	2015 Jun.
Lending rates in lei – households	14.00	13.26	11.32	10.47	9.47	8.22
Lending rates in lei – companies	10.45	10.11	7.36	7.04	5.93	5.30
Lending rates in euro – households	7.11	5.65	5.38	5.36	5.13	5.08
Lending rates in euro – companies	5.73	4.77	4.76	4.76	4.32	4.50
Deposit rates in lei – households	6.24	5.31	4.03	3.32	2.92	2.11
Deposit rates in lei – companies	5.59	4.94	2.69	2.26	1.61	1.13
Deposit rates in euro – households	3.29	3.12	2.25	1.92	1.66	1.18
Deposit rates in euro – companies	2.74	2.43	1.78	1.46	1.10	0.72

Source: NBR

In June 2014 – June 2015, the average bank interest rates on outstanding loans and deposits (Table 3.5) witnessed the following developments:

(i) the interest rate on leu-denominated loans dropped by around 2 percentage points as a result of the pass-through of monetary policy impulses to credit institutions to cut lending costs; the adjustment trend was visible for both main categories of borrowers;

(ii) the interest rates on foreign currency-denominated loans remained lower than those on leu-denominated loans, but the differential narrowed markedly, due to ongoing decline in financing costs and the further cautious lending activity;

(iii) the downward trend in the average interest rate on leu-denominated time deposits continued amid the drop in inflation rate and the need to improve operational efficiency;

(iv) the interest rates on foreign currency-denominated deposits were lowered further (falling close to 1 percent), in line with international trends.

Table 3.6. The average bank interest rates on new loans and deposits

percent

	2011 Dec.	2012 Dec.	2013 Dec.	2014 Jun.	2014 Dec.	2015 Jun.
Lending rates in lei – households	12.66	12.41	9.05	8.44	7.27	6.48
Lending rates in lei – companies	9.74	9.76	6.84	6.01	5.87	4.86
Lending rates in euro – households	5.90	4.33	4.81	5.63	4.42	5.08
Lending rates in euro – companies	5.64	4.62	4.89	4.38	3.93	3.76
Deposit rates in lei – households	6.59	5.64	3.92	3.17	2.78	1.79
Deposit rates in lei – companies	5.78	5.15	2.19	1.88	1.11	0.79
Deposit rates in euro – households	3.47	3.39	2.13	1.85	1.58	0.94
Deposit rates in euro – companies	2.38	1.97	1.47	1.06	0.71	0.42

Source: NBR

The evolution of average bank interest rates on new loans and deposits (Table 3.6) reveals the adjustment of margins June 2014 through June 2015:

(i) the average interest rate on new leu-denominated loans to households decreased in the period under review amid the pass-through of monetary policy impulses to the banks' business strategy and the keener competition among credit institutions. This indicator stood 1.7 percentage points lower than the corresponding average interest

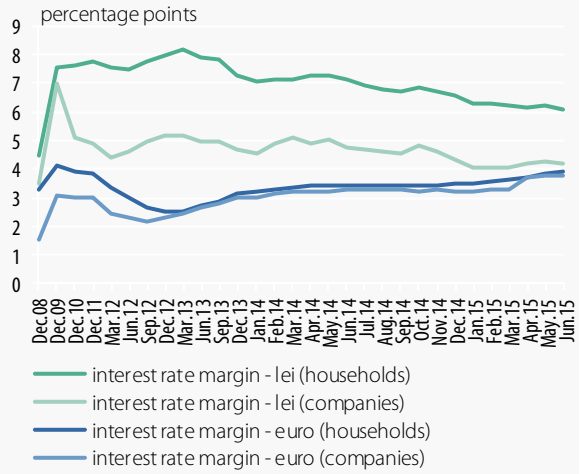
rate calculated for outstanding loans. The interest rates on new loans to non-financial corporations also headed downwards, in the context of the further prudent approach to financing this sector;

(ii) the average interest rate on new foreign currency-denominated loans to households and non-financial corporations fell due to the channelling of the funding flow to lower-risk loans (for households, funding has focused on mortgage loans) and to increased competition on this market segment;

(iii) the average interest rates on new deposits in domestic currency for both categories of customers remained on the downtrend started in the previous period, the deposit rates on new business being lower than those on outstanding deposits, amid the improved domestic macroeconomic environment and the further substantial liquidity available to credit institutions;

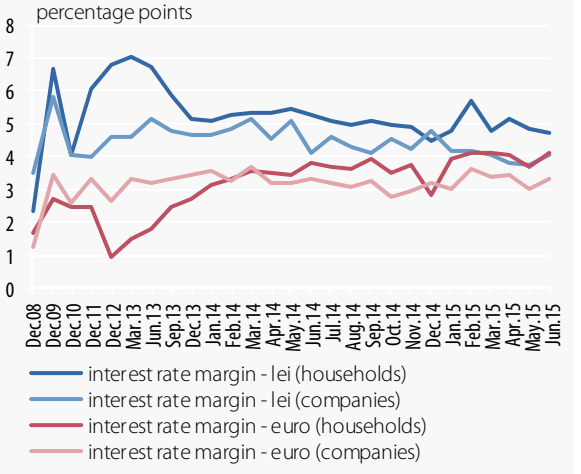
(iv) the average interest rates on new foreign currency-denominated deposits stayed on a downward path in the context of the still very low euro area interest rates.

Chart 3.21. Interest rate margins on outstanding loans and deposits



Source: NBR

Chart 3.22. Interest rate margins on new loans and deposits



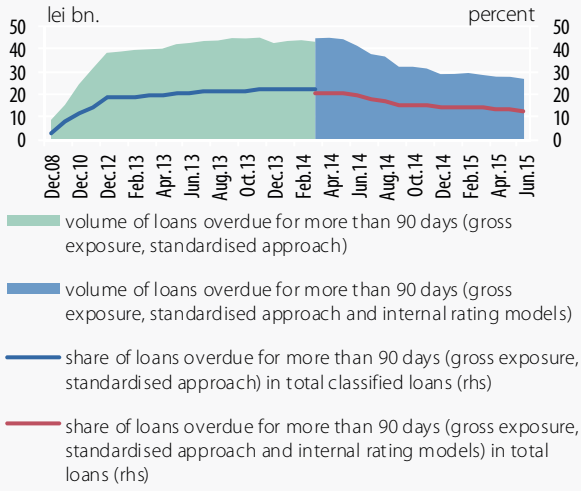
Source: NBR

The interest rate margins between leu-denominated loans and deposits (Chart 3.21) stuck to the downward trend (mainly due to the fall in interest rates on household loans granted under the "First Home" programme). This change in the business model calls for new efficiency requirements for the banking activity on this segment. The interest rate margins between foreign currency-denominated loans and deposits rose amid the faster decline in deposit rates, similar to the trends seen in the previous period. The downtrend in the interest rate margin between new leu-denominated loans and deposits (Chart 3.22) continued in June 2014 – June 2015, due to stronger decline in lending rates. The interest rate margins on new business are lower than those calculated based on outstanding loans and deposits, which will push the operating profit lower in the period ahead, given the low elasticity of loan demand. The interest rate margins between new foreign currency-denominated loans and deposits followed a similar downward course, on the back of the sharper cut in lending costs than in financing costs.

3.2.4.2. Loan quality

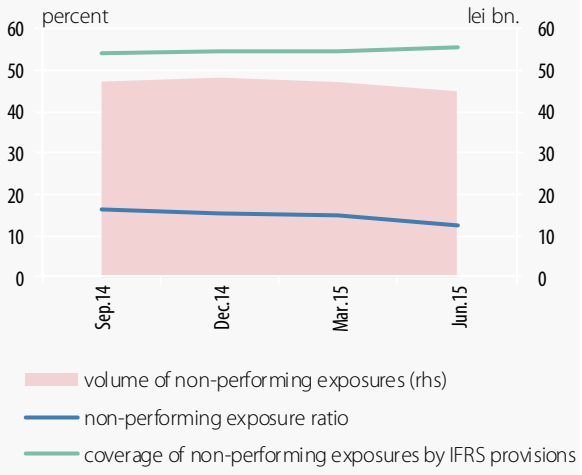
In 2014 and 2015 H1, the banking sector saw a fast-paced balance sheet clean-up that was aimed at supporting the sustainable resumption of lending to the real sector. The NBR required credit institutions to develop accounting policies concerning the removal from the balance sheet of the carrying amount of unrecoverable loans fully or partly covered with adjustments for impairment[61]. In accordance with the NBR's recommendations, credit institutions' accounting policies should comply with the generally-accepted banking practices, the International Financial Reporting Standards (IFRS) and the professional judgment, the approval of external auditors being mandatory. The balance sheet clean-up was the result of operations to remove from the balance sheet the carrying amount of unrecoverable loans fully or partly covered with adjustments for impairment.

Chart 3.23. Non-performing loans at aggregate level (national definition)



Source: NBR

Chart 3.24. Non-performing exposures at aggregate level (EBA definition)



Source: NBR

The volume of non-performing loans decreased significantly[62], which pushed the NPL ratio down to 12.8 percent in June 2015, from 19.2 percent in June 2014 (Chart 3.23). In 2014, credit institutions carried out non-performing loan sales in amount of lei 8.9 billion. The NPL coverage by IFRS provisions remains high (69.0 percent in June 2015, similar to the level recorded in December 2014, but higher than that seen in June 2014, i.e. 68.4 percent).

Starting with September 2014, the Implementing Technical Standards on supervisory reporting on forbearance activities and non-performing exposures developed by the EBA have become applicable. The technical standards provide a uniform definition for the assessment of non-performance of financial assets, as determined by the "non-performing exposure ratio", the methodology being applicable in all EU Member

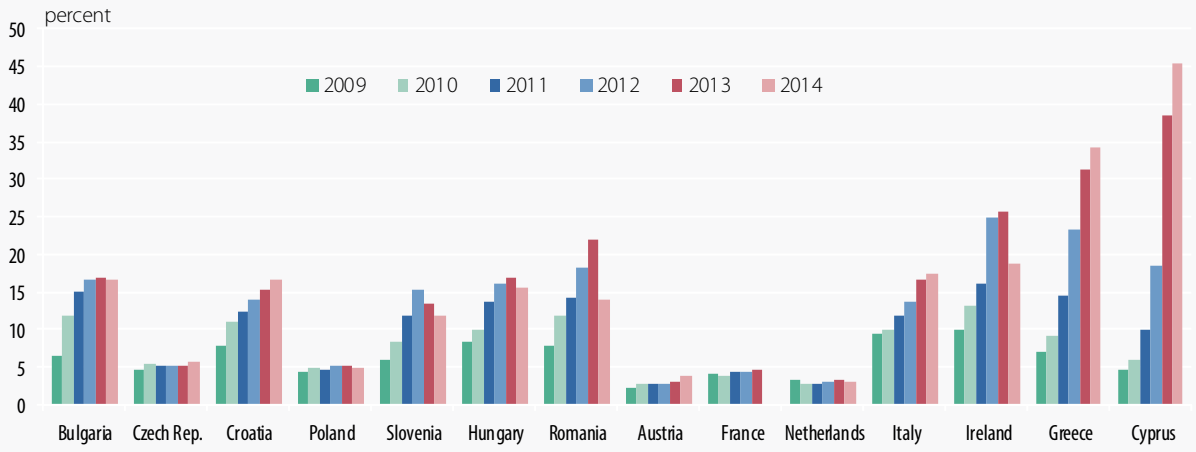
61 Georgescu, F. (2015), speech delivered at the conference *Dezvoltarea României în noul context financiar european* ("Romania's Development in the New European Financial Context")", http://www.bnr.ro/Discurs-sus%C8%9Binut-la-conferinta-'Dezvoltarea-Romaniei-in-noul-context-financiar-european'-12074.aspx.

62 The volume of loans and interest overdue by more than 90 days and in which case legal proceedings were initiated dropped to lei 26.8 billion in June 2015 from lei 41.5 billion a year earlier.

States on a consolidated basis. These standards are aimed at providing competent authorities with the additional instruments for assessing the level of forbearance activities and non-performing exposures, comparable at EU level, in the context of uncertainties surrounding the quality of bank assets, as well as of the inconsistent national practices for assessing asset quality, especially those regarding the scope of the non-performing asset class.

According to the EBA definition, the non-performing exposure ratio calculated for the Romanian banking sector, based on individual reports, stood at 16.57 percent in September 2014 (Chart 3.24) and posted a downward trend in 2015 (to 12.7 percent in June 2015). The NPL coverage by IFRS provisions was relatively stable in the reviewed period (about 55 percent).

Chart 3.25. Loan portfolio quality in selected EU Member States (share of non-performing loans in total loans)



Source: IMF (Financial Soundness Indicators, FSI Tables, April 2015); NBR calculations

Asset quality is still a vulnerability in many EU countries (Chart 3.25)[63]. The large stock of non-performing assets continues to affect banks' capacity to simultaneously build up additional capital buffers and secure the flow of loans to real economy, which generates systemic consequences[64]. The NPL ratio reported by 50 percent of the significant banking groups in the euro area further exceeds 10 percent (one of the causes consisting in the difficulties faced during the balance sheet clean-up process).

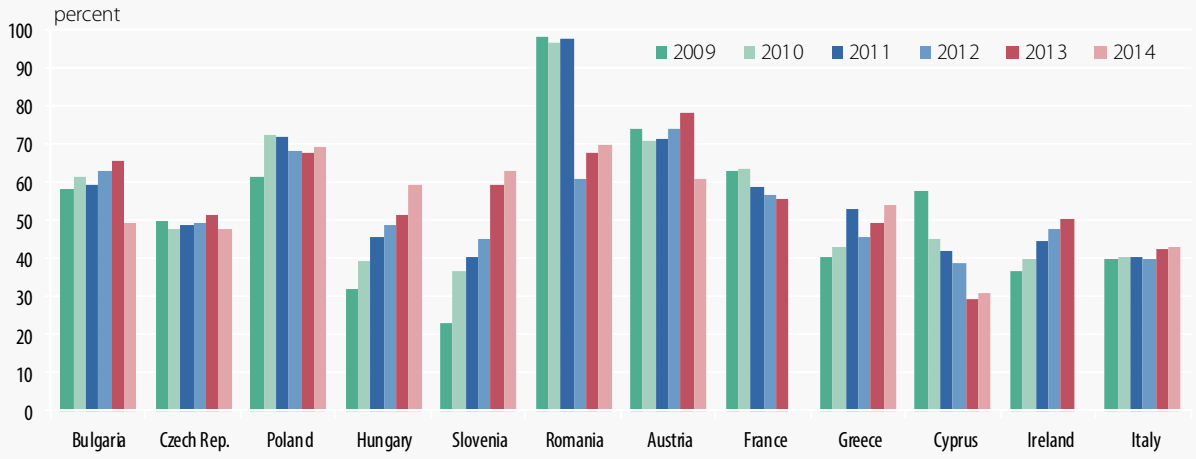
Romania compares favourably with most EU Member States in terms of the NPL coverage by IFRS provisions[65] (Chart 3.26).

63 The latest comparable data are for 2014. Therefore, NPL data were reported in compliance with national definitions. From this standpoint, data between countries are not fully comparable.

64 European Central Bank – Financial Stability Review (May 2015).

65 The data in the table were reported by EU Member States in compliance with national definitions and the levels of the indicator are not fully comparable.

Chart 3.26. Coverage of non-performing loans in selected EU Member States



Source: IMF (Financial Soundness Indicators, FSI Tables, April 2015); NBR calculations

Potential unexpected losses that may be generated by credit risk becoming manifest can be covered by the substantial capital reserves of credit institutions in Romania (which accounted for about 10 percent of total risk exposure amount in 2015 H1).

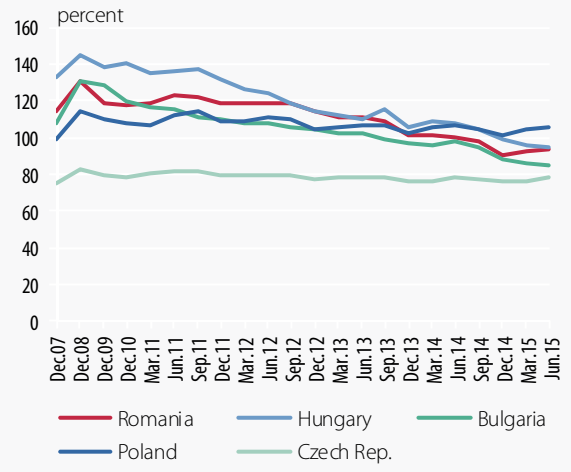
3.2.5. Liquidity risk

The loan-to-deposit ratio in the banking sector witnessed a fast decline in 2014, as a result of an increase in deposits taken from the local market and a weak lending activity. Starting with 2015, the indicator has seen a modest recovery amid the marginal reduction in the deposit base, corroborated with slightly favourable lending developments in May and June. The loan-to-deposit ratio posted a similar evolution across the region, as credit institutions continued to lower their reliance on foreign financing in favour of funds raised from the local market (Chart 3.27).

The loan-to-deposit ratio of banks with majority Romanian and Austrian capital was particularly influenced by structural changes across bank groups[66], while in the case of banks with majority Greek capital, the rise in this indicator (starting with 2015) was triggered by increased volatility of domestic financing amid the deepening financial crisis in Greece (Chart 3.28).

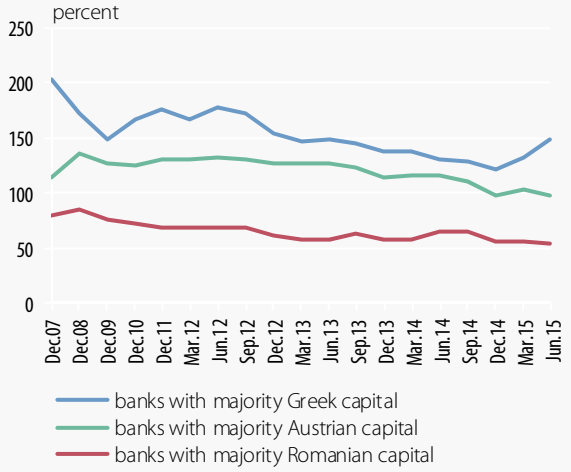
66 At end-December 2014, Banca Transilvania shifted from the category of banks with majority domestic capital to that of banks with heterogeneous capital, while in April 2015, Volksbank changed its ownership after being purchased by Banca Transilvania.

Chart 3.27. Private sector loan-to-deposit ratio (regional comparison)



Source: ECB

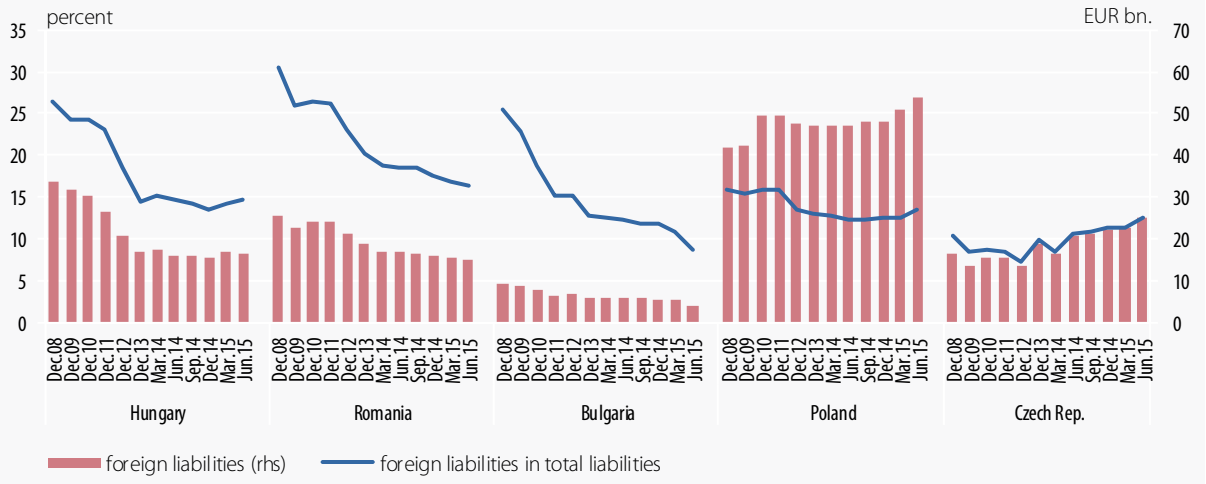
Chart 3.28. Private sector loan-to-deposit ratio for banks with majority Greek and Austrian capital



Source: NBR

Foreign financing continued to decline, the move being offset by the pick-up in funding from local sources, which resulted in lower cross-border contagion risk. The share of foreign liabilities in total liabilities shrank by 2.1 percentage points in June 2015 versus the same year-ago period to reach 16.6 percent, yet remaining higher than the average for the countries in the region (Chart 3.29). Foreign financing was largely ensured by deposits and loans from financial institutions and particularly by intercompany lending (73.2 percent of total foreign liabilities).

Chart 3.29. Foreign liabilities



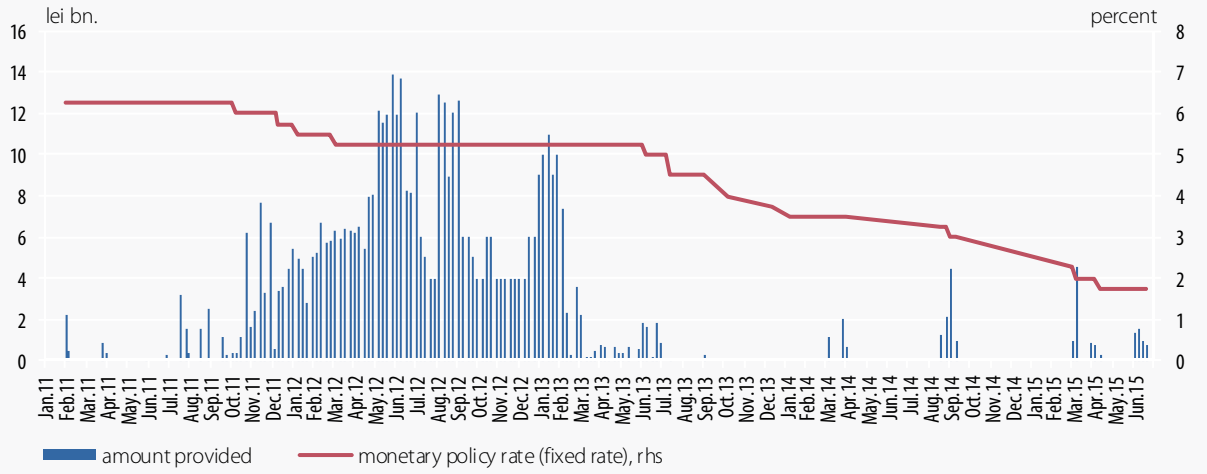
Source: ECB

Foreign financing from parent banks stayed on a downward trend, recording a 13.6 percent drop (in lei equivalent) in the past four quarters, mainly because short-term credit lines that reached maturity were no longer extended. Starting with 2014 H2, the average residual maturity shortened, on the back of the halt in raising new funding with maturity of over 2 years. In terms of currency breakdown, the share

of financing in euro from parent banks moved up to 81.3 percent of total parent bank funding, while the shares of the financing in lei and that in US dollar and other currencies narrowed to 12.9 percent and 5.8 percent respectively.

Holdings of unpledged government securities were further high over the past year, making a favourable contribution to the comfortable liquidity position of banks. At end-June 2015, credit institutions held government securities of more than 63 billion in lei equivalent (over 17.5 percent of total assets). In the case of large banks (with market shares of over 5 percent in total assets), the share of unpledged government securities in total assets was higher than that recorded system-wide (roughly 20 percent).

Chart 3.30. Liquidity provided by and frequency of repo operations



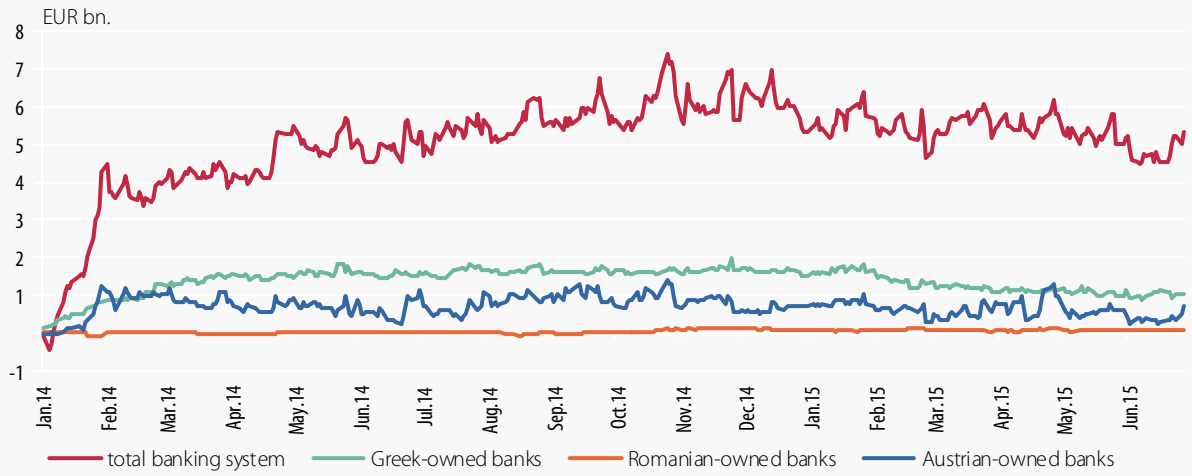
Source: NBR

Due to the favourable liquidity position of the banking sector, the NBR found it less necessary to conduct repo operations. Banks carried out these operations (6 times in the first half of 2015) mainly in order to cover reserve requirements in the context of temporary liquidity shortfalls generated by one-off factors such as liquidity absorptions from Treasury operations or autonomous factors (seasonal increase in currency outside the NBR). In this context, the NBR provided liquidity to credit institutions via one-week repo operations conducted as fixed-rate tenders with full allotment (Chart 3.30). Banks perceived that the periods of relative worsening of liquidity position were temporary, as shown by the small fluctuations in long-term (3M-12M) ROBOR rates. The favourable liquidity position in the banking sector was also confirmed by the low levels and volatility of the 3M ROBOR reference rate, which hit an all-time low in March 2015.

The correction in the currency mismatches between EUR-denominated assets and liabilities continued over the past year. However, the loan-to-deposit ratio for these balance sheet items stood at 149.7 percent in June 2015 amid the lower EUR-denominated funds raised from parent banks, indicating the increased importance of currency swaps for ensuring short-term financing in euro (despite the ongoing adjustment of the indicator, mainly as a result of the contraction in

EUR-denominated loans). The EUR-RON swaps conducted with non-resident financial institutions as counterparties are the most significant type of currency swap in terms of both number and value of transactions. The net daily balance of funds raised across the banking system via EUR-RON currency swaps in relation to non-residents followed a slightly downward course in 2015 H1, its volatility declining to around EUR 5.4 billion on average (Chart 3.31). In terms of flow, in the first half of 2015, the daily average of new transactions stood at around EUR 950 million. The deviation of the value of new transactions from the average is small, which shows that, despite the uncertainties generated by the situation in Greece, there was no contagion via this channel, the banks in Romania further benefiting from easy access to international financial markets. Most transactions initiated in 2015 H1 (82 percent) had maturities of one week at most, thus representing a system vulnerability. Similarly, the amounts raised by Romanian banks with majority Greek capital followed a slightly downward trend, their 2015 H1 average standing at 23 percent of the amounts raised system-wide.

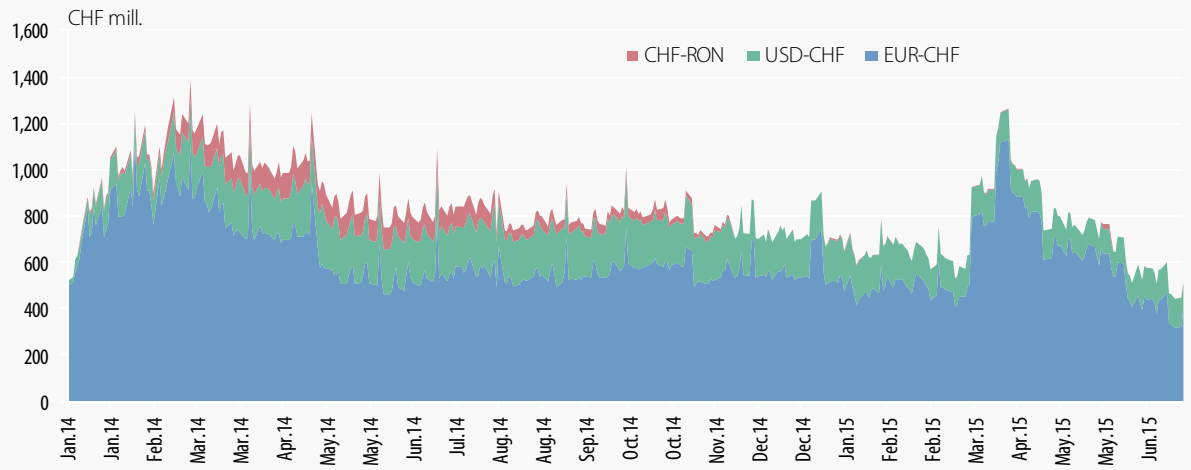
Chart 3.31. Net daily balance of EUR-denominated funds raised via currency swaps with non-resident financial institutions



Source: NBR

The FX swaps involving the Swiss franc are different from those used to ensure financing in euro, due to their longer maturity (nearly 35 percent of transactions have one-week maturity and most banks with Swiss franc exposures have at least one oustanding transaction with a maturity of over 30 days). Despite the effects on financial markets produced by the Swiss National Bank's decision of January 2015 to remove the 1.2 EUR/CHF floor, the volatility of funds raised in Swiss francs is low, indicating that the access of the Romanian banks to international markets was not restricted. The spike in CHF-denominated funds raised in early April 2015 (Chart 3.32) was due to the acquisition of Volksbank by Banca Transilvania, yet the effects of this intervention faded out in the following months.

Chart 3.32. Net daily balance of CHF-denominated funds raised via currency swaps with non-resident financial institutions



Source: NBR

In line with the reports on the liquidity indicator and the high liquidity risk, no credit institution reported liquidity ratios below one. This may be attributed to a significant volume of government securities in banks' portfolios, as well as to the modest lending, in foreign currency in particular, to non-financial corporations. Certain vulnerabilities are visible in the case of liquidity indicators for euro exposures, yet they are small in size and are not likely to adversely impact the liquidity position.

Stress tests highlighted a comfortable liquidity position of the Romanian banking system. The results showed banks' good capacity to withstand some unexpected withdrawals of funding sources, while the identified vulnerabilities occur individually and have as main causes the low volume of liquid assets or the increased reliance on short-term financing. The main factors leading to a favourable liquidity position in the banking sector are the substantial holdings of unpledged government securities, the low reliance on foreign financing, concurrently with maintaining the financing base from domestic sources, cash and holdings in the NBR's current account higher than the minimum reserve requirements, as well as the low reliance on wholesale financing. In addition, monetary policy measures created a favourable environment for ensuring appropriate liquidity in the banking sector.

3.2.6. Market risk

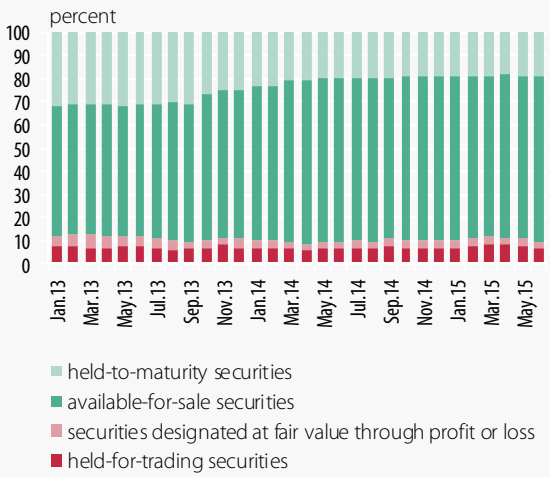
The interest rate risk assessed in terms of change in the economic value of capital is on a rise. The increase in the shares of variable interest-bearing liabilities and fixed interest-bearing assets in the balance sheet of credit institutions may cause significant losses for banks if interest rates, currently standing at historically low levels domestically and internationally, start to pick up.

Holdings of debt securities (generally bearing fixed interest), which include mostly Treasury certificates and Romanian government securities, saw their share in total bank assets moving ahead to reach 22.2 percent in June 2015. Equity instruments held a

modest share of 0.12 percent, being mainly classified as available for sale (82 percent of total equity instruments). Over the past year, foreign investors showed lower interest in government securities (owing probably to the decline in yields), as shown by the drop in the share of government securities held by non-residents (18.6 percent in April 2015 versus 20.3 percent in April 2014). The lei- and EUR-denominated Romanian government securities held by non-residents totalled EUR 4.96 billion at end-April 2015, with medium- and long-term securities holding an overwhelming share of 97 percent.

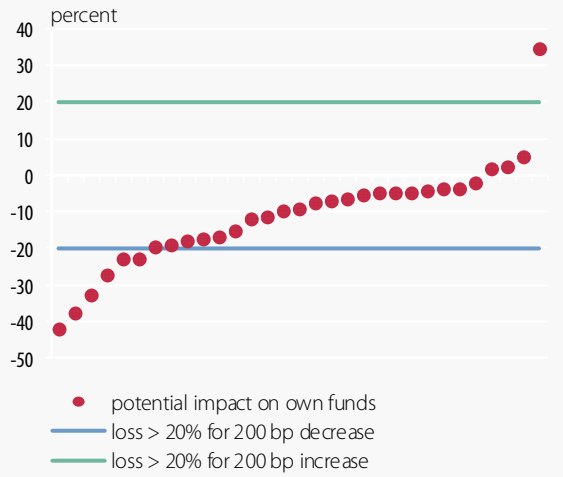
In the event of a parallel upward shift[67] by 200 basis points in the yield curve and the realisation of forward rates implied by this shift (the persistence of shock), banks would incur a relatively low potential loss. The loss occurs against the background of the duration mismatch of interest rate risk-sensitive assets and liabilities. The impact is stronger compared with June 2014, as a result of the increase in the share of fixed-interest bearing assets in the balance sheets of credit institutions as well as in that of variable-interest bearing liabilities, given the continued decline in the volume of foreign financing. Unlike previous years, the impact on credit institutions is highly heterogeneous (Chart 3.34), the application of the standardised shock leading to a change in the economic value of the capital ranging from -42 percent to +34 percent of own funds, based on the breakdown by maturity/timing of revaluation of credit institutions' assets and liabilities.

Chart 3.33. Balance sheet recognition of securities holdings



Source: NBR

Chart 3.34. Credit institutions ranked by the impact of a 200 bp shock on own funds



Source: NBR

The potential loss is largely generated by the high sensitivity of fixed-interest bearing assets, other than loans. In absolute terms, potential losses increased from a year ago, as a result of lower market interest rates at the time of the analysis to which the shocks were applied, as well as amid the declining share of held-to-maturity securities in the balance sheets of credit institutions (Chart 3.33), corroborated with the rise in the share of government securities holdings in total bank assets.

67 This working assumption is recommended by EU regulations that were incorporated in the Romanian legislation by NBR Regulation No. 5/2013 on prudential requirements for credit institutions. Recently, considering the very low interest rates by historical standards, some authorities started using stricter working assumptions (i.e. the Bank for International Settlements used a 250 basis point shock in its latest Annual Report).

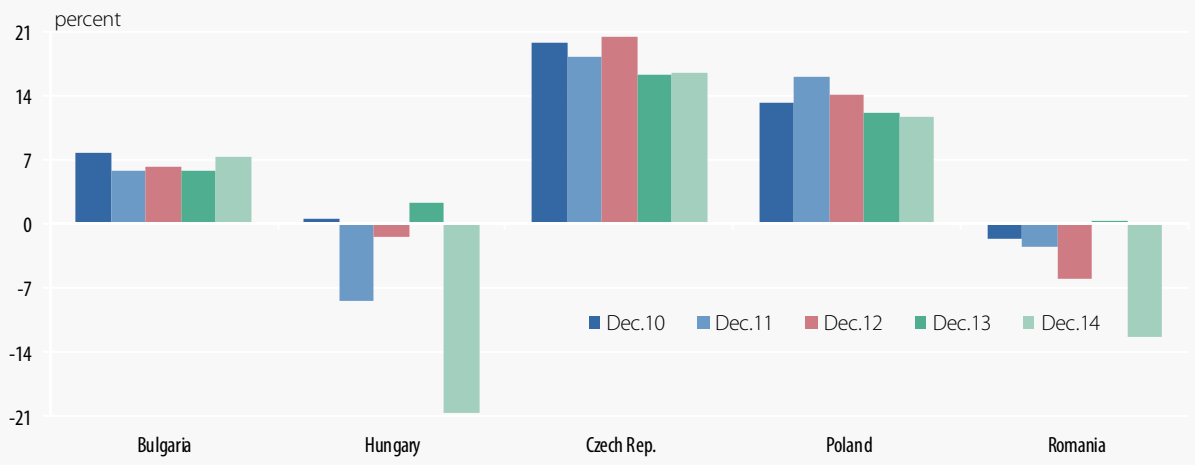
Credit institutions' appetite for using hedging derivatives is low, these instruments holding immaterial shares in total assets and liabilities, i.e. 0.008 percent and 0.11 percent respectively.

The currency risk across the banking system, estimated based on the maximum potential losses generated by unfavourable exchange rate developments (with a fixed probability), was further low (0.087 percent of own funds[68] in June 2015 versus 0.102 percent in June 2014). This may be explained by regulations in force, which impose costly capital requirements in the assumption that the net currency position of a credit institution exceeds 2 percent of own funds[69].

3.2.7. Profitability and efficiency

Since the previous Report, the profitability of the Romanian banking system posted uneven developments. After a negative financial result of lei 4.7 billion recorded at end-2014, the banking system returned to profit in 2015. The operating profit was eroded by the significantly higher net expenses on adjustments for impairment of financial assets (IFRS provisions), amid the stepped-up removal from balance sheet and sale of non-performing loan portfolios, concurrently with ensuring appropriate provisioning (by cautiously reassessing the recoverable value of collateral related to these loans)[70]. In this context, the main profitability indicators of the banking sector (return on assets – ROA and return on equity – ROE) stood at -1.3 percent and -12.5 percent respectively at end-2014. Except for Hungary, the profitability of the Romanian banking system compares unfavourably with other countries in the region (Chart 3.35).

Chart 3.35. Banks' return on equity – regional comparison



Source: IMF (Financial Soundness Indicators Database)

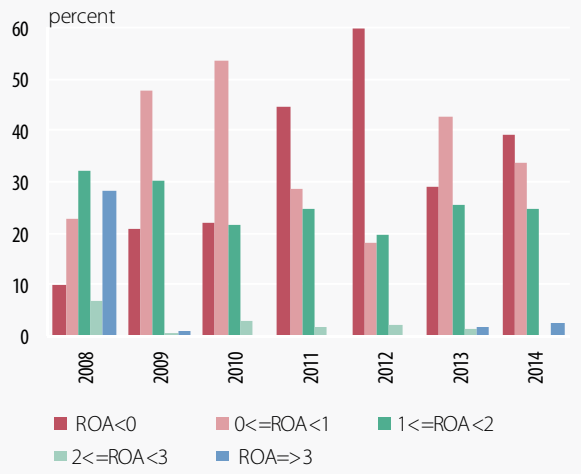
68 Provisional data.

69 In line with Article 351 of CRR, the capital requirement of the credit institution would be increased by 8 percent of the net position.

70 The magnitude of loss was significantly influenced by the provisioning costs concerning litigations for commercial clauses and the coverage of losses arising from the CHF appreciation and other risks incurred by a medium-sized credit institution.

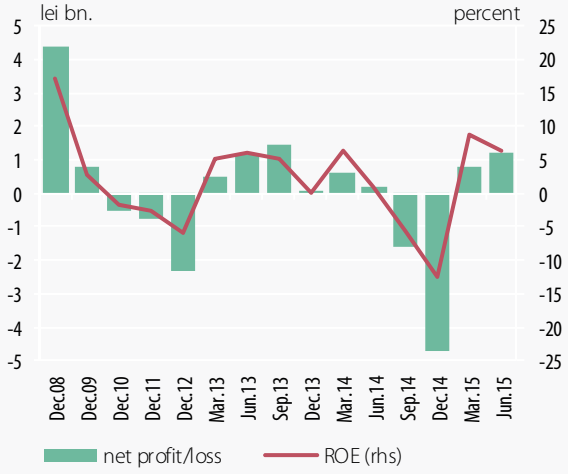
The market share of loss-making banks reached 39.2 percent, mainly as a result of the increase in net expenses for IFRS provisions in the context of non-performing loan resolution (Chart 3.36).

Chart 3.36. Distribution of credit institutions' market share by ROA



Source: NBR

Chart 3.37. Net profit/loss and ROE



Source: NBR

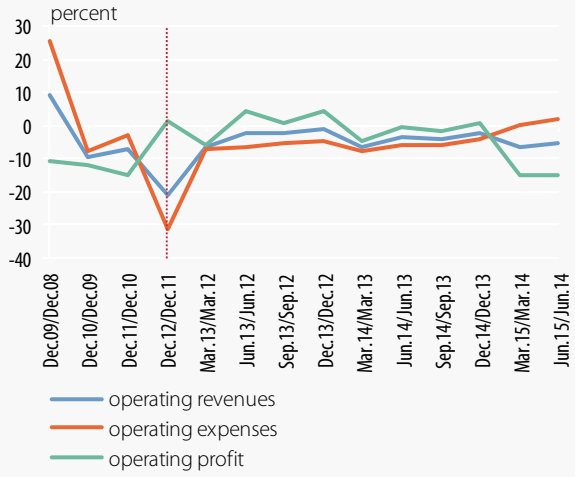
The substantial rise in net expenses for IFRS provisions in 2014 H2 caused the banking sector's financial result to show losses starting with August 2014 (Chart 3.37), despite the operating profit reported by most banks. In 2015 H1, the aggregate financial result was positive, benefiting from the negative dynamics[71] of net expenses for IFRS provisions. Thus, at end-June 2015, the main profitability indicators (ROA and ROE) stood at 0.7 percent and 6.4 percent respectively.

The operating profitability registered negative dynamics, under the influence of weak lending in recent years, as well as the ongoing adjustment of interest rates given the low eligible demand and credit institutions' continued efforts aimed at non-performing loan resolution (Chart 3.38).

The steady decline in net interest income (the main item under operating income) has been caused by the narrower net interest rate margin, as well as by the contraction in financial assets bearing high nominal yields (also due to the sale of some problematic portfolios), despite the reduction in the costs of funding in lei and the persistently low interest rates on EUR-denominated deposits in the context of a weak sovereign risk (Chart 3.39).

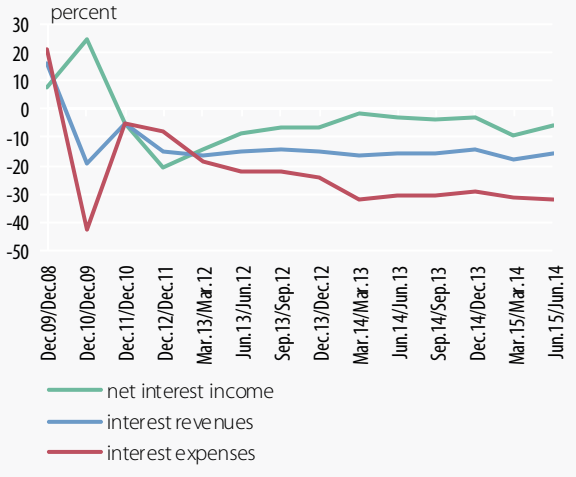
71 The growth rates are calculated in real terms versus the same year-ago period.

Chart 3.38. Annual real growth rates of operating revenues, expenses and profit



Source: NBR

Chart 3.39. Annual real growth rates of interest revenues, expenses and net interest income



Source: NBR

The annual growth rate of net income from commissions has stayed in negative territory since end-2014. The dynamics of gains from trading have remained negative as of February 2014, amid the slower adjustment of market yields. Banks' concern to cut down operating expenses was reflected by the mostly negative dynamics of staff costs (-4.2 percent in December 2014 and 1.5 percent in June 2015 respectively) and depreciation expenses (-10.4 percent in December 2014 and 1.0 percent in June 2015 respectively).

The efforts to clean up credit institutions' balance sheets by removing non-performing exposures may have negative effects on this year's financial results. At the same time, eliminating the uncertainty surrounding the actual capital level (influenced by the collateral valuation practices used for determining the value of adjustments for impairment of non-performing loans) will have beneficial effects on economic activity, by channelling available resources to granting new loans.

3.2.8. Misconduct risk

Misconduct risk is a form of operational risk, defined as the risk of losses generated by internal processes, personnel or inappropriate/failed systems or by external factors.

The misconduct in the banking sector is generally associated with the wilful or intentional disregard of laws, ethics or internal governance and controls and can be manifest at individual, institutional and sectoral levels. In view of recent examples, the following types of misconduct can be identified: the mis-selling of financial products to retail customers (i.e. mis-selling insurance against default risk by banks in the United Kingdom), mis-selling financial products to professional investors without presenting all the related risk factors (e.g. subprime mortgage-backed securities mis-sold by US investment banks), the violation of international rules and regulations (e.g. the breach of trade restrictions imposed on certain countries), the manipulation

of financial markets (i.e. the manipulation of LIBOR rates and foreign exchange benchmark rates by certain EU credit institutions).

From a macroeconomic perspective, the potential systemic impact of misconduct risk in the European banking system refers to: a) the high costs on society and the fact that it could damage confidence in financial markets and institutions; b) the effects of sanctions applied to the banking system, considering the uncertainties that could occur about the business model, solvency and profitability of credit institutions. Misconduct issues may sometimes arise in systemically important banks; the emergence of costs associated with misconduct during periods of recession can enhance the negative effects, thus having a procyclical impact; c) the unethical conduct could lead to withdrawal from activities by a systemically important bank, such that the functioning of a particular market and the provision of certain financial services are impaired.

Considering the potentially high costs to society and the potential consequences for financial stability, in order to prevent misconduct risks, the following are recommended: the implementation of corporate governance and internal controls to manage risks in compliance with the bank's business model, as well as at the level of executive management, by promoting and preserving a corporate culture of risk management and adopting a sound ethical culture.

Credit institutions in Romania are faced with misconduct risk, given the misaligned interests between managers and shareholders and the insufficient risk control. As a result of the improperly trained staff involved in lending activity, consumers were sometimes poorly informed about the basic risks associated with lending products. The strongly adverse macroeconomic developments contributed to highlighting some aspects that were masked in the pre-crisis period: the application of interest rates whose calculation raised understanding issues for customers, granting loans for which the debt service capacity was of secondary importance (relying on the fact that payment default was not likely to generate losses in an environment in which the market value of real estate properties used as collateral for contracting loans was continuously increasing), charging excessively high commissions, exposing vulnerable categories to products with high volatility of risk factors.

At present, several regulations are in force concerning the internal governance for approaching misconduct risk, recommendations for assessing the competence of bank managers, principles for establishing a benchmark index, recommendations for remuneration policies.

3.3. Non-bank financial sector

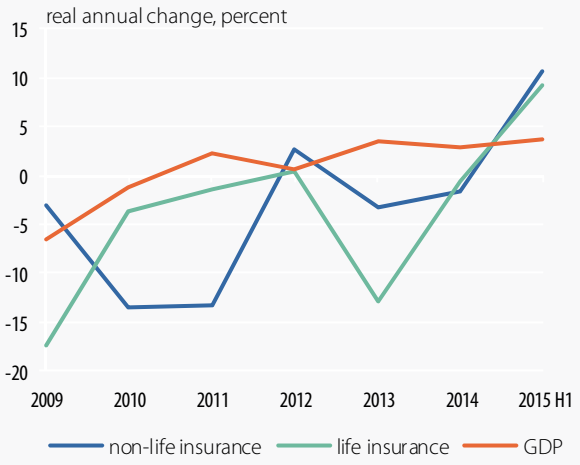
3.3.1. Insurance sector

The insurance sector contracted in 2014, amid weak financial intermediation, the lowest across the European Union. Behind this development stood both households' low disposable income and the absence of adequate financial education. 2015 H1

saw, however, gross premiums written resuming an upward path on account of favourable economic conditions. The insufficient capitalisation of insurance companies was one of the sector's key vulnerabilities during the period under review.

In 2014, the Financial Supervisory Authority (FSA), in cooperation with the European Insurance and Occupational Pensions Authority and the European Commission, conducted the first comprehensive assessment of the Romanian insurance sector, which consisted of a review of assets and liabilities and a stress testing exercise for 13 participating insurance undertakings covering over 80 percent of the insurance market. According to the Report published in July 2015[72], the assessment of assets and liabilities under the current prudential framework (Solvency I) revealed an aggregate capital shortfall of lei 1.6 billion, concentrated in four undertakings. Among them, one is undergoing a financial recovery procedure, another has already had its authorisation withdrawn, whereas the other two have been required to submit an action plan to the FSA by 4 August 2015, containing measures to be taken in order to restore solvency margins. Moreover, the analysis based on the prudential regime applicable from 2016 (Solvency II) indicated that the Romanian insurance sector would not be sufficiently capitalised. The stress test employed both financial and economic scenarios, as well as insurance-specific stress scenarios for floods and earthquakes. The test results revealed that the solvency capital requirement would be met only by one company under the earthquake scenario, by three companies under the flood scenario and by four companies under the financial and economic stress scenarios. From the banking sector's perspective, the difficulties encountered by certain insurance undertakings could not pose systemic risks via the channel of direct exposure to insurance companies (Section 3.3.4. Shadow banking).

Chart 3.40. Correlation between insurance sector and GDP dynamics



Source: FSA, NBR, NIS

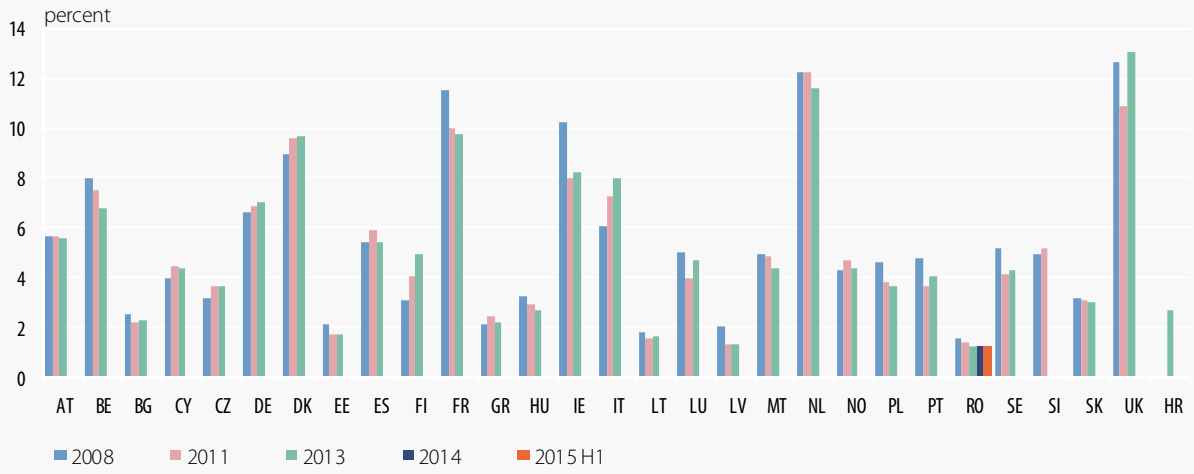
Total assets of the Romanian insurance sector accounted for about 2.8 percent of GDP at the end of last year. In 2014 and 2015 H1, the non-life insurance segment held about 80 percent of gross premiums written in the insurance market, with motor insurance accounting for the largest share, specifically motor third party liability insurance (45 percent) and other motor insurance (24 percent). The concentration of the insurance market remained at moderate levels for both non-life and life insurance, with the top ten insurance companies holding an 80.7 percent market share based on gross premiums written as at 30 June 2015.

Gross premiums written in the insurance sector fell slightly in 2014, in both nominal and real terms, mainly due to a contraction of the non-life insurance market. However, the magnitude of the decline was lower than in the previous year, given the consolidation of economic growth (Chart 3.40). Data for 2015 H1 indicate a

[72] FSA Report – *Balance Sheet Review and Stress Test of the Romanian Insurance Sector*, July 2015. The Report is available at http://www.asfromania.ro/files/engleza/comunicate/20150715%20BSR%20-%20Final%20Report%20-engl-logo.pdf.

reversal of the general downtrend in gross premiums written, as they rose by 10.45 percent in real terms versus the same year-ago period. As a result, the financial intermediation ratio at sector level, calculated as a share of gross premiums written in GDP, stood at 1.25 percent in 2015 H1, similarly to the 2013 level (Chart 3.41).

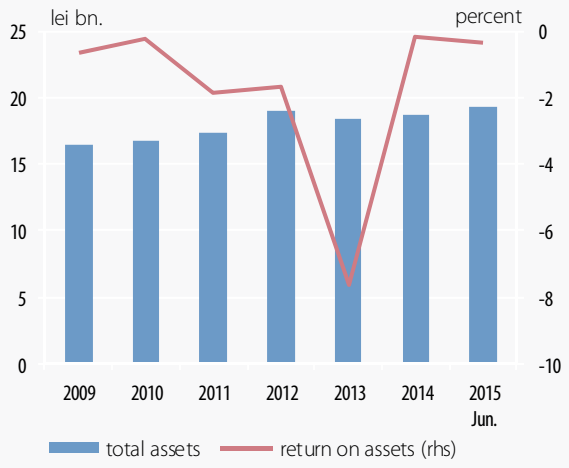
Chart 3.41. Dynamics of gross premiums written as a share in GDP – comparison across EU Member States



Source: FSA

The ratio of gross claims paid to gross premiums written for non-life insurance decreased by more than 13 percentage points in the past five years to reach 58 percent at 30 June 2015, revealing a relatively lower pressure on the segment's profitability.

Chart 3.42. Insurance sector – Return on assets (ROA)



Source: FSA

Return on assets increased by 7.45 percentage points in 2014, but is still in negative territory (Chart 3.42). This rise is due to the 97 percent reduction of losses incurred by insurance companies as a result of improved technical results reported by non-life insurance undertakings.

In August 2015, the FSA withdrew the authorisation of Societatea Asigurare-Reasigurare Astra SA and opened the winding-up proceedings. The company operates mainly in the non-life insurance market, accounting for 2.85 percent of total assets of the insurance sector at 30 June 2015. Astra ranked third by value of gross premiums written for non-life insurance in 2015 H1, with a 12.5 percent market share. Although most of the company's current accounts and deposits are held with a single credit institution, they represent a small share in the insurance company's assets, so that the risk of contagion of the banking sector due to direct exposures is low.

3.3.2. Private pension funds

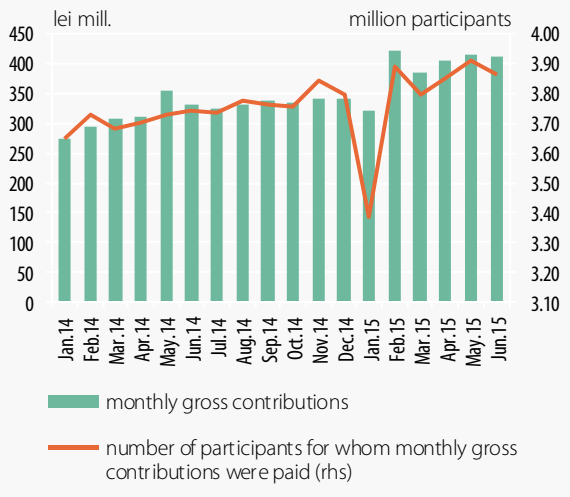
Private pension funds are not exposed to significant risks that are likely to affect the financial system stability. The total assets of this sector saw high growth rates amid the larger number of participants and greater volume of contributions, without reporting significant payment obligations. Government securities further held the largest share in the investment portfolio of private pension funds, whereas investments in bank deposits became increasingly less attractive as a result of low interest rates. Pension funds' exposures to credit institutions have a medium to high concentration, but there is a low risk of banking sector contagion via balance sheet links with the pension funds.

The local and European financial environment characterised by low interest rates contributed to the drop in profitability reported by the private pension funds in Romania. Since the aggregate price index followed a downward path, the profitability in real terms on pension funds' investments remained in positive territory. The significant share of Romanian government securities in the private pension funds' portfolio and the positive spread between domestic and euro area yields provide limited investment opportunities.

The assets of private pension funds stood at 3.03 percent of GDP in 2014. The sector has a significant growth potential given its accumulation stage, at an average annual growth rate of assets of around 51 percent over the last five years. This development is ascribable to the larger number of participants and volume of contributions to both Pillar II (privately-managed pension funds) and Pillar III (voluntary pension funds).

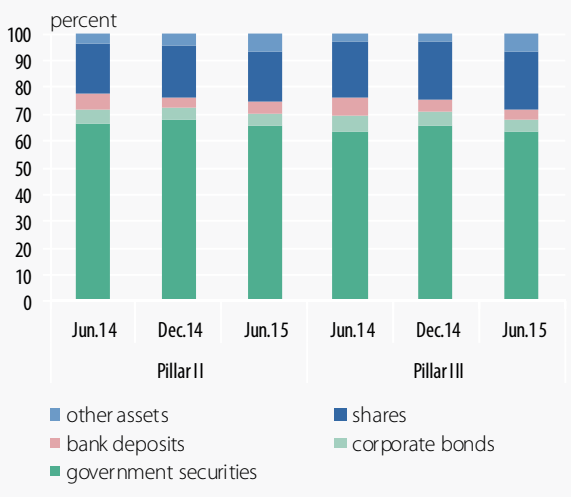
The gross monthly contributions transferred to Pillar II followed an upward trend during 2014 and 2015 H1, due, on the one hand, to the larger contribution quota (up to 4.5 percent in 2014 and 5 percent in 2015) and, on the other hand, to the increased number of participants for which monthly contributions are paid, as well as to the favourable economic context (Chart 3.43).

Chart 3.43. Contributions to Pillar II



Source: FSA

Chart 3.44. Composition of investment portfolios



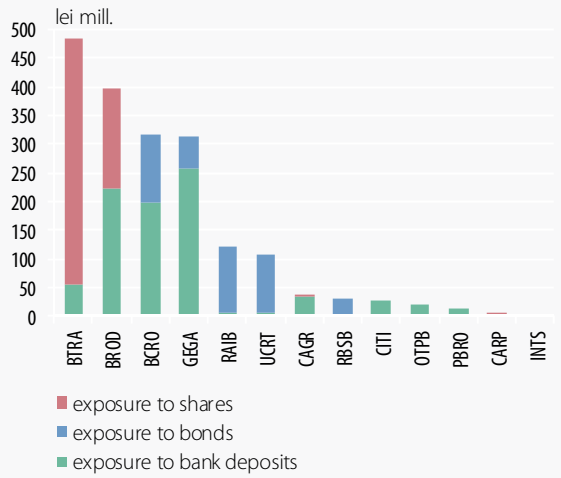
Source: FSA

Pension funds invested mainly in government securities, with a share of approximately 65 percent for Pillar II and 63 percent for Pillar III (Chart 3.44). Within the limits set by law, pension funds may increase the volume of government securities holdings as a result of the rise in total managed assets. The composition of investment portfolios saw no significant changes June 2014 through June 2015 in terms of the weight of government securities, shares and corporate bonds. Given the low interest rates on bank saving products, deposits with credit institutions stayed on the downward trend manifest in previous years, falling from 6.65 percent to 4.26 percent for Pillar II and from 6.51 percent to 3.37 percent for Pillar III respectively during July 2014 – June 2015. Investments of private pension funds must strike a balance between the need to invest in low-risk instruments and the funds' capacity to provide satisfactory rates of return.

Compared to 2013, in 2014 the average yield of pension funds declined for Pillar II from 11.5 percent to 8.92 percent, owing to lower returns on every type of financial instrument in the portfolio, but increased from 9.11 percent to 9.87 percent for Pillar III, mainly on account of higher returns on investments in government securities. Equity investments reported the highest returns, followed by investments in government bonds and units of undertakings for collective investment in transferable securities (UCITS).

The average initial maturity of fixed-income securities increased from 5.8 years in 2013 to 6.9 years in 2014, while the average maturity of bank deposits shortened by 12 days to 41 days. This development, combined with the large share of fixed-income securities in the investment portfolio, has a positive impact on the pension funds' capacity to manage risks arising from the asset-liability mismatch.

Chart 3.45. Exposure of pension funds to credit institutions



Source: FSA, websites of private pension fund administrators

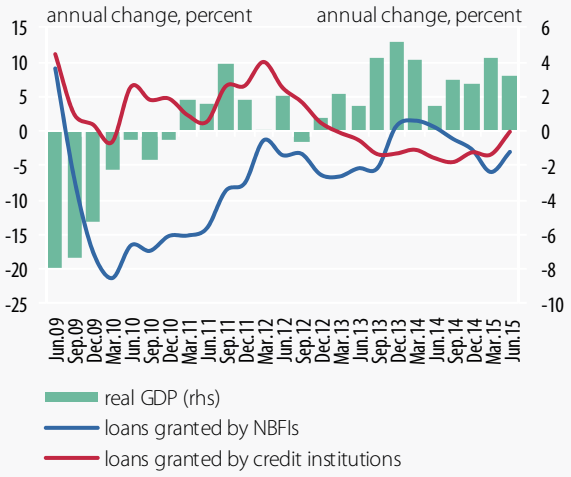
Pension funds' exposures to the Romanian banking sector amounted to lei 1.8 billion at 31 December 2014, accounting for 9.8 percent of total pension fund assets and 0.46 percent of total bank liabilities, thus indicating a low risk of banking sector contagion from pension funds. The main exposures consist of bank deposits, followed by shares and bonds issued by credit institutions (Chart 3.45).
A potential vulnerability of pension funds might be induced by the high concentration of exposures to credit institutions. The share of the top four banks in total funds raised by banks from pension funds equalled around 80 percent, and the Herfindahl-Hirschman index stood at 1,761 points versus 1,172 points in July 2013 – June 2014, pointing to a moderate to high concentration of pension funds' exposures to credit institutions.

3.3.3. Non-bank financial institutions

Given the persistence of high risk aversion, as well as the uncertainty surrounding the medium-term economic outlook, the lending growth rates reported by non-bank financial institutions (NBFIs) remained in negative territory in the period under review. The non-performing loan (NPL) ratio, albeit high, fell slightly, making a positive contribution to the sector's improved profitability. Behind the decline in the stock of loans stood not only demand, but also supply, owing to greater interest in risk management. A major vulnerability of the sector stems from the scarcely diversified funding sources. The probability of systemic risk being generated by the NBFIs sector is relatively low, given its size and the loose balance sheet links with the other components of the Romanian financial system.

The strengthening of the prudential regulatory framework for credit institutions at international level has increasingly brought into question the prospect of transferring part of their activity, lending included, to other financial sectors covered by looser regulatory requirements. In Romania, the NBFIs provide an alternative funding channel for the real economy, falling, as of 2006, within the National Bank of Romania's regulatory and supervisory scope, with the aim of mitigating specific risks and reducing regulatory arbitrage in relation to credit institutions.

Chart 3.46. Lending and the GDP dynamics



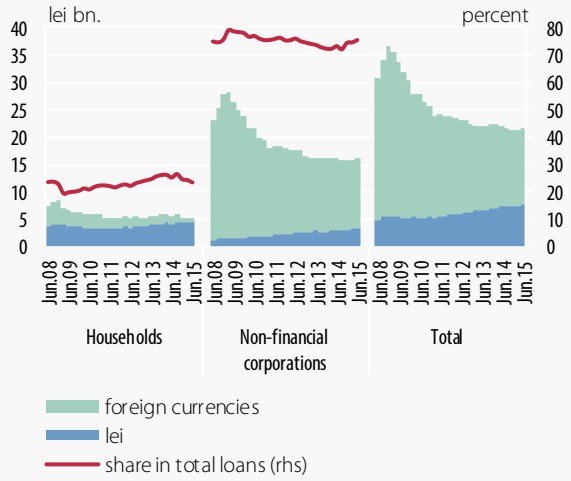
Source: NIS, NBR

NBFIs saw a contraction in activity June 2014 through June 2015: their total assets declined by lei 0.7 billion to lei 30.9 billion, whereas the loan stock decreased by 2.6 percent to lei 21.5 billion. The comparative analysis of the dynamics of private loans granted by NBFIs and credit institutions respectively shows a negative annual growth rate of the two financial sectors' loan stock, of a lower magnitude in the last quarter under review, despite the improvement in the macroeconomic environment (Chart 3.46), which may be indicative of a lag between the credit cycle and the business cycle. In contrast to the positive developments witnessed in the previous year, this decline was stronger in the NBFIs sector, whose market share – calculated as a share of the stock of loans granted by NBFIs in total loans taken by the private sector from NBFIs and credit institutions – stood at approximately 9.1 percent in June 2015 versus 9.3 percent in the same year-ago period.

The decline in the loan stock was prompted by a contraction in loans to households, while loans to non-financial corporations showed a slight rebound (Chart 3.47). Looking at the portfolio breakdown, the lending activity focuses on non-financial corporations (75 percent), with SMEs holding the largest share (85 percent of loans to non-financial corporations). Trade and services companies account for 54 percent of total loans granted to non-financial corporations, although there has been an increase in farm loans lately. In relative terms, the breakdown of loans by borrowers' business

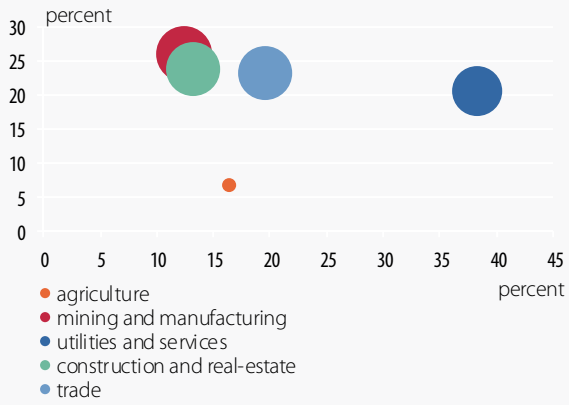
sector shows a larger share of loans to utility and services companies in the portfolio of NBFIs compared to that of credit institutions, while manufacturing and mining companies hold a larger share in the portfolio of credit institutions (Chart 3.48). Loans to households account for about 23 percent of the total portfolio and are granted mainly in the form of consumer loans. In the period under review, the breakdown of the loan portfolio by currency confirmed the improvement trend, i.e. the rise in domestic currency funding, with leu-denominated loans thus reaching 36 percent of total loans.

Chart 3.47. Breakdown of NBFIs' loan portfolio by borrower and currency



Source: NBR

Chart 3.48. Breakdown of loans to non-financial corporations by sector



Note: The size of the circles is given by the share of the business sector in total loans granted to non-financial corporations by credit institutions and NBFIs in Romania.

Source: NBR

Apart from direct lending, the NBFIs underpin the real economy financing also by issuing guarantees, which helps reallocate credit risk across the Romanian financial sector. Guarantees were granted largely for the purpose of implementing government programmes intended to support economic activity and lending, in June 2015 the coverage equalling 7.7 percent[73] of the loans extended to the private sector by credit institutions and NBFIs (against 7.4 percent in June 2014). Thus, in year-on-year comparison, the guarantees provided through the "First Home" programme stayed on an upward trend, whereas the volume of guarantees issued by guarantee funds for loans to non-financial corporations declined.

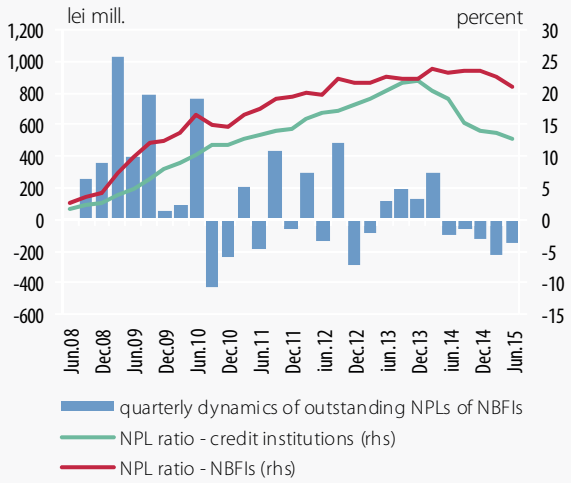
Given their specific activity, the main risk facing NBFIs is credit risk. The NPL ratio is further high at 21 percent in June 2015, above the level reported by the banking sector, but a decrease in the stock of overdue loans became manifest over the past four quarters (Chart 3.49). Moreover, credit risk is mitigated by the comfortable provision coverage of expected loan loss.

End-2014 and 2015 H1 saw a strengthening of the positive financial result of the NBFIs sector, notably on account of the reduction in operating expenses. Aggregate profit at sector level amounted to lei 300.4 million in December 2014, corresponding to a 5 percent return on equity (ROE). The improved financial results were reflected by

73 "First Home" guarantees and other types of guarantees.

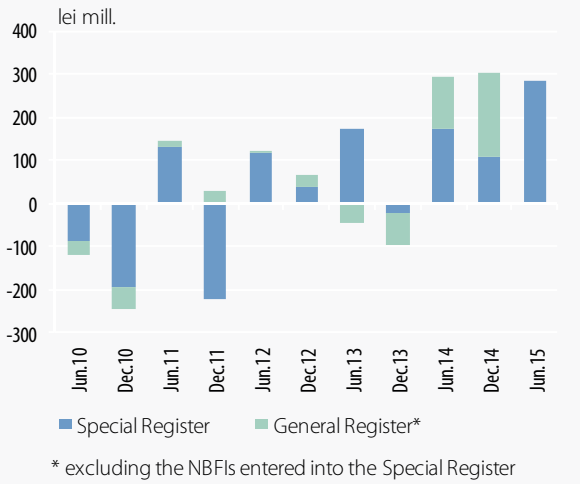
NBFIs in the Special Register and especially by those entered solely into the General Register (Chart 3.50). In 2015 H1, financial results at aggregate level remained positive only for the NBFIs listed in the Special Register.

Chart 3.49. Non-performing loans



Source: NBR

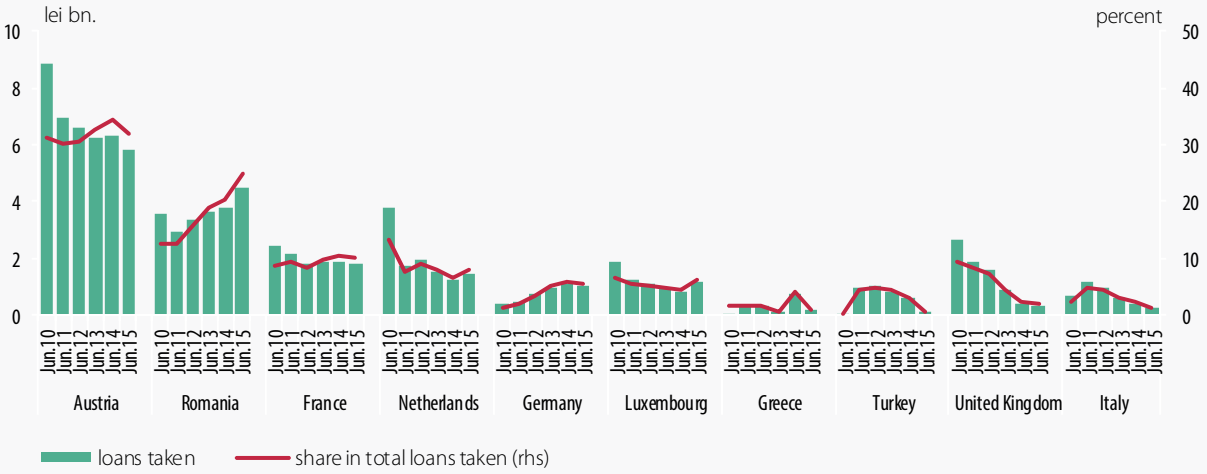
Chart 3.50. Profitability of the NBFIs sector



Source: NBR

The breakdown of share/endowment capital by country of origin as at 31 December 2014 shows a 6.8 percentage point rise in the share of domestic capital from the previous year-end to 63.7 percent, on the back of an increase in its value, along with a decline in foreign capital. The main countries of origin of foreign participation in the share/endowment capital are the Netherlands (24.3 percent of total foreign capital), France (18.9 percent) and Germany (15.3 percent).

Chart 3.51. Breakdown of loans taken by NBFIs, by main country of origin



Source: NBR

The major difference between NBFIs and credit institutions is that the former may not take deposits or other repayable funds from the public, ensuring their financing by raising funds from financial institutions or shareholders. The breakdown of financing

points to an approximately 75 percent share of loans taken from non-resident lenders (Chart 3.51). The weight of Romanian financing entities rose further (from 20.4 percent in June 2014 to 24.7 percent in June 2015), along with a drop in the volume of loans from the major foreign creditors, i.e. Austria, France and the Netherlands, cumulating approximately 50 percent of total loans. NBFIs have also raised funds from international bodies such as the EIB, EBRD or the European Investment Fund (about 4 percent of total loans taken) in order to implement financing programmes. The NBFIs generally exhibit high reliance on raising funds from one entity or a limited number of fund providers, usually from within the group they are part of, which could pose an important vulnerability to these institutions in terms of financing risk.

The contagion risk via the direct channel may materialise as a result of the balance sheet links of the NBFIs sector with other entities in the Romanian financial system. The main balance sheet links are manifest between the NBFIs and the banking sector in Romania via the "credit institutions – NBFIs" financing channel, through equity participation and deposits placed by NBFIs with credit institutions. These links can be analysed from two perspectives. Thus, as regards NBFIs, the funds raised from credit institutions (lei 3.2 billion) in the form of capital and loans account for 10.4 percent of the liabilities of these entities, while from the banks' perspective, the balance sheet exposure to this sector remains low (about 1 percent of total assets). Moreover, the NBFIs' deposits with resident credit institutions amounted to lei 2.7 billion, accounting for about 9 percent of the NBFIs' assets and 0.9 percent of total deposits of credit institutions respectively. In addition to the aforementioned interconnections, pointing to a relatively weak interdependence between the two sectors, being part of the same financial group by both NBFIs and credit institutions may raise the question of the common lender and the reputational risk.

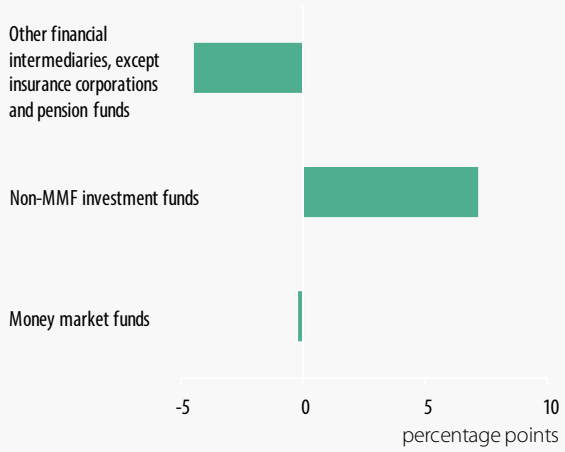
3.3.4. Shadow banking

In many countries, particularly the developed ones, the financial crisis proved that financial institutions outside the banking sector played an important part in the build-up and pass-through of financial risks. There have been rising concerns lately among policymakers in Europe and elsewhere about the likelihood of entities considered as being part of the shadow banking sector to be involved in future events of a systemic nature, given the increasing size and low transparency of these institutions. This sector's development is generally fuelled by extremely strict banking regulations or a low-rate macroeconomic environment, encouraging investors to seek positive yields in real terms (search for yield), or by episodes of high demand for assets, for instance from pension funds and insurance companies. From this perspective, the current macroeconomic framework could favour shadow banking development. In order to preserve financial stability and prevent regulatory arbitrage, all entities in the financial system should be subject to regulation and supervision. As a result of strengthening the prudential requirements applicable to financial institutions, there is a tendency of shifting towards the unsupervised financial sector. The fast-paced development of shadow banking may pose systemic risk. Although on the rise, the shadow banking sector in Romania is relatively small compared to other EU countries and its entities must comply with a regulatory and supervisory framework. The risk of direct contagion, measured via balance sheet links with other financial system components,

is low. However, shadow banking in developed countries may have adverse spillover effects on the Romanian financial system.

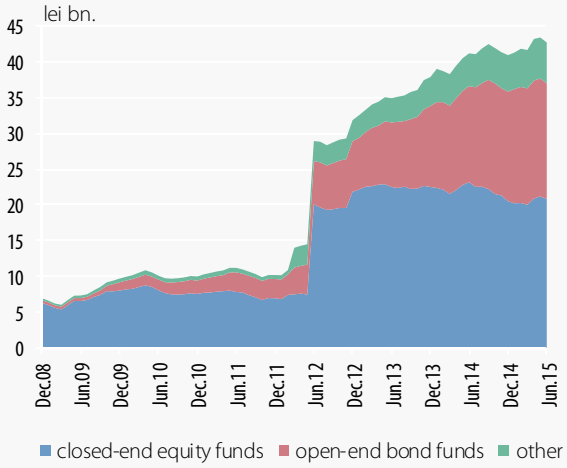
The main entities operating in Romania that can be considered part of the shadow banking sector (according to the broader approach of the Financial Stability Board) are non-bank financial institutions[74], investment funds and money market funds.

Chart 3.52. Changes in the composition of the financial system March 2009 through March 2015



Source: NBR - national financial accounts

Chart 3.53. Developments in investment fund assets



Source: NBR

The shadow banking sector accounts for 15.5 percent of total financial assets of the Romanian financial system. Expansion of investment funds, other than money market funds, in both relative and absolute terms has been the main source of growth of the non-bank financial sector (Chart 3.52). Starting in 2009, investment funds in Romania have been developing steadily, posting a faster growth rate since 2012 (Chart 3.53). The explanations lie with: (i) including Fondul Proprietatea in the category of closed-end equity funds (Fondul Proprietatea holds about 30 percent of total investment fund assets) and (ii) seeking alternatives to bank savings amid low interest rates.

Investment funds operate as financial intermediaries, by providing alternative saving/investment solutions on the one hand, and by channelling funds towards the real economy on the other hand, either directly (through equity or bond investments) or indirectly (through investments with other credit institutions). Investment funds in Romania are regulated and supervised by the Financial Supervisory Authority and, in terms of their share in total assets, the most important are closed-end equity funds and open-end bond funds.

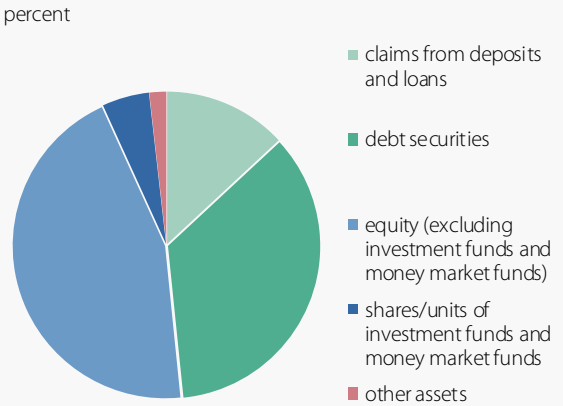
From a systemic perspective, investment funds may pose a risk of direct or indirect contagion, i.e. either by channelling funds to other financial sectors or through their likely adverse impact on markets in case of fire sales. They may also pose reputational risk for other financial institutions if they are part of the same group. Along with

[74] Classified under "Other financial intermediaries, except insurance corporations and pension funds", along with special purpose vehicles, financial investment firms and central counterparty clearing houses.

providing funding to other economic sectors, on the asset side, investment funds seek their own financing. The financing structure of investment funds renders them robust to covering losses, yet also highly sensitive to significant withdrawals. Given that funds are raised mostly through fund shares or units, potential losses are borne directly by shareholders, with little impact on other economic agents. By contrast, the emergence of uncertainty-ridden episodes can lead to massive capital withdrawals from investment funds, causing fire sales and, thus, significant losses.

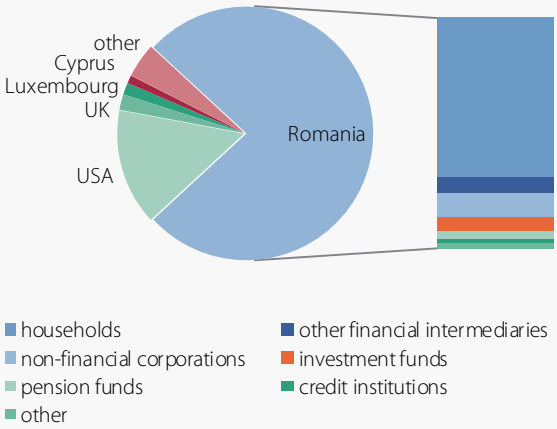
Investment funds in Romania place their assets on the domestic market (90 percent of assets), investing mostly in shares and debt securities (government securities in particular), while bank deposits account for 13 percent of the total (Chart 3.54). Romanian investors hold 76 percent of the outstanding fund shares/units, with households having purchased about 52.7 percent (Chart 3.55).

Chart 3.54. Investment fund assets



Source: NBR

Chart 3.55. Outstanding fund units

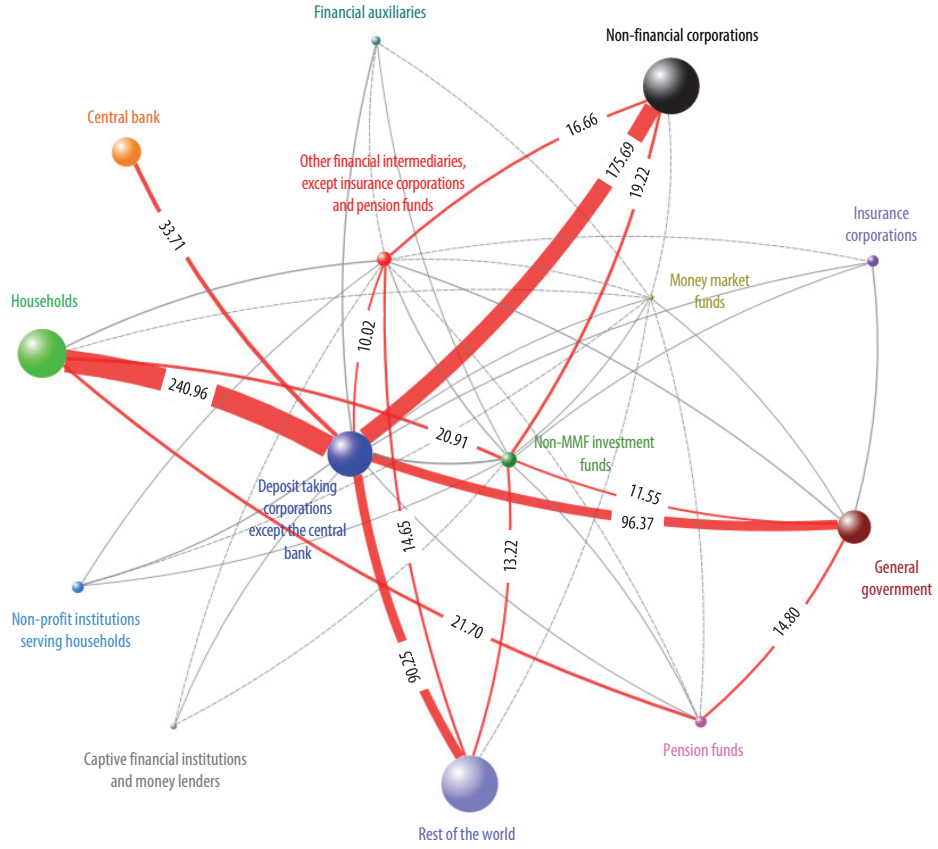


Source: NBR

Another important component of the shadow banking sector is that of non-bank financial institutions (for further details see Section 3.3.3. Non-bank financial institutions). NBFIs provide an alternative financing channel for the real economy and are subject to the National Bank of Romania's regulation and supervision according to national legislation, in the absence of a uniform regulatory framework at European level in this area. Compared with the dynamics of the loans granted by credit institutions, the contraction of lending in recent years was sharper in the case of NBFIs, whose market share – determined as the share of outstanding loans granted by the NBFIs in total loans to the private sector from NBFIs and credit institutions – stood at approximately 9.1 percent in June 2015 versus 15.7 percent in December 2008.

Money market funds, the third component of the shadow banking sector, are not particularly relevant to financial stability, given that only one money market fund operates currently consistent with the definition and mechanisms established at European level for these entities, having a relatively low asset value.

Chart 3.56. Exposures of the Romanian financial system



Note: The size of the sectors is calculated based on the share of the sector's financial assets in total financial system assets. Exposures are estimated based on the aggregate value of all types of balance sheet exposures reported at end-March 2015.

Source: NBR

From the perspective of size and interconnections with other institutional sectors (Chart 3.56), shadow banking does not pose significant risks to the stability of the financial system as a whole. However, a significant vulnerability comes from the concentration of exposures on Romanian government securities in various financial sectors (credit institutions, investment funds, insurance companies, pension funds), which may cause difficulties in case of low market liquidity.

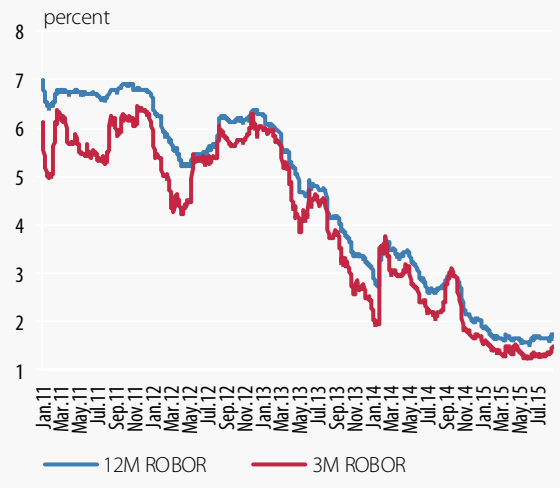
3.4. Financial markets

The positive performance of key financial market indicators, corroborated with lowering volatility across the board, ensures further the stability of local financial markets. The emergence of temporary stress episodes following the uncertainty surrounding Greece's financial woes, as well as amid concerns over the fragile global economic growth, had a limited impact on the major market segments.
The narrowing spreads against Europe's benchmark indices, along with the shrinking risk premium and solid growth rates, may help strengthen the external perception of the Romanian economy as an emerging financial market attractive to institutional investors.

3.4.1. Money market

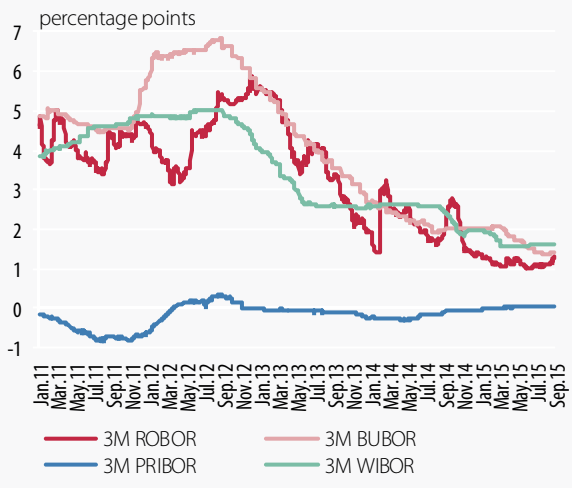
Interbank money market rates stayed on the downward path they had embarked upon in 2013 Q1 (Chart 3.57). The expected increase in the Federal Reserve rate will most likely prompt higher interest rates on the international financial markets. Given the specific structure of the Romanian financial system, the anticipated effects in such circumstances, aside from other amplifying factors, could lead, first, to a short-lived episode of interbank market volatility which would not have a high magnitude. In this regard, interest rates showed a clear trajectory, with sporadic trend reversals. An exception was the period between end-September and early December, when 3M ROBOR and 12M ROBOR rates saw sudden, albeit moderate to low, increases. Specifically, the largest spread during this trend reversal episode stood at about 0.50 percentage points for 3M ROBOR rate and roughly 0.30 percentage points for 12M ROBOR rate. The temporary nature of the rise in interbank rates was due to the timely intervention of the NBR, which conducted 1W repos aimed at easing monetary conditions.

Chart 3.57. Average interbank money market rates



Source: NBR

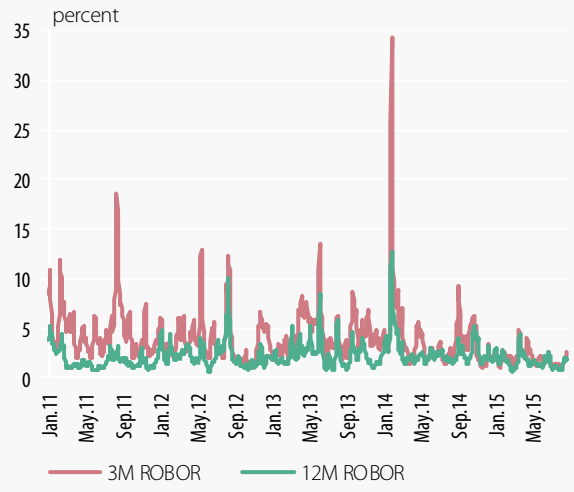
Chart 3.58. Spread between money market rates in the region and those in the euro area



Source: Bloomberg, NBR

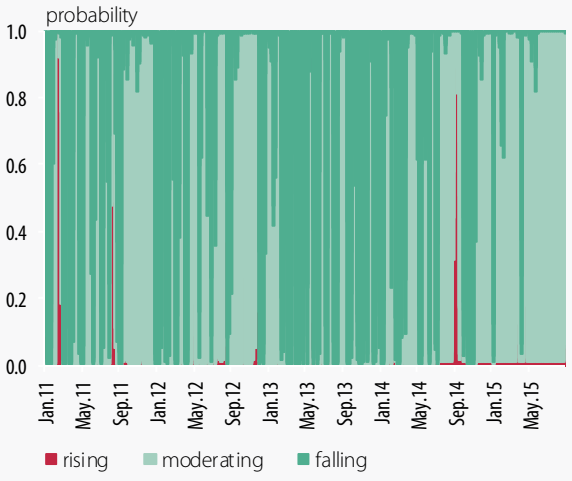
In the period under review, the ROBOR rate on 3- and 12-month deposits decreased by about one percentage point. Across the region, the 3-month rate spread vis-à-vis the EURIBOR benchmark rate has followed, starting in 2015, a downward trend only in Romania (Chart 3.58). This decline has occurred amid favourable domestic factors. Similarly to the preceding years, liquidity conditions (shaped also by the increase in the Treasury reserves) and the monetary policy rate cuts were the main determinants of the lower rates on the interbank money market. On the other hand, an opposite influence on interest rates had the rise in international investors' risk aversion, triggered in September through October 2014 by the slowdown in euro area economic growth.

Chart 3.59. Stochastic volatility of interbank money market rates



Source: NBR

Chart 3.60. Transition probabilities between stress regimes in interbank money market

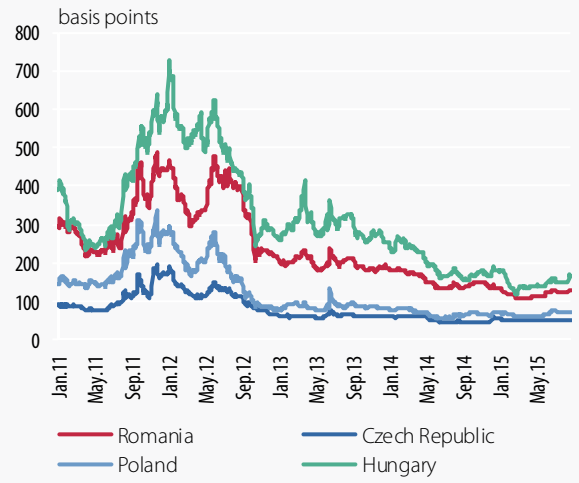


Source: Bloomberg, NBR

Starting in 2014 Q2, the volatility of 3- and 12-month deposit rates posted lower swings than before (Chart 3.59). Moreover, the spread between short- and long-term interest rate volatilities narrowed significantly, excluding a short-lived episode between end-September and early October 2014. Stress conditions on the interbank money market eased further, in favour of financing (Chart 3.60). The improvement in funding conditions on the Romanian interbank market was mostly ascribable to endogenous factors, amid the further decline in key ECB rates and the relevant deposit facility rate already standing in negative territory.

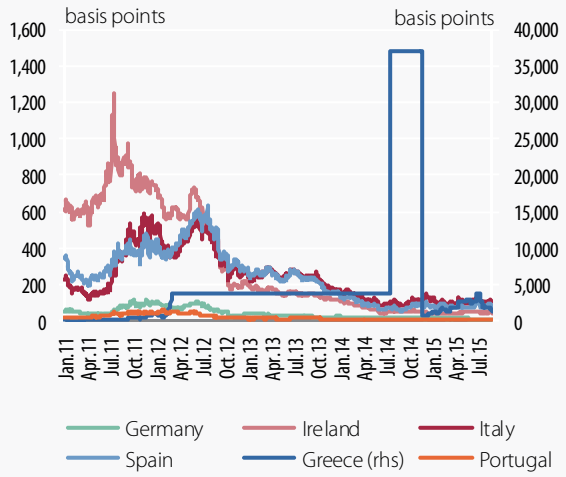
The higher-than-expected growth of the US economy in 2014, along with the broadly favourable stress test results recorded by credit institutions and the adoption of non-standard monetary policies by the ECB, led to an improvement in investors' sovereign risk perception in 2014 H2 – 2015 Q1. This translated in a decline in CDS quotes for both the euro area and Central and Eastern Europe (Charts 3.61 and 3.62). Subsequently, the escalating concerns regarding the situation in Greece and the potential negative externalities prompted a trend reversal in regional CDS quotes. The further decline in CDS quotes for Romania, which were already relatively low, against a backdrop of weak savings returns at European level, might channel foreign investments towards the country, unless other developments offset these positive effects.

Chart 3.61. 5Y CDS quotes for selected countries in the region



Source: Reuters

Chart 3.62. 5Y CDS quotes for selected euro area countries

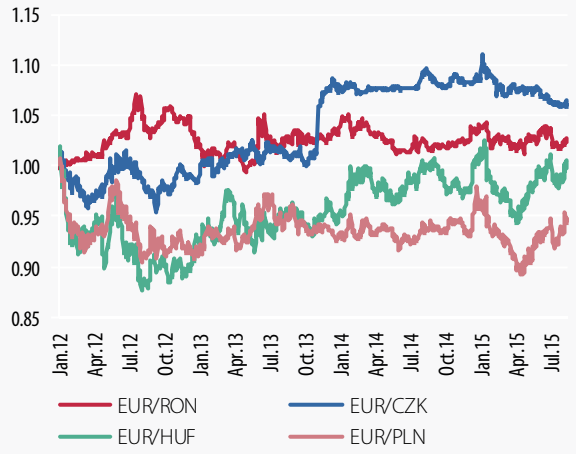


Source: Reuters

3.4.2. Foreign exchange market

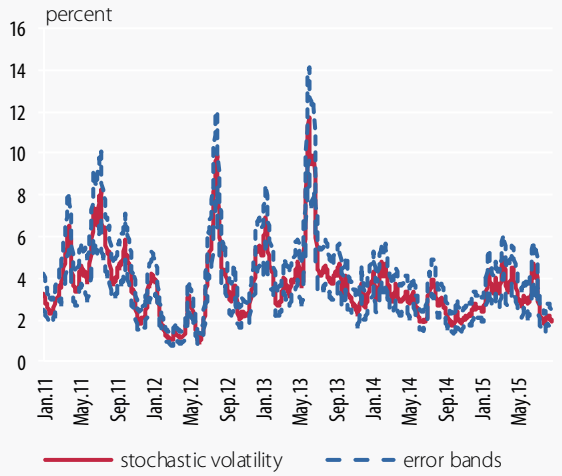
The domestic currency posted similar developments to those of other currencies across the region also at times of escalating regional tensions, such as the Greek crisis or the Ukraine conflict (Chart 3.63). The magnitude of the depreciations seen in 2015 Q2 was similar to that of the appreciations in the first three months of the year. In this context, the Romanian leu and the Hungarian forint witnessed smaller swings than the other two currencies in the region, namely the Czech koruna and the Polish zloty, selected for comparison reasons.

Chart 3.63. Main exchange rates across the region



Source: Bloomberg, NBR

Chart 3.64. Stochastic volatility of the EUR/RON exchange rate



Source: NBR

In 2014 H2, exchange rate volatility mirrored the less brisk dynamics manifest since late 2013 (Chart 3.64). By contrast, the start of this year saw an increasingly volatile EUR/RON exchange rate, amid concerns triggered by the appreciation of the Swiss

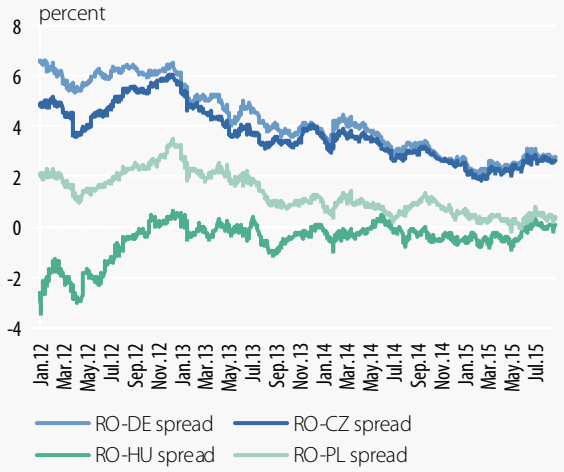
franc and the rise in foreign investors' risk aversion. The EUR/RON exchange rate was less volatile than those of the other currencies in the region.

3.4.3. Government securities market

The convergence of yields on domestic government securities with those on regional and European government stocks strengthened July 2014 through March 2015. Alongside the local money and foreign exchange markets, the developments in the Romanian government securities market uphold the assertion of stronger synchronous movements with those seen across the region, regardless of the type of challenges that arose in the period under review (Chart 3.65).

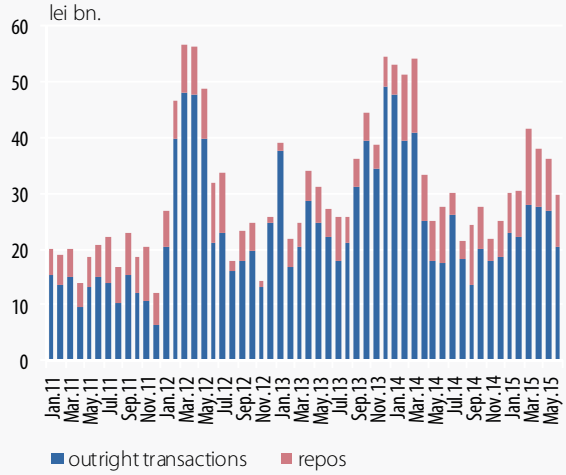
Yields have shown some sensitivity to external shocks, confirming investors' ongoing risk assessment of these instruments. Against this background, the yields on government securities issued by Romania and Poland increased from close to 2 percent at end-March to more than 3 percent in the former case in early July, amid the escalating tensions relative to Greece's financial woes and the uncertainty surrounding the talks with international lenders. Similarly, the yields on German Bunds posted an uptrend over the above-mentioned period, yet the scale of the change was lower than half of a percentage point.

Chart 3.65. Spread between yields on 5Y government securities in Romania and other European countries



Source: NBR

Chart 3.66. Transactions in government securities on the interbank secondary market



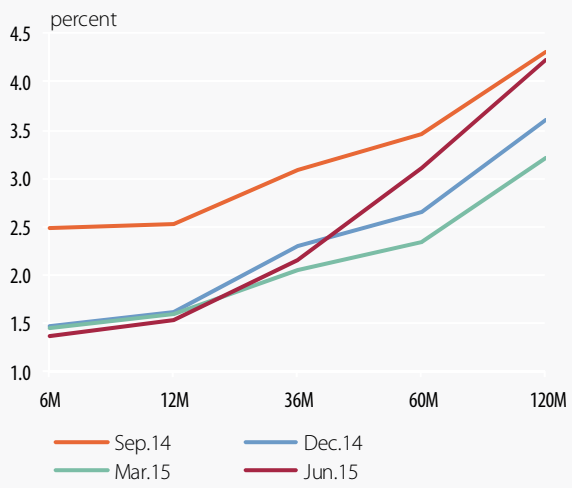
Source: NBR

The volume of government stock dealings in the interbank secondary market followed an upward path in the period under review, but readings were far below those seen in the same months a year earlier (Chart 3.66). One can thus identify the limited impact exerted by the tense financial situation of Greece on the interbank secondary market for government securities. Conversely, monthly traded volumes in the reviewed period were, with few exceptions, close to or higher than the four-year average for both outright transactions and repo transactions.

The composition of domestically-issued government securities holdings changed over the past 12 months, with credit institutions reducing their share in favour of resident non-bank clients (from 25 percent in April 2014 to more than 30 percent in April 2015, according to MPF data). Over the same period, holdings by non-resident clients fell slightly.

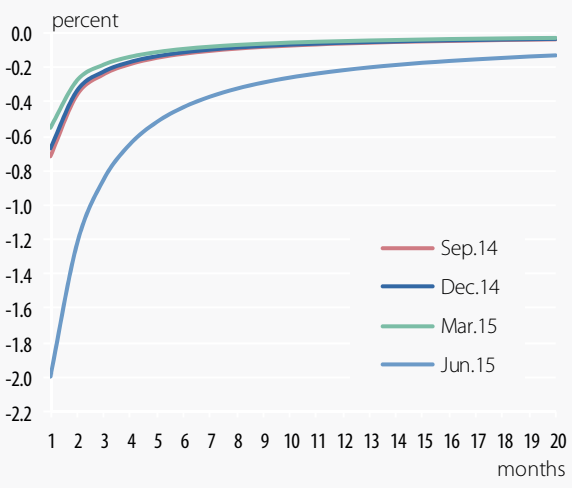
In the period July 2014 – June 2015, economic, financial and monetary conditions exerted effects that translated unevenly into the yield curve for the government securities traded on the secondary market. The yield curve segments showed different responses to shocks coming from the three directions mentioned above (Chart 3.67). Yields across the entire maturity spectrum decreased from July 2014 to March 2015. During 2014 Q4, yields posted a parallel shift compared to the end of September. Over the following two quarters, short-term yields saw marginal changes. On the other hand, yields on 5Y and 10Y bonds embarked on a downward path in 2015 Q1, before rising sharply to levels higher than those at end-2014.

Chart 3.67. Yield curve in the secondary market



Source: NBR

Chart 3.68. Slope of the yield curve in the secondary market

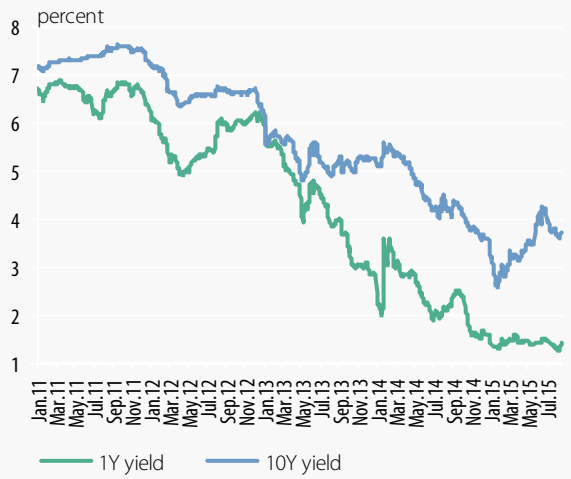


Source: NBR

The uneven shift in the yield curve, in response to the changing economic, financial and monetary conditions, is attributed to how sensitive yields are, over various maturities, to the adjustment to the new conditions (Chart 3.68). The yield curve dynamics seen in the latter half of the year can be put down to the favourable liquidity conditions, coupled with the lowering of the required reserve ratio on leu-denominated liabilities, as well as to the three successive monetary policy rate cuts. The adjustment in investor expectations on the monetary policy rate, after two other cuts in January and February, prompted lower yields on 5Y and 10Y bonds in the three months to March 2015. Subsequently however, following foreign investors' stronger risk aversion, amid concerns over the sovereign debt crisis, medium- and long-term yields increased markedly.

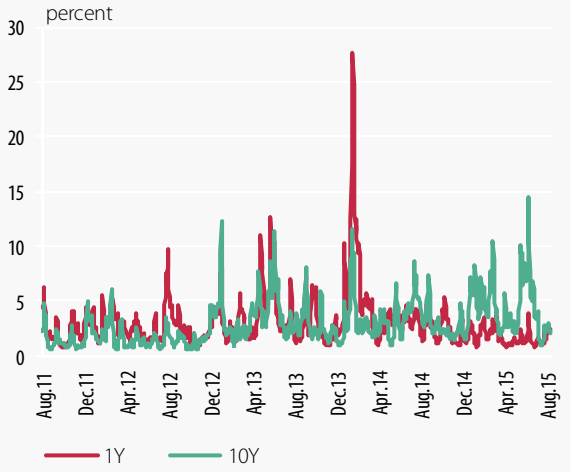
On the whole, starting in 2014 H2, yields on 10Y bonds saw wider fluctuations than the yields at the short end of the maturity spectrum (Chart 3.69). Unlike short-term yields, those on 10Y bonds exhibited a trend reversal in February 2015. The spread between the volatilities of long-term and short-term securities has widened since 2015 Q1 (Chart 3.70). The wider spread points also to an asymmetry in the response to shocks.

Chart 3.69. Benchmark rates on the secondary market for government securities (bid/ask rate average)



Source: NBR

Chart 3.70. Volatility of benchmark rates on the secondary market for government securities (bid/ask rate average)



Source: NBR

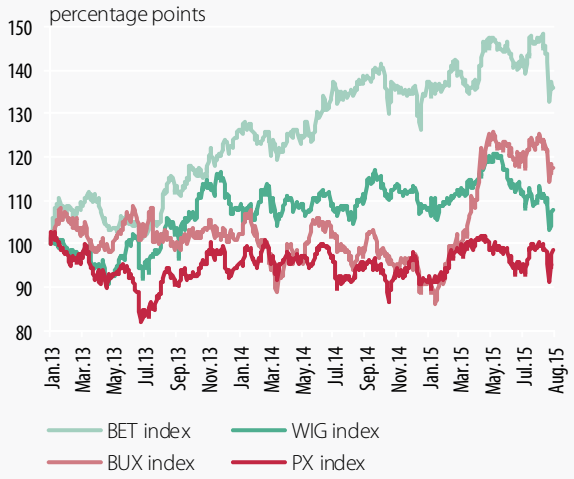
3.4.4. Capital market

The local stock market posted a positive performance from January 2013 to July 2015, providing investors with higher yields than those on other capital markets in the region (Chart 3.71). Romanian capital market's positive results hinge on the achieved macroeconomic stability and the robust economic growth rate witnessed over the past year, alongside foreign investors' keener interest in emerging markets in Central and Eastern Europe and the low-rate environment, which prompted a search for yield by investors. With interest rates at all-time lows, investors' shift to variable-income securities, which are higher-yielding, albeit riskier assets, may fuel the volatility of stock market indices, reducing their resilience to external shocks. Consequently, the increase in the volume of speculative capital to the detriment of long-term investment cannot help achieve a lasting development of the capital market in Romania.

Compared to the same year-ago period (July 2014), the benchmark index of the Romanian capital market advanced by more than 5 percent, being overtaken by the Budapest stock market index alone. Index fluctuations over the period July 2014 – January 2015 are indicative of relatively elevated uncertainty surrounding the geopolitical context in the region, as well as across the world, which weighed on investors' decisions to rebalance their portfolios. Conversely, 2015 Q1 saw a largely stable expansion of regional markets, associated with relatively low fluctuations. The start of 2015 Q2 witnessed a trend reversal on the region's capital markets, amid

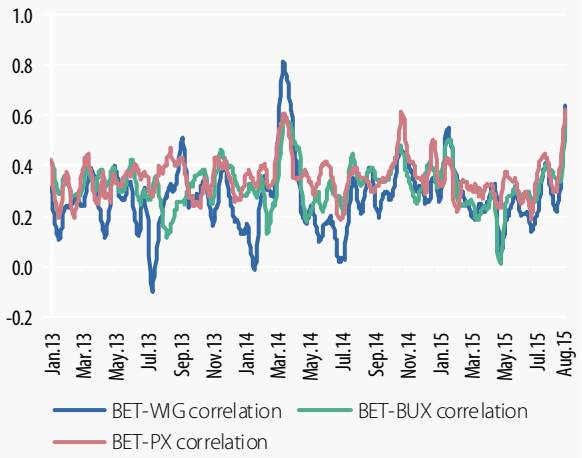
the escalating uncertainty surrounding Greece's financial woes. The similar pattern seen in stock market indices across the region has been confirmed by relatively stable dynamic correlations (Chart 3.72), with jumps in the correlation coefficients being attributed to temporary drops in market indices caused by geopolitical tensions perceived worldwide. The latest such episode seen on capital markets across the region stemmed from fears over the economic picture in China, but also from the low commodity prices, prompting investors to readjust their portfolios sizeably. Testifying to the strengthening of the capital market segment and the sector's importance for the real economy is the significant share of resident listed companies in GDP: 12.4 percent at end-2014.

Chart 3.71. Regional stock market index dynamics (reference period: January 2013)



Source: Bloomberg, NBR

Chart 3.72. Dynamic correlations[75] between the BET and other regional stock market indices (10-day moving average)



Source: Bloomberg, NBR

BSE market capitalisation stayed unchanged in the course of 2014, due to the mixed picture painted by the dynamics of its major sectors (Chart 3.73). Annualised liquidity[76] posted swings from July 2014 to June 2015, with sharp rises being recorded in November 2014 and April 2015. These increases were transitory in nature, so that, except for the above-mentioned months, liquidity hovered around the past years' average.

While the domestic corporate sector witnessed positive developments over the period as a whole (up 13 percent year on year in June 2015), the BSE's "International" sector embarked on a downward path in terms of capitalisation until the end of 2014, before rebounding significantly in 2015 Q1. RASDAQ market capitalisation reported an annual decline of 19 percent in June 2015, in the context of the entry into force on 24 October 2014 of Law No. 151/2014[77], whereby the companies listed on this market

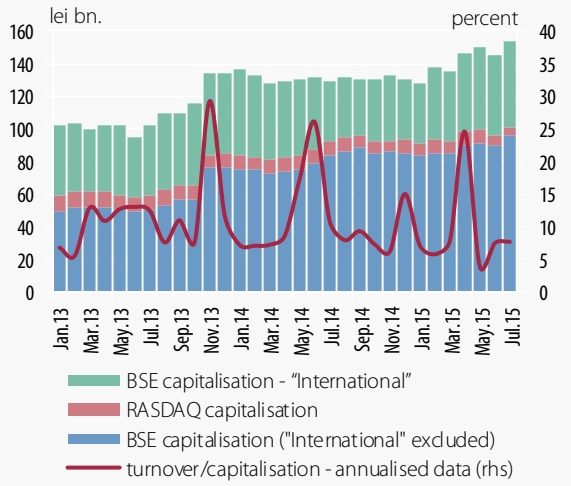
75 The dynamic conditional correlations were estimated by using a BEKK-type multivariate GARCH model (1,1,1) allowing for the error heteroscedasticity, which is a characteristic of most financial time series.

76 Monthly transactions * 12 / Market capitalisation at the end of the month.

77 The law on the clarification of the legal status of the shares traded on RASDAQ market or on the unlisted securities market.

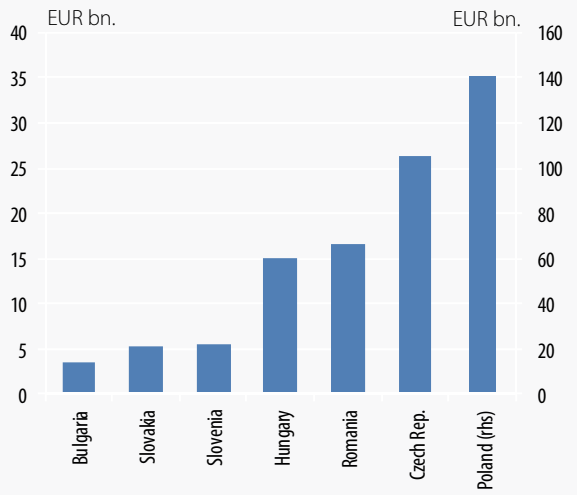
segment should opt for either trading their shares on the regulated market or on an alternative trading system or being delisted. Compared to the capital markets in the region, domestic market capitalisation of the Bucharest Stock Exchange (excluding "International") is higher than in Slovenia, Slovakia or Bulgaria and nears that of stock markets in Budapest and Prague, while Poland exceeds by far all the CEE countries in this respect (Chart 3.74).

Chart 3.73. Stock market capitalisation and annualised liquidity



Source: BSE, NBR

Chart 3.74. Stock market capitalisation of CEE countries

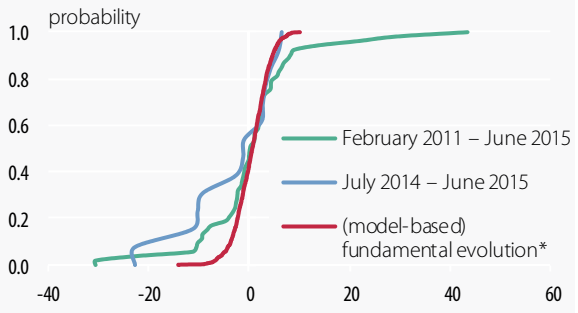


Source: Bloomberg

The empirically-observed path of the dividend growth rate resembles that of economic fundamentals during upturns. The situation is entirely different during periods of contraction in the volume of dividends paid. Results show that a time of rising dividends would be tightly linked to economic fundamentals, with exuberant behaviour being infrequent from July 2014 to June 2015 in particular (Chart 3.75). On the other hand, results indicate risk aversion, since empirically-observed declines are significantly stronger than those derived from the fundamental evolution of the dividend rate. Specifically, company managers may have had an uncertain outlook for the macro-financial conditions. Heightened financial market volatility and a possible tightening of the Federal Reserve's monetary policy stance could be the main drivers behind the managers' behaviour.

Volatility of key Romanian stock market indices has displayed relatively stable dynamics over the period under review (Chart 3.76), interrupted by short-lived episodes of heightening tensions on the local financial market. While the volatility episode in 2014 Q1 coincides with the uncertainty surrounding the crisis in Ukraine, the second surge, in the run-up to the end of 2014, may be ascribed to concerns over the fragile rebound of European economies. The steep increase at end-August emerged against the background of the largest correction on the Bucharest Stock Exchange in four years, highlighting the local capital market's sensitivity to shocks in global investor sentiment. The main tension-ridden episodes overlap with above-average trading volumes, which illustrate investors' swift moves to rebalance their portfolios amid high uncertainty and invalidate the assumption of volatility induced by liquidity squeeze on the BSE's regulated market.

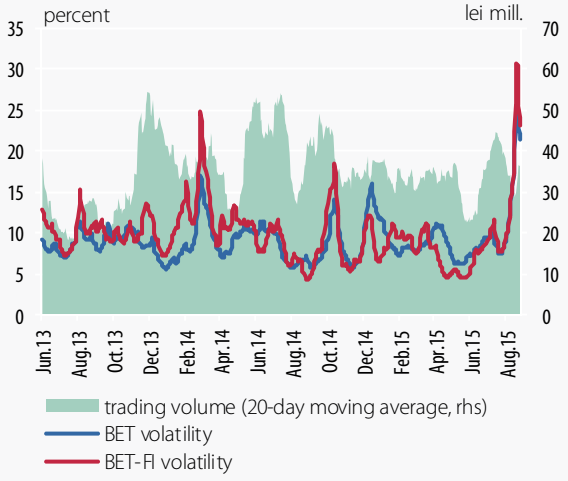
Chart 3.75. Cumulative distribution of dividend growth rate



* The cumulative distribution is calculated based on the fundamental relationship between consumption, dividends and a long-term predictable component defined in the model developed by Bansal and Yaron (Risks for the Long Run: A Potential Resolution of Asset Pricing Puzzles, *The Journal of Finance*, Vol. LIX, No. 4, 2004).

Source: BSE, NBR

Chart 3.76. Stock market volatility and daily trading volume on the BSE



Source: BSE, NBR

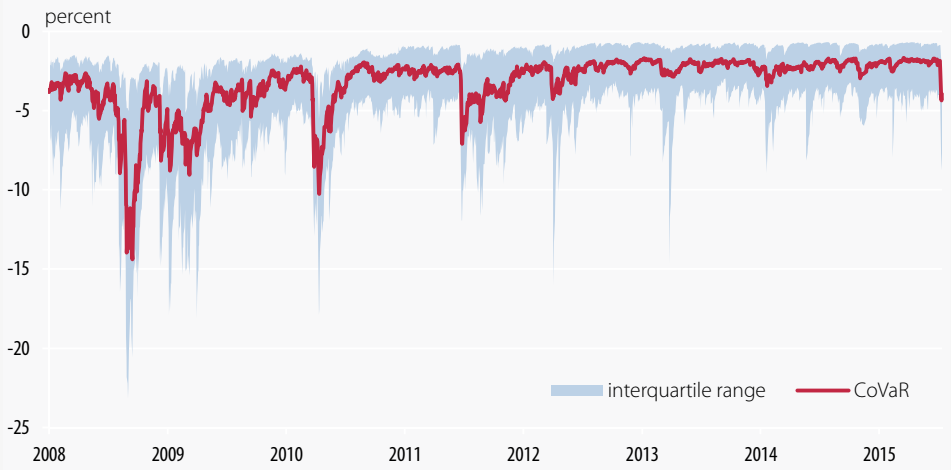
Box 7. CoVaR, a tool for assessing systemic risk

The recent financial crisis is proof of how fast individual financial shocks pass through to the system as a whole via contagion channels, entailing adverse consequences on financial stability and, hence, the real sector. For this reason, the strong concern of the academia to identify and monitor systemic risks materialised in a number of aggregate indicators based on methodologies capable of capturing both the importance of financial system components and their intricate interlinkages. Adrian and Brunnermeier[78] put forward a measure of individual contributions of each financial institution to systemic risk of the sector as a whole. The CoVaR (Conditional Value at Risk) measure uses both market information of financial institutions listed on the local capital market and balance sheet data in order to determine the potential loss of individual institutions, using as parameters a time horizon of ten days and a 99 percent confidence level, conditional on how serious the financial distress of an institution can be. Considering the intuitive manner in which it is defined, as well as the relevant conclusions that may be inferred, the CoVaR is used in many papers dealing with systemic risk and is included in the quarterly ESRB Risk Dashboard.

The construction of CoVaR for Romania comprised ten financial institutions listed on the Bucharest Stock Exchange from the banking sector and from among investment funds in order to capture various sources of systemic risk. Moreover, quantile regressions were resorted to, in light of the benefits of this estimation methodology, given the modelling of non-linearities that may occur when measuring individual potential losses. By including additional variables capable of capturing the specifics of risks associated with individual institutions, such as the short-term interest rate (3M ROBOR), the stock market index (BET) or the induced external vulnerability (VIX index), CoVaR takes a multidimensional approach to the sources and transmission channels of potentially systemic risks.

78 See Adrian, T. and Brunnermeier, M. K. (2008), CoVaR, *Federal Reserve Bank of New York Staff Reports*, No. 348.

Chart A. CoVaR computed for the financial institutions listed on the BSE



Source: BSE, NBR

Having determined the contributions of each financial institution, CoVaR is computed by using the median of daily distribution of potential losses of individual institutions. The major systemic distress episodes overlap with the global crises, showing the level of interconnectivity between the local financial markets and the developed ones both regionally and globally. The comovement is confirmed by the similarity of CoVaR determined for the financial institutions listed on the BSE and the CoVaR computed at European level (the ESRB index uses a sample of 52 credit institutions and 34 insurance companies listed in the STOXX Europe 600). The results of estimations prove the significant, albeit asymmetric, impact of tension-ridden episodes in global financial markets on the financial institutions included in the sample and show limited potential losses of the financial institutions listed on the Bucharest Stock Exchange during the last year of observation. In 2015 H1, the level of systemic risk measured by CoVaR is relatively low, amid decreasing volatility of share prices across the board. Similar trends in systemic risk were also detected for the European markets following the brighter outlook for economic growth and the launch of non-standard monetary policy measures of quantitative easing.

4. FINANCIAL SYSTEM INFRASTRUCTURE – STABILITY OF PAYMENT AND SECURITIES SETTLEMENT SYSTEMS

Payment and securities settlement systems in Romania functioned smoothly, without significant incidents.

The average daily settlement ratio remained high, indicating a low potential for the liquidity risk to become manifest.

The changes to the system rules aimed especially to increase efficiency and contain certain risks, such as operational, legal, credit and liquidity risks.

The intention of the National Bank of Romania is to induce the alignment of the payment-related costs borne by end-users with those applied in the European Union, with a view to ensuring a pricing level that would stimulate the economic activity, while maintaining the high quality and security of the services provided.

The NBR, in co-operation with the ECB and the other oversight authorities in the EU, assesses the systemic risks associated with potential cyber-attacks and engages in testing and improving the cyber resilience of financial market infrastructures and of the participants therein.

4.1. Stability of ReGIS

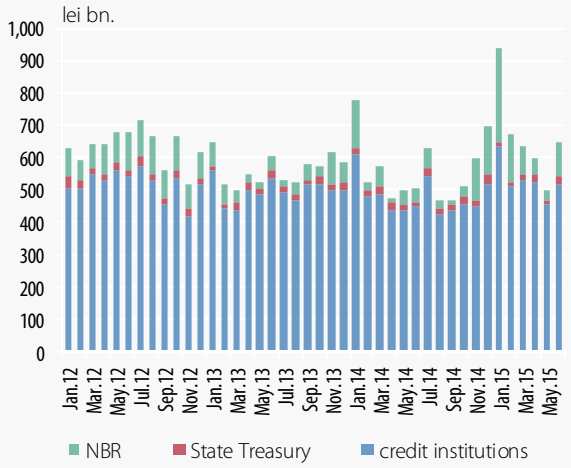
ReGIS is the most important payment system in Romania. It ensures the real-time gross final settlement of participants' fund transfer orders and of the net positions calculated in the ancillary systems[79], which amounted to lei 7,366 billion in July 2014 – June 2015 (Chart 4.1). The importance of this system arises from both the value of settled transfer orders and its ensuring the settlement of payment obligations resulting from the transactions performed on the capital market and the government securities market, as well as from central bank's operations.

ReGIS functioned smoothly July 2014 through June 2015, amid an increase in both the number and average value of settled transfer orders. In the period under review, the

[79] A payment system – SENT (operated by STFD TRANSFOND S.A.), two card payment schemes – VISA (operated by VISA Europe Services Inc.) and MasterCard (operated by MasterCard International), and three securities settlement systems – DSClear (operated by Sibex Depository), RoClear (operated by the Central Depository) and SaFIR (operated by the NBR).

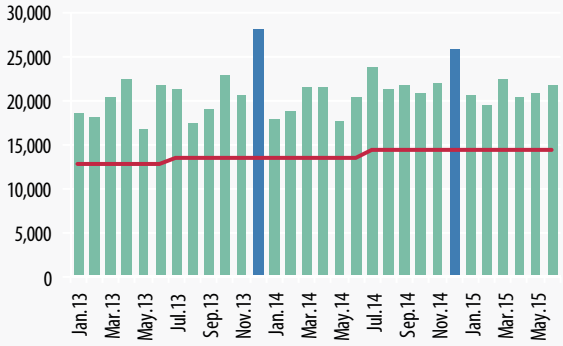
average monthly availability ratio remained very high, above 99.99 percent, similarly to the level reported during the reference period (July 2013 – June 2014), which indicates a very good system reliability. In 2014 an exercise was successfully conducted for testing the business continuity plans concerning ReGIS and SaFIR, with the support of STFD TRANSFOND S.A. as technical operator and the voluntary participation of 28 financial institutions.

Chart 4.1. Value of transfer orders settled in ReGIS



Source: NBR

Chart 4.2. Maximum number of transfer orders settled in ReGIS on a monthly basis



Note: The red line stands for the evolution of the average daily number of transfer orders settled during January 2013 – June 2013, July 2013 – June 2014 and July 2014 – June 2015.

Source: NBR

The average daily settlement ratio[80] was further 99.98 percent, given the rise by almost 10 percent in the average daily value of settled transfer orders versus the reference period. No gridlock situations occurred in the waiting queue, which shows a low potential for the liquidity risk to become manifest. The settlement of the largest net debtor position[81] did not generate liquidity pressures, being carried out under normal conditions with 21.84 percent of the liquidity available at the start of the day in ReGIS and without changes in participants' normal behaviour.

Transfer orders settled through ReGIS in the period under analysis (3.6 million) increased by more than 7 percent compared to the reference period and the average daily number of settled transfer orders (close to 15,000) stuck to the slightly upward path seen since 2012 – with seasonal peaks in December (Chart 4.2) – without posing any problems to the system's processing capacity.

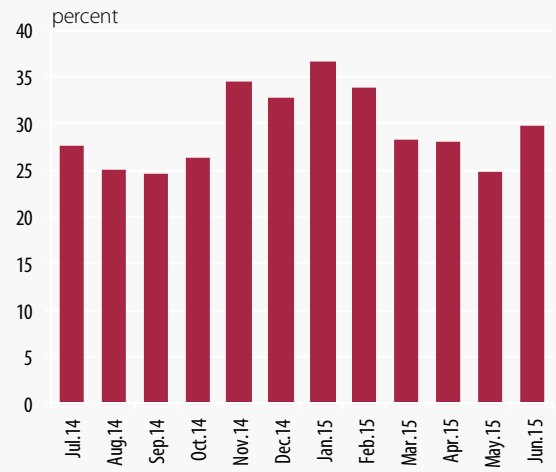
At present, 47 entities participate in ReGIS and the participants' concentration ratio[82] remains at a moderate 67.79 percent, below the 80 percent alert threshold, which indicates a good resilience of the system should a significant participant be unable to settle.

80 Calculated as a ratio of transfer orders settled in the system to the accepted transfer orders.

81 The value was 25 percent higher than the value of the largest net debtor position settled during the reference period.

82 Calculated as the sum of the five largest individual market shares in terms of the value of settled transfer orders.

Chart 4.3. Liquidity usage ratio in ReGIS



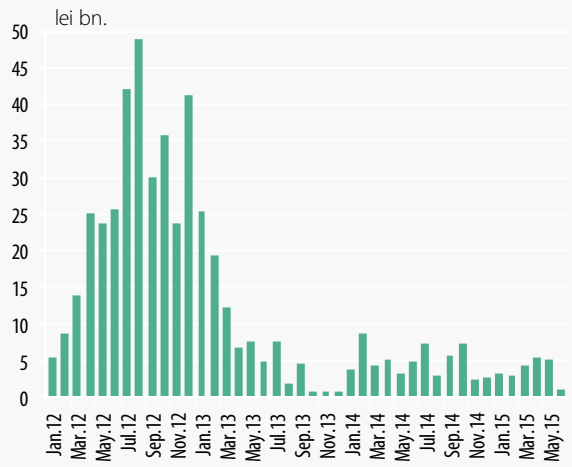
Source: NBR

ReGIS system rules were adjusted in the course of 2015 in order to ensure better management of the operational and legal risks. The changes with an impact on the operational risk referred mainly to the system access criteria, the criteria for identifying critical participants and critical payments, as well as to additional participation conditions for critical participants. The adjustments aimed at reducing the legal risk related to the introduction of provisions for processing garnishment operations at any time during the operating day and updating the terms of reference for the legal opinions on the participant's capacity and country of origin.

The liquidity usage ratio, calculated based on simulations, indicates a comfortable liquidity level in the banking sector (Chart 4.3). The pressure on banks' financial resources was relatively low, pointing to a liquidity surplus relative to the liquidity needs in ReGIS, as seen over the last years.

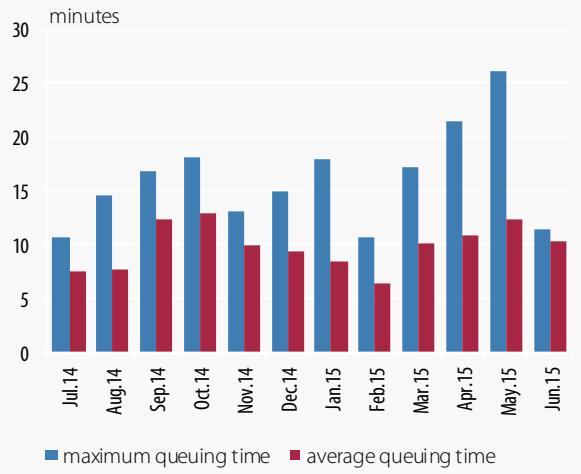
The asymmetry of liquidity resources in the banking sector, determined based on simulations, remains low and posted a relatively stable evolution during July 2014 – June 2015 (Chart 4.4). The distribution of liquidity primarily to participants with temporary resource shortages supports ReGIS stability. The maximum and average value of waiting queues show some temporary above-average rises in queued orders; however, when assessed in correlation with the total value of settled orders and with the use of the intraday credit facility, no implications on system stability were detected.

Chart 4.4. Maximum value of waiting queues in ReGIS



Source: NBR

Chart 4.5. Queuing time of instructions

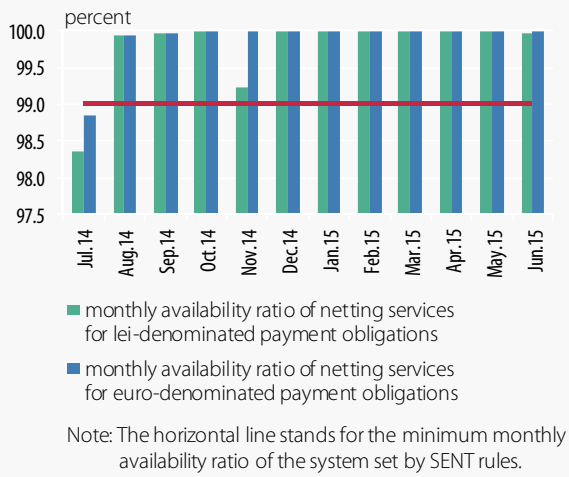


Source: NBR

4.2. Stability of SENT

SENT is a payment system, operated by STFD TRANSFOND S.A., which ensures the multilateral netting of lei- and euro-denominated transfer orders. The netted orders totalled lei 285 billion and EUR 62 million respectively during the period under review. Net positions are settled through ReGIS and TARGET2. SENT is pivotal to the economy because of the high volume of small-value transactions processed and in view of the fact that it allows for the interbank settlement of debit payment instruments.

Chart 4.6. Availability ratio of SENT



Note: The horizontal line stands for the minimum monthly availability ratio of the system set by SENT rules.

Source: STFD TRANSFOND S.A.

SENT functioned normally, except for isolated operational incidents, amid a slight pick-up in netting in the period under review. In 12-month terms, netting services posted a good average availability ratio, namely 99.79 percent for lei-denominated payments (99.89 percent for euro-denominated payments), slightly down from 99.98 percent (99.92 percent for euro-denominated payments) in the reference period, but above the 99 percent level set forth by the system rules. The emergence of operational incidents in July 2014 caused a minor decline in the monthly availability ratio below the level required by the system rules (Chart 4.6).

The volume and value of lei-denominated transfer orders netted during July 2014 – June 2015 expanded by more than 10 percent and over 7 percent respectively. Payment obligations denominated in domestic currency posted a high 98.65 percent settlement ratio[83], similar to that seen in the reference period. The netting ratio[84] of lei-denominated payment obligations remained at a very good level, posting a 20.45 percent average, with the variation interval ranging further from 13 percent to 45 percent. The lower the netting ratio, the more efficient the system, but the 10 percent level marks an alert threshold, below which the contagion risk may become manifest should a participant be unable to settle. All net payment obligations in SENT are entirely collateralised and no foreclosure was necessary during the period under review.

In the context of a low number of participants using netting services for euro-denominated payment obligations, the significant pick-up in the netting of euro-denominated payment instructions (by over 150 percent in terms of both number and value) owes mainly to cross-border transfer orders from outside the country. The only exception to the 100 percent daily settlement ratio occurred in February 2015 due to an operational incident caused by a human error, resulting in the non-completion of the settlement via TARGET2-România of net positions arising

83 Calculated as a ratio of the value of netted-settled transfer orders to the value of transfer orders processed in SENT – the lei component.

84 Calculated as a ratio of net debtor positions to the value of netted transactions. The lower the netting ratio, the stronger the effect of netting.

from the netting of euro-denominated payment obligations calculated in SENT. Following the remedial measures, among which restoring the netting of euro-denominated payment obligations and postponing the second netting session, all euro-denominated payment instructions were successfully settled in the course of the same operating day. The netting ratio of euro-denominated payment obligations ranged further between 80 percent and 100 percent, similarly to the previous years, which indicates very low system efficiency in terms of liquidity.

Participating in SENT are 41 institutions from Romania and branches of some EU credit institutions. The concentration ratio of SENT participants remained at the level seen in the previous years, ranging between 57 percent and 59 percent, in terms of the value of netted transfer orders. The value is moderate, below the 80 percent critical threshold, showing a low possibility for the contagion risk to become manifest within the system.

In 2014, SENT rules were amended including with respect to the management of operational and legal risks. To this end, the operating schedule was adjusted, the requirements on the participants' annual self-assessment were simplified and provisions were made for the Court of International Commercial Arbitration attached to the Chamber of Commerce and Industry of Romania to settle the disputes that were not amiably settled.

At end-2014, the National Bank of Romania started assessing ReGIS and SENT systems in terms of their compliance with the standards provided by the Principles for financial market infrastructures, prepared by the Bank for International Settlements together with the International Organisation of Securities Commissions (IOSCO).

4.3. Securities settlement systems

The three securities settlement systems operating in Romania provide post-trading services for the capital market – DSClear operated by Sibex Depository and RoClear operated by the Central Depository, as well as for the government securities market – SaFIR operated by the National Bank of Romania. These systems continued to run safely, without significant incidents, as shown by the 100 percent annual availability ratio recorded by all three systems.

Changes in the functioning of DSClear and RoClear

During July 2014 – June 2015 a series of adjustments were made in the architecture and operating rules of DSClear and RoClear. The adopted measures were aimed at reducing exposure to market risk by complying with the provisions under the European Regulation on Central Securities Depositories – CSDR[85] regarding the settlement of transactions no later than on the second business day after trading takes place (T+2).

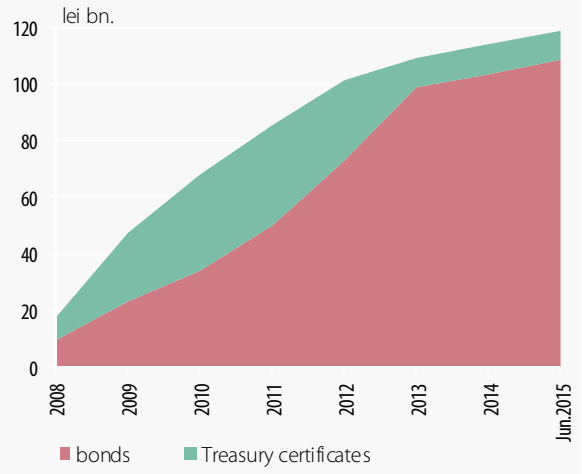
[85] Regulation (EU) No 909/2014 on improving securities settlement in the European Union and on central securities depositories.

In the course of March 2015, the functioning rules governing RoClear were changed in order to pave the way for the Central Depository to join TARGET2-Securities (T2S)[86], the pan-European platform for securities settlement; in June 2015, the Central Depository successfully joined the new platform in the first migration wave alongside other depositories. The main benefits provided by the T2S platform are the considerably higher efficiency and increased safety of cross-border settlements, as well as the contribution to developing an integrated European market for the settlement of securities transactions.

Functioning of SaFIR

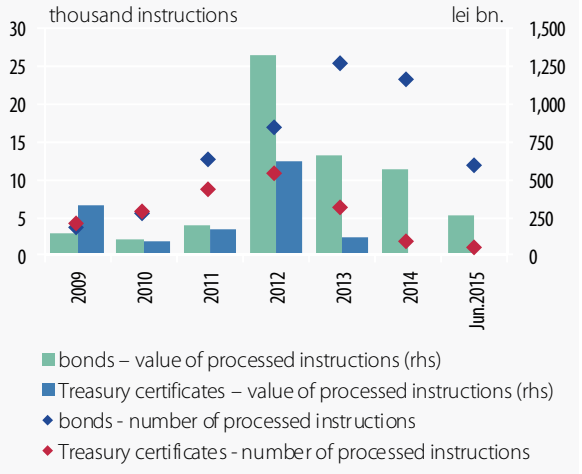
SaFIR is a system of a pivotal importance, due to its role in ensuring an adequate monetary policy transmission channel and to the value of the securities in the system and of the related transactions. At the end of 2015 H1, the securities in SaFIR amounted to lei 118.9 billion (Chart 4.7), up by 4 percent compared to the end of the previous year. This was attributed to a 4.9 percent increase in the value of the bonds recorded with the system (lei 108.7 billion), in spite of a further visible downward trend in the value of Treasury certificates (down 4.2 percent to around lei 10.3 billion).

Chart 4.7. Value of securities recorded in SaFIR



Source: NBR

Chart 4.8. Transactions processed in SaFIR by type of securities



Source: NBR

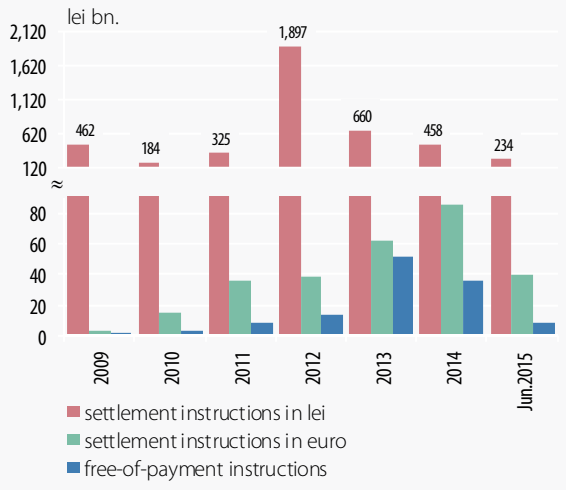
The volume and value of settled transactions fell largely because of the decline in participants' liquidity needs, given that financing transactions in securities prevail in SaFIR. After the peak seen in 2013, when SaFIR settled approximately 32 thousand transactions, in 2014 the number of transactions diminished to about 25 thousand, a tendency which carried on in the first half of 2015 (12.6 thousand transactions, compared with 13.6 thousand in the first half of 2014, Chart 4.8). The volumes of transactions do not pose any problem to the system's processing capacity.

[86] T2S will contribute to increased efficiency and reduced fragmentation of securities settlement activities, thanks to: (1) delivering a single IT platform, with common interfaces and the same messaging protocol, (2) harmonising the operational schedules and the settlement deadlines, (3) implementing a single engine for the gross settlement in central bank money of all national and cross-border transactions settled in T2S-eligible currencies.

The aggregate value of transactions settled through SaFIR (Chart 4.9) in 2015 H1 (lei 282 billion) remained on the downward trend that started in 2014, although the value of transactions in Treasury certificates almost trebled (lei 17.4 billion versus lei 6 billion in 2014 H1). The settlement of lei-denominated payments through ReGIS, alongside the securities settlement via SaFIR, ensures compliance with the delivery-versus-payment (DvP) principle and, consequently, the elimination of the principal risk. The upward trend in the value of transactions settled in euro was further manifest in 2014 (up by 36 percent from 2013), before reversing during 2015 H1 (down 20 percent against 2014 H1). The value of transactions settled in euro illustrates how important it is to implement, in the near future, a fund settlement mechanism that would ensure full compliance with the DvP principle of these transactions as well, with a view to eliminating the principal risk. To this end TARGET2 is envisaged to be used.

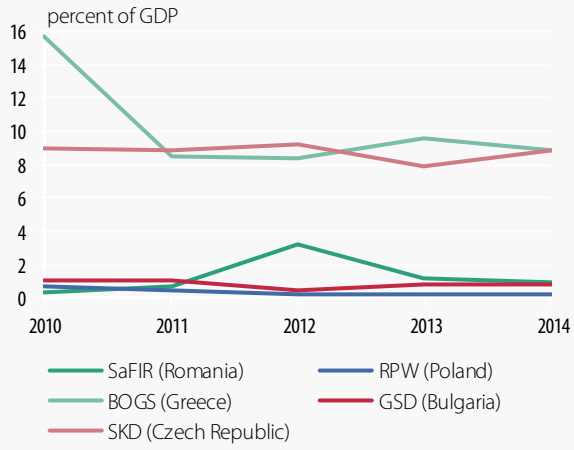
The drop in the appetite for liquidity and implicitly in the value of collateralised lending led to a decrease in the total value of transactions settled through SaFIR as a share in Romania's GDP. Compared to other systems owned by central banks, the activity level continues to be higher than that in Poland and Bulgaria, remaining, however, much lower than that reported by the systems owned by central banks in Greece and the Czech Republic (Chart 4.10). In view of connecting the system to the T2S platform, the value of cross-border transactions in securities deposited with SaFIR is expected to grow significantly, with a positive impact on efficiency, which may lead to a decline in tariffs.

Chart 4.9. Value of transactions settled in SaFIR



Source: NBR

Chart 4.10. The value of transactions settled in systems owned by central banks as a share in GDP



Source: ECB (Securities trading, clearing and settlement, July 2015), NBR calculations

The participants in SaFIR did not encounter difficulties in settling transactions in the period under review, as also shown by the average settlement ratio[87]. It continued to be high compared to the 95 percent limit set forth by standards, reaching 99.94 percent for transactions settled in lei and 99.73 percent for transactions settled in euro. The contagion risks that may arise in the event of a significant participant

87 The settlement ratio is the percentage ratio of transactions settled on the intended settlement date to total transactions recorded in the settlement system during a period of time.

encountering difficulties are mitigated thanks to the possibility to carry out real-time settlements and due to the moderate, stable concentration level (the concentration ratio of participants in terms of the value of settled transfer orders is 55.7 percent).

In March 2015, the National Bank of Romania changed the functioning rules of SaFIR, with the adopted measures aiming mainly to reduce the principal risk, the liquidity risk and the operational risk, by observing EU recommendations. The changes focused on: (i) ensuring compliance with the delivery-versus-payment principle for those transactions settled in lei for which funds are not transferred via ReGIS, but in the accounting records of a settlement bank; (ii) setting forth the obligation for settlement banks and participants to credit beneficiary accounts as soon as possible; (iii) providing explanations by the SaFIR administrator on the decision to withdraw the quality of participant in the system; (iv) defining the quality of a critical participant in the system, and (v) setting forth stricter requirements for these participants than for the other participants.

4.4. Cybersecurity

In the context of operational risk management, cyber resilience has recently become a priority, owing to the worldwide rise in the number, seriousness and complexity of cyber-attacks, including against financial market infrastructures and the participants therein. An increase is also visible in financial services' dependence on technology, in the interdependence and interconnections between the operators of financial market infrastructures, as well as in the attackers' diversity and capabilities – for instance state-based cyber-attacks or attackers backed by terrorist organisations.

Cyber resilience is defined as the capacity to foresee, withstand and/or tailor the systems to attacks and quickly resume normal activity in the wake of a cyber-attack. Such attacks may compromise the confidentiality of some information, render systems unavailable or affect the integrity of the information in the systems. Cyber-attackers' goals are: illicit gains, inducing political and social unrest, espionage and undermining financial stability. Cyber governance refers to IT systems, the personnel, processes and communications. The international cybersecurity policy pursues the prevention of attacks by reducing vulnerabilities and discouraging attackers, finding attack attempts or successful attacks, and resuming activity in the wake of an attack in compliance with the pre-set quality standards.

In view of the interdependencies across both the financial market infrastructures and the participant institutions, cyber-attacks may have a systemic impact on the financial sector and therefore may affect real economy. The basic standards for assessing and containing such risks to financial market infrastructures are included in the *Principles for financial market infrastructures,* prepared by the Bank for International Settlements (BIS) in 2012, especially the requirements on operational risks and governance. According to these standards, the security policy has as objectives to ensure settlement finality and resume critical activities within two hours. In 2014, the BIS compiled a study addressing cyber risks, titled *Cyber resilience in financial market infrastructures*, which serves as guidance for oversight authorities and administrators

of market infrastructures, until the completion of a new set of international standards thoroughly addressing these risks.

The National Bank of Romania, in co-operation with the European Central Bank and other oversight authorities in the EU, assesses the systemic risks associated with potential cyber-attacks and engages in testing and improving the cyber resilience of financial market infrastructures and the participants therein. This falls within the central bank's scope of business, which includes the permanent oversight, based on relevant international standards, of the smooth functioning of national payment and settlement systems, with a view to identifying and minimising the risks that could harm the financial system and the economy overall.

5. FINANCIAL STABILITY, REGULATORY FRAMEWORK AND MACROPRUDENTIAL POLICIES

Financial stability is a global public good characterised by non-rivalry and non-excludability. This public good cannot be provided exclusively by the market, being ensured by the central bank as well as by other public institutions. Moreover, considering Romania's status as an open economy, financial stability cannot be achieved at national level alone, as it requires a global approach to coordinating the related policies.

The intermediate macroprudential policy objectives in the NBR's field of competence, completely harmonised with the specific EU recommendations are: (i) to mitigate and prevent excessive credit growth and leverage, (ii) to mitigate and prevent excessive maturity mismatch and market illiquidity, (iii) to limit direct and indirect exposure concentrations, (iv) to limit moral hazard and (v) to strengthen the resilience of financial infrastructures.

In order to consolidate the system resilience to potentially adverse developments and comply with the requirements of the EU regulatory framework, new macroprudential instruments are set to be implemented in the period ahead.

In all the assessments made by the European Systemic Risk Board, Romania was found to be "fully compliant" or "largely compliant" with the issued recommendations.

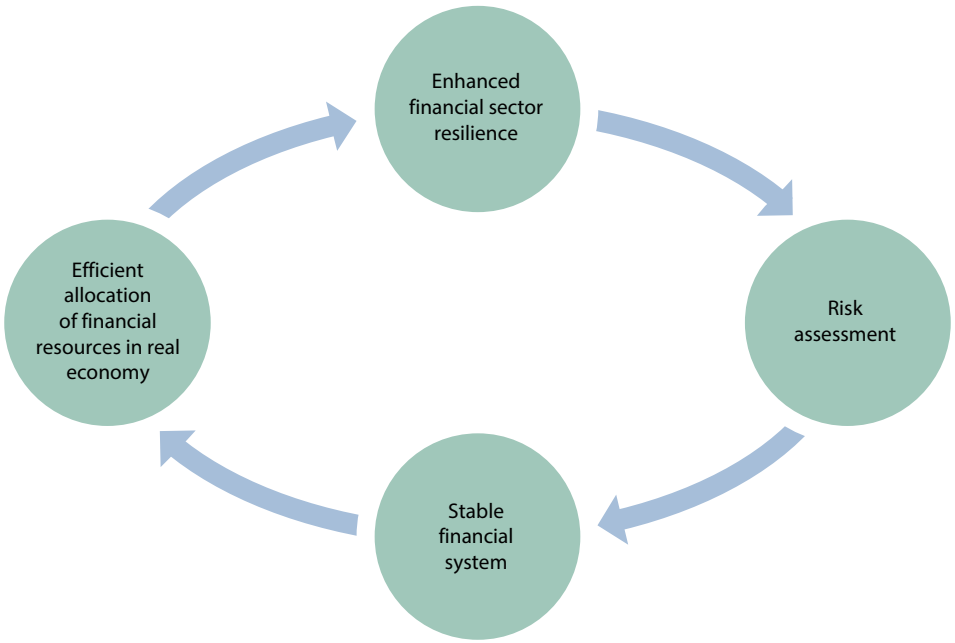
5.1. The role of financial stability in the current economic and financial context

In order to understand the concept of financial stability, it is necessary to define the concept of a stable financial system. A financial system, irrespective of its size or complexity, is considered stable when it is able to facilitate economic processes and correct the imbalances resulting from significant adverse shocks (Schinasi, 2004). On the other hand, taking account of its functions, a financial system may be assessed as stable when it is able to efficiently allocate economic resources both spatially and especially intertemporally, manage financial risks, and be self-corrective when hit by external shocks.

The European Central Bank (ECB) defines financial stability as a condition in which the financial system – intermediaries, markets and market infrastructures – can withstand shocks without major disruptions in financial intermediation and in the efficient

allocation of savings to productive investment. The main characteristics of financial stability refer to the identification and effective management of risks, as well as to the strengthening of financial system resilience to systemic shocks on solid grounds and without major economic disturbances. The role of safeguarding financial stability is to help prevent disruptions in the smooth functioning of the financial system, the exercise of its functions economy-wide focusing on the intermediation between savers and investors, payment and settlement system functioning and the effective risk management.

Diagram 1. Financial stability – concept, importance, objective



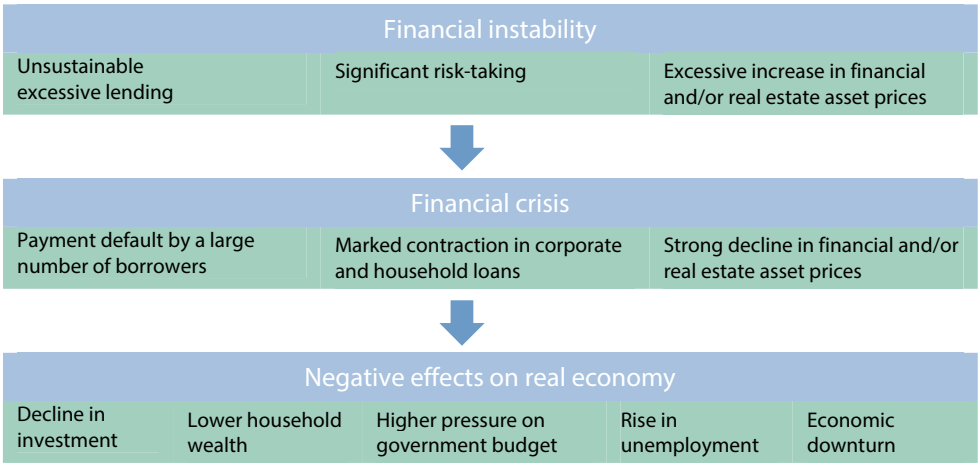
Source: NBR

Specifically, financial stability assesses risks and monitors the allocation of financial resources in real economy, which helps enhance the financial sector's resilience (Diagram 1)[88]. Due to its functions, financial stability may be regarded as a global public good characterised by non-rivalry and non-excludability. This public good cannot be provided exclusively by the market, being ensured by the central bank as well as by other public institutions. Moreover, considering Romania's status as an open economy, financial stability cannot be achieved at national level alone, as it requires a global approach to coordinating the related policies[89].

88 Voinea, L. (2015), *Stabilitatea financiară, riscul sistemic şi instrumentele macroprudenţiale din perspectiva băncii centrale*, http://www.bnr.ro/DocumentInformation.aspx?idDocument=19532&directLink=1.

89 Dăianu, D. (2015), *A central bank's dilemmas in highly uncertain times – a Romanian view*, NBR Occasional Paper No. 13, http://www.bnr.ro/occasional-papers-3217.aspx.

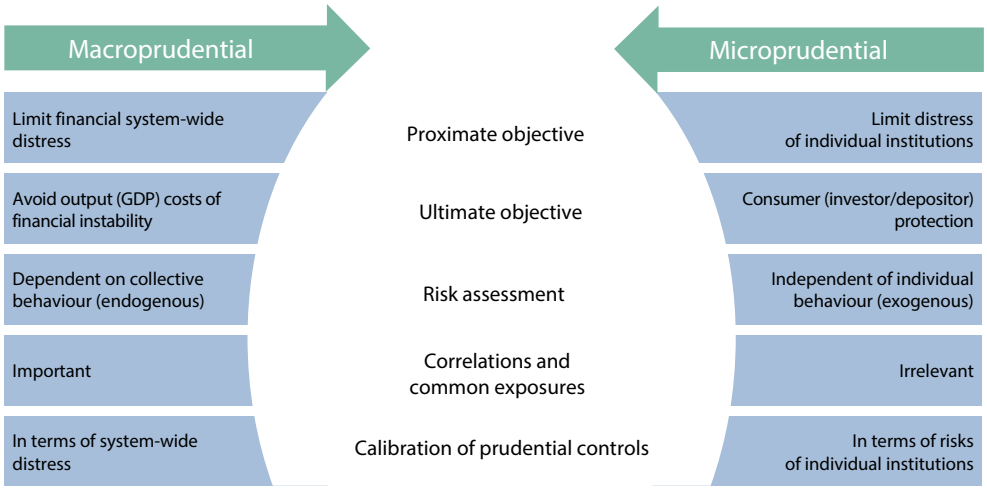
Diagram 2. The importance of financial stability



Source: NBR

According to the literature on financial stability, the importance of this system characteristic stems from the negative effects that unsustainable lending, significant risk-taking or the excessive increase in asset prices can have on real economy. Such imbalances may facilitate the emergence of financial crises, with major implications for companies and households (Diagram 2).

Diagram 3. Macro and microprudential perspectives compared



Source: Adaptation of Borio (2003)

Both European and international supervisory authorities attached higher importance to the concept of financial stability, which helped define an operational framework for macroprudential policy, concurrently with the creation of coordination bodies in this field. The role of financial stability in the mix of already established economic policies (monetary, fiscal or competition policies) was thus acknowledged. The ever higher interconnectedness between national financial systems brings to the fore the importance of coordination between macroprudential authorities in different

countries, particularly in cases when national banking sectors are dominated by foreign groups (as in Romania).The analysis of interactions between economic policies is also relevant, particularly for common instruments and sectors, in which case, however, objectives and approaches are different (Diagram 3).

5.1.1. The international context

Over the past decades, the economic and financial context underwent sweeping changes that stemmed from globalisation and the interdependence relations established at both institutional and national levels. The globalisation of the financial system is beneficial in view of financing and diversification opportunities available internationally. Heightened competition fosters the growth of financial service efficiency and product quality, as well as the decline in costs. On the other hand, globalisation contributes to a higher degree of financial system interconnectedness, which may produce chain reactions when financial shocks occur. The fallout from the high degree of interconnectivity was visible internationally during the 2007-2008 financial crisis. For the first time ever, concepts such as shadow banking or the interconnectivity of institutions at national and international levels caught the attention of international bodies.

The global economic recession generated by the financial crisis prompted central banks worldwide to take exceptional measures aimed at boosting aggregate demand. The gradual cut in policy rates, which currently stand at minimum levels, concurrently with the implementation of non-standard monetary policy measures helped shape a new macroeconomic environment featuring close-to-zero or even negative nominal interest rates. In this context, monetary policy relies on transmission channels with uncertain effectiveness and potentially significant consequences on real economy, such as the heightened vulnerabilities and systemic risk sources within the financial system. Hence, financial stability came to have a key role in the current macroeconomic context, by way of macroprudential instruments available to authorities for containing risks and strengthening financial sector resilience.

The main challenges brought about by the sweeping changes affecting the financial sector and the economic environment in recent years refer to the weak profitability of credit institutions and insurance companies, in the context of fragile economic growth and slow restructuring of asset portfolios, as well as to public and private debt sustainability. The short-term implications of low interest rates also mirror in the assessment of asset prices and investors' risk appetite. Some of these elements may contribute favourably to economic growth in the near run; however, the negative side-effects of investors' search for yield may have far-reaching consequences on financial institutions' balance sheets.

In order to ensure the stability of the European financial system, the European Systemic Risk Board (ESRB) was established in 2010 as a body responsible for the macroprudential oversight of the EU financial system. The ESRB objective is to contribute to systemic risk prevention or mitigation and the smooth functioning of the internal market, thus ensuring a sustainable contribution of the financial sector to economic growth. The ESRB issues recommendations and warnings in the field of

macroprudential oversight for all EU Member States. To date, the ESRB has issued seven recommendations (presented in Section 5.4. Implementation by the NBR of ESRB macroprudential recommendations). The first ESRB Recommendation (ESRB/2011/3) refers to the macroprudential mandate of national authorities and the designation of the macroprudential authority, whose implementation deadline was February 2014 (initially 1 July 2013). According to this Recommendation, Member States are required to "designate in the national legislation an authority entrusted with the conduct of macroprudential policy, generally either as a single institution or as a board composed of the authorities whose actions have a material impact on financial stability". Another ESRB Recommendation supplements the macroprudential framework by establishing the intermediate objectives and instruments of macroprudential policy (ESRB/2013/1).

5.1.2. The implementation framework for macroprudential policy in Romania

5.1.2.1. Designating the macroprudential authority in Romania

In order to implement the ESRB Recommendations in Romania, a draft law on the macroprudential oversight of the national financial system was prepared. The law provides the establishment of the National Committee for Macroprudential Oversight (NCMO) as an interinstitutional cooperation structure without legal personality, which aims to ensure coordination in the field of macroprudential oversight of the national financial system by setting the macroprudential policy framework and the appropriate instruments for its implementation. The NCMO shall be set up taking after the ESRB model.

Financial stability is a global public good that cannot be ensured by a single institution, but rather through the joint efforts of several national institutions and the coordination of macroeconomic policies. Hence, the NCMO gathers the authorities playing a substantial role in ensuring financial stability in Romania, namely the National Bank of Romania (NBR), the Financial Supervisory Authority (FSA) and the Government. A representative of the Bank Deposit Guarantee Fund attends the General Board meetings as observer. The NCMO organisation chart consists of the General Board, the Technical Committee for systemic risk, the Technical Committee for financial crisis management, and the NCMO Secretariat, ensured by the central bank.

The Committee's primary objective is to help safeguard financial stability, also by strengthening the financial system's resilience and by containing the build-up of systemic risks, thereby ensuring a sustainable contribution of the financial sector to economic growth. In pursuing this objective, the functional independence of the Committee is ensured, meaning that it cannot receive instructions from other public or private entities. The main tasks of the NCMO are: (i) to identify, monitor and assess systemic risks; (ii) to identify systemically important financial institutions and financial system structures; (iii) to develop the macroprudential policy strategy; (iv) to issue recommendations and warnings in order to prevent or mitigate systemic risks; (v) to monitor the implementation of ESRB or NCMO recommendations as well as the

measures adopted by national authorities following the recommendations and warnings issued by the ESRB or NCMO.

The Committee may issue warnings and recommendations (soft law), based on an "act or explain" mechanism, addressed to the NBR or the FSA, in their capacity as national authorities responsible for the sectoral financial oversight. In addition, the NCMO may issue recommendations to the Government for the latter to initiate draft laws, in line with legal provisions, in order to safeguard financial stability. Non-compliance with the recommendations of the Committee must be justified accordingly. The Committee is also empowered to request the ESRB to issue a recommendation in order for one or several Member States to recognise the macroprudential instruments recommended by the Committee.

The Committee publishes the macroprudential policy decisions, except when they could pose risks to financial stability, can make statements on systemic risk and is ultimately accountable to the Parliament, in compliance with the provisions of the draft law, being bound to submit an Annual Report.

The draft was reviewed by the ESRB Secretariat, and Romania was assessed as "largely compliant" (Section 5.4. Implementation by the NBR of ESRB macroprudential recommendations) with all recommendations and overall in the Follow-up Report on the ESRB Recommendation on the macroprudential mandate of national authorities.

In addition to Recommendation ESRB/2011/3, Directive 2013/36/EU (CRD IV) required that each Member State should designate a national macroprudential authority in charge of using macroprudential instruments. Pursuant to CRD IV, this role may be attributed either to a specially designated authority or to the competent authority responsible for microprudential supervision.

5.1.2.2. Designating the macroprudential authority in other EU Member States

Pursuant to Recommendation ESRB/2011/3 on the macroprudential mandate, Member States entrusted the role of designated macroprudential authority either to a single authority – the central bank (BE, CY, CZ, EE, GR, HU, IE, LV, LT, MT, PT, SK and UK) or the supervisory authority (FI, SE) – or to a board comprising the authorities whose actions have a material impact on financial stability (AT, BG, HR, DK, FR, DE, IT, LU, NL, PL, RO, SI and ES).

According to the ESRB assessment, the different approaches of Member States to the implementation of recommendations concerning institutional design (Recommendation B) and those concerning tasks, powers and instruments (Recommendation C) were particularly influenced by the current institutional supervisory framework and policy preferences.

Therefore, most EU Member States decided that the designated authority for CRD IV should be the central bank (17), the supervisory authority (5) or the government (1). In five EU Member States (Romania included), the designated authority for CRD IV was

the national macroprudential authority established as a Committee, pursuant to the ESRB Recommendation (Table 5.1).

Table 5.1. Classification of Member States based on the institutional arrangements regarding the implementation of Recommendation ESRB/2011/3 and the designated authority for CRD IV/CRR instruments[90]

CRD IV: Macroprudential authority \ Designated authority	Committee	Central bank	Supervisory authority	Government	No
Committee	FR, LU, PL, SL, RO*	ES, NL, HR, IT, BG	AT, DE	DK	13
Central bank		BE, CZ, CY, EE, GR, HU, IE, LT, MT, PT, SK, UK	LV		13
Supervisory authority			FI, SE		2
No	5	17	5	1	

* according to the draft law on the macroprudential oversight of the national financial system

So far, the legislative process is still ongoing in four Member States (Italy, Poland, Romania and Spain), while in all other EU countries the macroprudential authority is already functional.

5.1.2.3. Why does the NBR play a leading role in the NCMO?

Pursuant to Recommendation ESRB/2011/3 (Recommendation B.3), Member States are required to ensure that the central bank plays a leading role in macroprudential policy and that macroprudential policy does not undermine its independence, in accordance with Article 130 of the Treaty on the Functioning of the European Union.

At the same time, the Regulation on establishing a European Systemic Risk Board (Regulation (EU) No 1092/2010) stipulates that the national central banks should have a leading role in macroprudential oversight because of their expertise and their existing responsibilities in the area of financial stability, particularly when they have tasks in the field of macroprudential supervision.

At present, the National Bank of Romania is (i) monetary authority; (ii) supervisory authority for credit institutions, non-bank financial institutions, payment institutions, electronic money institutions; (iii) supervisory/oversight authority for payment and settlement systems; (iv) resolution authority for credit institutions; (v) supervisory authority for bank deposit guarantee schemes (once the legal framework is passed) and (vi) has tasks in the field of macroprudential supervision, within its scope of activity. All these functions are supportive of the NBR's role in safeguarding financial stability and, implicitly, the central bank's leading role in the NCMO activity.

At EU level, the central bank's leading role in macroprudential supervision is also proved by the fact that a large number of Member States decided to designate the

90 ESRB Recommendation on the macroprudential mandate of national authorities (ESRB/2011/3): Follow-up Report – Overall assessment, June 2014.

central bank as national macroprudential authority. Moreover, in many EU countries that decided to designate a committee as macroprudential authority, the central bank does not have tasks in the field of microprudential supervision.

5.1.3. Objectives, functions and tasks of macroprudential policy in Romania

According to the ESRB principles, the ultimate objective of macroprudential policy is to safeguard the financial system as a whole, also by strengthening the financial system resilience and containing the build-up of systemic risks. In Romania, the National Committee for Macroprudential Oversight (NCMO)[91] will ensure the coordination in the field of macroprudential supervision of the national financial system, by designing the macroprudential policy and the appropriate instruments for its enforcement. Until the NCMO becomes operational, the recommendations and advisory opinions are adopted by the National Committee for Financial Stability (NCFS), on the basis of a cooperation agreement between the National Bank of Romania (NBR), the Financial Supervisory Authority (FSA) and the Ministry of Public Finance (MPF). Developing the macroprudential policy strategy elements relative to the intermediate objectives and macroprudential instruments relies on the assessments made by competent authorities in the field of macroprudential supervision, namely the National Bank of Romania and the Financial Supervisory Authority.

The NBR is responsible for developing the macroprudential policy strategy within its scope of activity. So far, the NBR has adopted several macroprudential measures on loans to households and non-financial corporations (for further details, see the 2014 Financial Stability Report, Section 7.1. Macroprudential instruments implemented by the NBR in relation to debtors – a decade-long experience). In addition, the preparations made for achieving compliance with the ESRB recommendations (detailed in Section 5.4. Implementation by the NBR of ESRB macroprudential recommendations) helped the NBR improve its capacity to oversee and manage potentially systemic risks and vulnerabilities across the financial system in Romania.

5.2. The NBR's macroprudential objectives and the instruments of macroprudential policy for achieving the objectives

The intermediate macroprudential policy objectives in the NBR's field of competence, fully harmonised with the specific EU recommendations, are to mitigate and prevent excessive credit growth and leverage, mitigate and prevent excessive maturity mismatch and market illiquidity, limit direct and indirect exposure concentrations, limit moral hazard and strengthen the resilience of financial infrastructures.

91 In line with the draft law on the macroprudential oversight of the national financial system, subject to public debate as of 30 October 2014.

5.2.1. The objective of mitigating and preventing excessive credit growth and leverage

This intermediate objective is important in the context of Romania's experience with the fast dynamics of bank lending in 2005-2008. The objective aims to contain unsustainable leverage from the perspective of both borrowers and creditors.

A first set of instruments implemented by the NBR in order to fulfil this objective refers to the loan-to-value (LTV) and debt service-to-income (DSTI) ratios. These two instruments have an indirect contribution to mitigating excessive credit growth by reducing borrowers' potential indebtedness. The DSTI ensures borrowers' increased resilience to possibly unfavourable financial developments (and contributes implicitly to lowering the probability of default), while the LTV ensures the enhanced capacity of creditors to withstand adverse developments by reducing the loss-given-default (LGD). The NBR has an almost decade-long experience in implementing and calibrating these instruments. In Romania's case, the empirical analysis[92] showed a relatively satisfactory contribution of the DSTI and LTV to limiting excessive credit growth and improving the capacity of borrowers and creditors to withstand potentially negative financial developments.

Other instruments that can contribute to achieving this macroprudential policy objective are:

(i) sectoral capital requirements (including intra-financial system). This category also comprises the requirement for maintaining the risk weight for commercial mortgage-backed loans at 100 percent, irrespective of their conditions;

(ii) countercyclical capital buffer (CCB). The instrument aims to build up additional capital reserves during excessive credit growth periods and release them during periods of contraction, being designed particularly to enhance the banking sector's resilience to potential shocks. The NBR plans to activate this instrument by end-2015, in line with the ESRB recommendations (for further details, see Section 5.3. Capital buffers with a view to preserving financial stability);

(iii) macroprudential leverage ratio. This instrument complements the risk-weighted regulatory framework and is a simple and transparent backstop protecting against model risk and the mispricing of risks. The regulated level of this indicator will be established as of 2018, in compliance with EU regulations;

(iv) requirements for appropriate qualitative and quantitative levels of training for bank employees directly involved in lending.

5.2.2. The objective of mitigating and preventing excessive maturity mismatch and market illiquidity

The financial crisis highlighted the significant lack of appropriate instruments at international level which can be used for effective liquidity risk management. One of

92 Neagu, F., Tatarici, L., Mihai, I. – *Implementing loan-to-value and debt to income ratios: learning from country experiences*, International Monetary Fund, Monetary and Capital Markets Department project, 2015.

the primary functions of banks in an economy is to transform maturities, namely to raise deposits or other short-term resources (on the interbank market in particular) and use them to provide long-term funding. An excessive maturity mismatch between assets and liabilities or holding a small amount of liquid assets increases the risk of liquidity issues, which can translate into low market liquidity levels and higher financing risk.

In order to achieve this objective, the NBR can resort to the following instruments:

(i) macroprudential adjustment to liquidity ratio (i.e. liquidity coverage ratio) – credit institutions must have a large enough stock of liquid assets (required liquidity – LCR) to allow them to face the potential imbalances between liquidity inflows and outflows, in cases of severe crises, over a 30-day period. Transforming the LCR into a macroprudential instrument could become a time-varying add-on over the prudential minimum requirement, which should be activated in periods of abundant market liquidity and deactivated when imbalances are manifest;

(ii) macroprudential restrictions on funding sources (i.e. net stable funding ratio) – the stable funding requirement (NSFR) is a medium- and long-term structural indicator monitoring the potential maturity mismatches and has the role of encouraging credit institutions to use stable financing resources. Until the minimum required European standards are introduced, the provisions of Regulation No 25/2011 on credit institution liquidity are further applicable. Pursuant to this Regulation, banks must comply with the national minimum liquidity requirements, with different maturity ranges of 12 months at most. The macroprudential change in haircuts will require appropriate calibration based on CRR/CRD IV provisions.

Additionally, the NBR may also use the following instruments:

(i) macroprudential unweighted limit to less stable funding (i.e. loan-to-deposit ratio – LTD) – shows the manner in which banks rely on less stable financing sources, providing information on the potential vulnerabilities in the banking sector;

(ii) margin and haircut requirements included in the indicative list in Recommendation ESRB/2013/1 – refer to the level of collateralisation of secured financing and derivatives transactions. These instruments can be used as macroprudential instruments by applying some minimum or time-varying caps for transactions cleared through central counterparties, as well as for bilateral transactions. The NBR will further monitor financial market developments, also in order to determine the build-up of systemic risks in certain sectors or in relation to certain financial instruments.

5.2.3. The objective of limiting direct and indirect exposure concentrations

The concentration of exposures by loan (e.g. real estate collateralised loans or housing loans, foreign currency-denominated loans), borrower (e.g. sovereign debt exposures) or sector (e.g. the financial sector) may have a negative impact on financial stability and real economy.

An instrument underlying this objective is that referring to clearing through central counterparties (CCPs). It is part of the requirements set forth by Regulation EU No 648/2012 on OTC derivatives, central counterparties and trade repositories (EMIR), which is directly and entirely applicable in Romania. The NBR initiated the adjustment of the domestic legal framework in order to comply with the provisions of this regulation. Specifically, the NBR will supervise credit institutions' compliance with EMIR provisions, while the FSA will supervise the fulfilment of requirements applicable to the other financial and non-financial counterparties.

5.2.4. The objective of limiting moral hazard

The objective refers to strengthening the resilience of systemically important institutions and has the potential to mitigate the negative effects of an implicit government guarantee in cases when these entities are facing financial strains, on the one hand, and the moral hazard arising from the perceived importance of the institution for the system, on the other. Moreover, the objective also implies the adoption of some regulations on the orderly recovery or resolution of these institutions, given their destabilising potential for the financial system.

This objective can be achieved by implementing additional capital requirements for systemically important financial institutions. The NBR intends to implement the additional capital requirements for systemically important financial institutions, referred to in national regulations as the buffer relating to other systemically important institutions (O-SII buffer).

5.2.5. The objective of strengthening the resilience of financial infrastructures

The objective aims to address externalities within the financial system infrastructure and correct the moral hazard effects that could arise from the institutional set-up (legal system, credit rating agencies, deposit-guarantee schemes, market practices, etc.) and refers to the structural dimension of systemic risk, namely that concerning the distribution of risks across the financial system.

In order to improve the access to credit risk information, the NBR has recently extended the information available in the Central Credit Register (for further details, see Section 5.5. Developments of the Central Credit Register in order to obtain the information necessary for monitoring macroprudential objectives). In addition, the NBR is regularly conducting surveys on credit market conditions among credit institutions and non-financial corporations.

Other instruments the NBR can use to fulfil this objective are:

(i) margin and haircut requirements for clearing through central counterparties – in order to mitigate the contagion risk in case of a participant's default, central counterparties (CCPs) should apply strict participation conditions, collect appropriate initial margins and hold a guarantee fund and other liquid financial resources in order to cover potential losses. CCPs may include, subject to setting appropriate haircuts,

government securities, covered bonds, guarantees callable on first demand granted by a member of the ESCB, and commercial bank guarantees;

(ii) structural systemic risk buffer – aims primarily to strengthen the resilience of the banking system and its subsets to possible shocks stemming from changes in legislation or accounting standards, the contagion effects from the real economy, from excessive concentration or a large financial system relative to GDP amid financial innovation that increases complexity.

5.3. Capital buffers with a view to preserving financial stability

The CRD IV/CRR regulatory package makes available a set of macroprudential instruments that national competent authorities can resort to with a view to preventing the emergence of cyclical systemic risks or mitigating structural systemic risks, as follows: a) the capital conservation buffer; b) the countercyclical capital buffer; c) the buffer relating to other systemically important institutions (O-SII buffer); d) the systemic risk buffer. Regulating capital buffers through a European Directive and a directly applicable Regulation aimed to (i) ensure a level playing field across EU Member States, as an essential pre-requisite for the functioning of the internal market, (ii) prevent regulatory arbitrage, (iii) ensure maximum harmonisation, and (iv) enhance transparency and predictability in the macroprudential field.

5.3.1. The capital conservation buffer

The capital conservation buffer is aimed at increasing credit institutions' resilience, namely their capacity to absorb potential losses arising from the banking activity. The buffer is comprised of Common Equity Tier 1 capital equal to 2.5 percent of the total risk exposure amount, and its implementation can be tailored to country-specific situations, as follows: a) accelerated build-up, in line with a schedule set by the national competent authorities; b) phased in between 1 January 2016 and 1 January 2019 in equal increments of 0.625 percent per annum. To date, the NBR has not opted for the accelerated build-up of the capital conservation buffer.

5.3.2. The countercyclical capital buffer

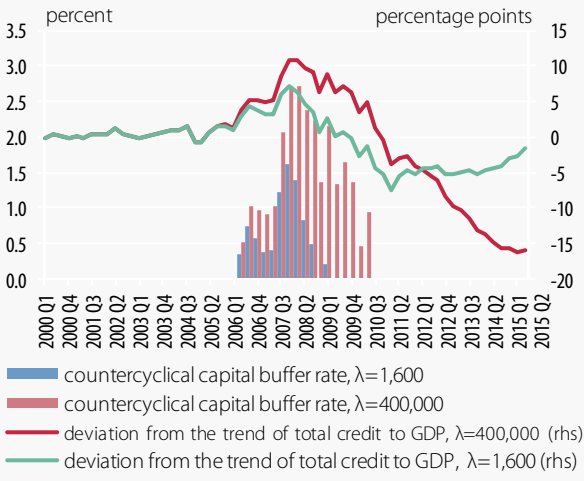
The countercyclical capital buffer (CCB) is one of the macroprudential instruments introduced by the CRD IV/CRR legislative package[93] and recommended by the European Systemic Risk Board (ESRB) for reducing and preventing excessive credit growth and leverage. The primary objective of the CCB tool is to improve banking sector resilience to possible shocks. The decision to activate the buffer is based on the evidence provided by the deviation from its long-term trend of the credit-to-GDP ratio (an indicator recommended by the ESRB[94]), which can be complemented with the analysis of other indicators capturing the risk of unsound credit and leverage

93 The countercyclical capital buffer is defined under articles 135-140 of CRD IV.

94 ESRB Recommendation on guidance for setting countercyclical buffer rates (ESRB/2014/1).

developments. The CCB should be released either as a result of the risk materialising or due to its significant mitigation. The effectiveness of the indicator is also strengthened by the principle of jurisdictional reciprocity of the measures to implement the CCB across EU Member States. The European countries that have implemented this instrument at a CCB rate of over 0 percent are Sweden (1.5 percent) and Norway (1.5 percent).

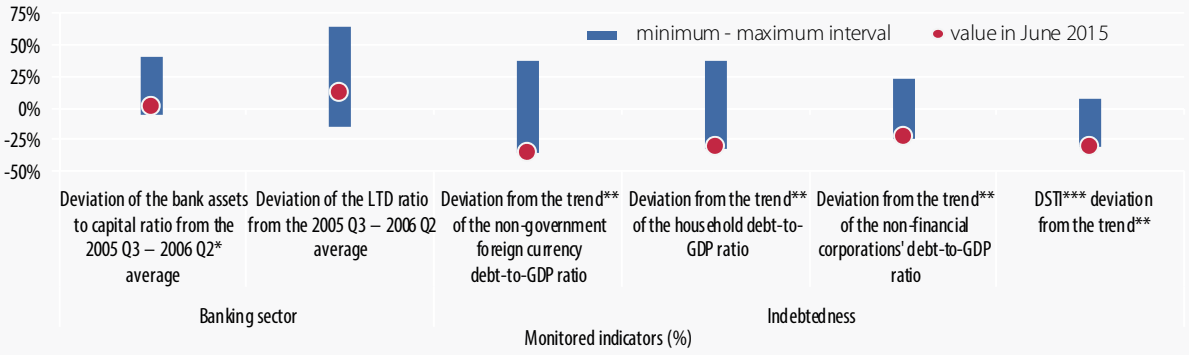
Chart 5.1. Analysis of the countercyclical capital buffer in Romania (2000 Q1 – 2015 Q2)



Source: NBR, NIS, NBR calculations

The findings for Romania[95] of the analysis that would include the ESRB-recommended indicator alone point to upside risks starting June 2006. This would have meant applying the CCB as of June 2007 at the latest, along with the need to keep it in place for approximately three years since implementation[96] (Chart 5.1). The breakdown shows that the leverage of both households and non-financial corporations would have hinted at excessive credit growth. Given the short data history (March 2000 – March 2015) and the structural changes seen at the end of the 1990s, an assessment relying strictly on the ESRB-recommended indicator is debatable in the case of Romania. The NBR has developed and permanently enhanced a set of indicators monitoring risks to financial stability posed by lending to companies and households.

Chart 5.2. Additional indicators monitored by the NBR



Note: Findings for the period March 2005 – June 2015.

* The average for the period between September 2005 and June 2006 (considered as signal interval) has been used as the reference value for the bank assets to capital ratio and the LTD ratio. Developments during the said period complement the information provided by the standard indicator for calculating the ESRB-recommended indicator and the decisions related to the implementation of the CCB.

** The deviation from the trend was computed using a one-sided recursive HP filter with a lambda smoothing parameter of 400,000.

*** The DSTI is the ratio of debt service to net income and is calculated for household loans.

Source: NBR, NIS, MPF

95 This is an update of the findings in the 2013 Financial Stability Report, Section 7.1.1 Capital requirements laid down in CRD IV/CRR, with the following amendments: (i) the definition of indebtedness was expanded as follows: credit is defined from the perspective of borrowers, non-financial corporations and households, and encompasses bank credit (including sold assets), credit from domestic NBFIs and credit from non-resident financial institutions; (ii) a one-sided recursive Hodrick-Prescott filter was used, and (iii) the sensitivity of results to the smoothing parameter (lambda) was tested.

96 Using a debt cycle smoothing parameter of 1,600 (corresponding to a shorter cycle) would have pointed to a shorter period (around two years) of keeping the buffer in place.

At this point in time, the still relatively subdued developments in lending (for further details, see Section 1.3. Non-financial private sector indebtedness) do not highlight any urgent pressure from private sector leverage that might warrant the activation of the buffer. The breakdown by borrower does not reveal any pressure from household or corporate indebtedness, with the debt-to-GDP ratio running below the long-term level (Chart 5.2). Other indicators under scrutiny stand at the lowest readings for the analysed period (except for the DSTI ratio). However, the significant pick-up in lending visible on certain segments calls for increased attention and possibly early macroprudential measures to avoid excessive credit growth.

The CCB tool is defined for risk management based on the monitoring of credit market developments at aggregate level. Risk assessment is also warranted on certain segments of lending so as to identify any disproportionate build-up of risks (e.g. a concentration of foreign currency lending). In this case, the instrument needs to be complemented with other macroprudential tools, such as the LTV or the DSTI ratios, or sectoral limits, as set forth in ESRB recommendations as well.

5.3.3. The capital buffer relating to other systemically important institutions

The NBR has implemented at national level the methodology for identifying systemically important credit institutions in line with the EBA Guidelines. The criteria for assessing domestic systemically important institutions are as follows:

(a) in the first step, a score is calculated based on the mandatory indicators laid down in the EBA Guidelines on the assessment of O-SIIs, at the highest consolidation level, for the entities under the national competent authority's jurisdiction, including subsidiaries in other Member States and third countries. This mandatory stage helps achieve an appropriate degree of convergence in terms of identifying O-SIIs across Member States and making the assessment of O-SIIs comparable, transparent and comprehensible;

(b) in the second step, the national competent authority uses additional indicators selected from the list of optional indicators in the EBA Guidelines. The additional indicators should reflect the specificities of the national banking sector, with a view to identifying all systemic institutions, including smaller ones, which have not been automatically designated as systemic during the first stage. The need for this step arises from the differences across Member States in terms of the size and features of national financial systems.

The two steps strike a balance between convergence, comparability and flexibility in identifying systemic institutions. The criteria and mandatory indicators used in the first step of assessing the systemic importance of credit institutions are listed in Table 5.2.

Table 5.2. Criteria and mandatory indicators laid down in the EBA Guidelines on the assessment of O-SIIs

Criterion	Mandatory indicators	Weight (%)
Size	Total assets	25.00
Importance (including substitutability/financial system infrastructure)	Value of domestic payment transactions	8.33
	Private sector deposits from depositors in the EU	8.33
	Private sector loans to recipients in the EU	8.33
Complexity/cross-border activity	Value of OTC derivatives (notional)	8.33
	Cross-jurisdictional liabilities	8.33
	Cross-jurisdictional claims	8.33
Interconnectedness	Interbank liabilities	8.33
	Interbank assets	8.33
	Debt securities outstanding	8.33

All four criteria have equal weights of 25 percent each in determining the final score of each credit institution, while the indicators are weighted equally within each criterion. The framework of mandatory indicators generates a ranking of institutions in terms of degree of systemic importance, with institutions above the 350 basis points threshold being automatically designated as O-SIIs.

As part of the second assessment step, the NBR procedure provides for the use of a set of additional indicators, in the form of an analysis of quantitative and qualitative factors specific to the Romanian banking system (Table 5.3). The additional criteria selected by the NBR capture in detail the nexus between banks and the real economy, as well as the links among financial entities, thereby contributing to a more in-depth analysis of credit institutions' systemic importance.

According to the EBA provisions, national authorities should publish the scores of relevant entities designated as O-SIIs by 1 December of each year, as well as the additional capital requirements applicable thereto starting 1 January 2016. The buffer relating to other systemically important institutions should consist of Common Equity Tier 1 capital, calibrated at up to 2 percent of the total risk exposure amount. The NBR shall conduct periodic assessments of credit institutions in terms of systemic importance and shall communicate the findings both by notifying the relevant entities, the Commission, the ESRB and the EBA, and by disclosing the updated list of systemically important banks duly identified.

Table 5.3. Additional indicators included in the NBR Procedure for assessing systemically important institutions, based on the room for flexibility left by the EBA Guidelines

Criterion	Indicators
a) The credit institution's contribution to financing the real economy, calculated based on the volume of corporate loans and the degree of substitution of lending to non-financial corporations	The share of the credit institution's corporate loans in total credit extended to non-financial corporations by the banking sector, overall and by major group of economic sectors
b) The credit institution's contribution to financial intermediation, calculated via the volume of corporate and household deposits	The share of corporate and household deposits with the respective credit institution in total bank deposits of non-financial corporations and households
c) The credit institution's activity on the interbank market and assessing the contagion effect by incorporating the feedback loops generated by the real sector	1) The number of cases in which the capital adequacy ratio falls below the required level following a bank's default (as a result of direct exposures via the interbank market) 2) Market share (in terms of assets) of credit institutions whose capital adequacy ratio would fall below 8 percent (as a result of direct exposures via the interbank market and the feedback loops generated by the real sector) 3) Credit institutions' interconnectedness
d) Determining systemically important institutions in the ReGIS payment system	1) The volume and share of each bank's transactions within the ReGIS payment system in total transactions 2) Connectivity index (calculated based on the number of connections and the volume of transactions for each bank) 3) The total volume of unsettled payment orders and the number of banks in default by contagion following the running of the stress test scenario
e) The credit institution's activity on the government securities market	1) The volume and share of each bank's transactions on the (primary and secondary) government securities market 2) The volume and share of the stock of government securities held by credit institutions
f) Vulnerability to contagion in the parent-subsidiary relationship via the common lender channel (country of origin of the capital)	1) The importance of the bank in the transmission of a shock within the conglomerate by country of origin of the capital 2) The vulnerability of the other banks in the conglomerate to the shock sent by the bank in distress 3) The importance of the common lender (country of origin of the capital) that the bank in distress is also part of

5.3.4. The systemic risk buffer

The systemic risk buffer aims to prevent and mitigate long-term structural systemic risk or macroprudential risk with the potential of serious negative consequences to the financial system and the real economy. The buffer must be of at least 1 percent Common Equity Tier 1 capital based on the relevant exposures. It may apply to exposures located in Romania, in third countries, as well as to exposures located in other Member States. The buffer may be set in gradual or accelerated steps of adjustment of

0.5 percentage points, to range between 0 percent and 5 percent of total exposures (or above 5 percent in justified cases). The systemic risk buffer requirement shall be posted on the NBR website and must be reviewed at least every second year.

To date, the systemic risk buffer has not been activated, in view of the NBR's regulatory measure regarding the further use of national prudential filters[97] introduced in 2012 (also as of 2012, banks in Romania have been applying the IFRS standards as an accounting basis) during the implementation of the CRD IV/CRR legislative package (2014-2018).

5.4. Implementation by the NBR of ESRB macroprudential recommendations

The European Systemic Risk Board (ESRB) issued seven recommendations[98] aimed at putting in place a macroprudential policy framework and limiting certain sectoral vulnerabilities identified within the European financial system. In all ESRB evaluations, Romania is "fully compliant" or "largely compliant" with the issued recommendations.

1) ESRB Recommendation on the macroprudential mandate of national authorities (ESRB/2011/3)

The recommendation shows that a well-defined framework is a necessary condition for effective macroprudential policy, given its contribution to safeguarding the stability of the financial system as a whole, including by strengthening the resilience of the financial system and decreasing the build-up of systemic risks (Recommendation A). Member States should designate in the national legislation an authority, institution or board entrusted with the conduct of macroprudential policy, establish the mechanism for cooperation among the authorities in case of setting up a board, as well as ensure that the central bank plays a leading role in the macroprudential policy and that macroprudential policy does not undermine its independence. The macroprudential authority should cooperate and exchange information also cross-border, in particular with the ESRB (Recommendation B). Moreover, the macroprudential authority has the role of identifying, monitoring and assessing risks to financial stability and of implementing policies to mitigate those risks. It has the power to require and obtain all national data and information relevant for the exercise of its tasks (Recommendation C). With a view to promoting transparency, macroprudential policy decisions and their motivations should be made public in a timely manner. Finally, the recommendation includes provisions on accountability to the national parliament (Recommendation D) and operational independence (Recommendation E).

Romania is currently in the process of designating the macroprudential authority, in line with the ESRB Recommendation, as there is a draft law on the macroprudential oversight of the national financial system. It provides for the establishment of the National Committee for Macroprudential Oversight as an inter-institutional

97 The most important national prudential filter relates to the positive difference between the provisions calculated in line with prudential regulations and the impairment adjustments recognised based on the IFRS accounting standards.

98 One of them concerns solely the European Commission (ESRB Recommendation on money market funds), so it will not be analysed in this chapter.

cooperation forum and non-legal entity, which aims to ensure coordination in the field of macroprudential supervision of the domestic financial system by defining the macroprudential policy and determining the adequate tools for its implementation. Consequently, Romania was found to be "largely compliant" with Recommendations A-E, as well as in the overall assessment of the Follow-up Report on the ESRB Recommendation on the macroprudential mandate of national authorities.

Table 5.4. Level of implementation of the ESRB Recommendation on the macroprudential mandate of national authorities

	Macroprudential mandate of national authorities					
	Recommendations					Overall*
	A	B	C	D	E	
Romania	LC	LC	LC	LC	LC	LC
Austria	FC	LC	LC	FC	LC	LC
Belgium	LC	PC	LC	LC	FC	LC
Bulgaria	LC	LC	LC	PC	PC	LC
Croatia	FC	FC	FC	FC	FC	FC
Cyprus	LC	PC	LC	LC	FC	LC
Czech Republic	LC	FC	FC	FC	FC	FC
Denmark	LC	LC	LC	LC	FC	LC
Estonia	LC	PC	LC	LC	FC	LC
Finland	MN	MN	MN	LC	FC	PC
France	LC	LC	LC	FC	LC	LC
Germany	LC	FC	FC	FC	LC	FC
Greece	FC	FC	LC	PC	FC	LC
Hungary	FC	FC	FC	LC	FC	FC
Ireland	LC	LC	LC	PC	LC	LC
Italy	PC	PC	PC	PC	PC	PC
Latvia	LC	LC	LC	LC	FC	LC
Lithuania	LC	LC	LC	LC	FC	LC
Luxembourg	LC	PC	LC	LC	PC	LC
Malta	FC	FC	FC	PC	FC	LC
Netherlands	PC	PC	LC	LC	LC	LC
Norway	LC	PC	LC	MN	PC	PC
Poland	MN	PC	PC	MN	PC	PC
Portugal	FC	FC	FC	LC	FC	LC
Slovakia	LC	LC	LC	FC	FC	FC
Slovenia	FC	FC	FC	FC	FC	FC
Spain	PC	MN	PC	PC	FC	PC
Sweden	LC	LC	LC	FC	FC	LC
United Kingdom	FC	LC	FC	FC	FC	FC

* Grades are assigned for the overall compliance with the ESRB Recommendation, as well as for complying with each of Recommendations A-E: FC = fully compliant, LC = largely compliant, PC = partially compliant, SE = inaction sufficiently explained, MN = materially non-compliant.

Source: ESRB

2) ESRB Recommendation on intermediate objectives and instruments of macroprudential policy (ESRB/2013/1)

The ultimate objective of macroprudential policy, i.e. safeguarding financial stability, can be attained by identifying intermediate objectives. The ESRB Recommendation focuses on the definition of objectives, namely: to mitigate and prevent excessive credit growth and leverage; to mitigate and prevent excessive maturity mismatch and market illiquidity; to limit direct and indirect exposure concentrations; to limit moral hazard and strengthen the resilience of financial infrastructures (Recommendation A). The selection of macroprudential instruments and the monitoring of their adequacy, with a view to attaining the ultimate objective, should be carried out on an ongoing basis and, where the available instruments are found to be insufficient, additional instruments should be determined (Recommendation B). Along with the aforementioned principles, a policy strategy should be defined, establishing a sound framework to pursue the ultimate and intermediate objectives of macroprudential policy (Recommendation C). Macroprudential authorities are recommended to periodically assess the intermediate objectives and macroprudential instruments and report to the ESRB any change in the set of intermediate objectives and macroprudential instruments that are under their direct control (Recommendation D). Finally, the Commission is recommended, in the framework of forthcoming revisions of Union legislation, to take account of the need to establish a coherent set of macroprudential instruments affecting the financial system, including financial intermediaries, markets, products and market infrastructures (Recommendation E). The NBR policy regarding the intermediate objectives and the instruments of macroprudential policy is presented in Section 5.2. The NBR's macroprudential objectives and the instruments of macroprudential policy for achieving the objectives.

3) ESRB Recommendation on guidance for setting countercyclical buffer rates (ESRB/2014/1)

The Recommendation is based on the fact that the pro-cyclical amplification of financial shocks has been one of the most destabilising elements of the recent financial crisis. The global crisis has highlighted the importance of building up additional capital in the banking sector which, in periods of system-wide stress, will help absorb unexpected losses, while continuing to provide credit to the real economy. Consequently, the ESRB has formulated several principles for the measurement and calculation of appropriate countercyclical capital buffer rates. For a description of these principles and the manner in which this instrument would have functioned in Romania in the previous period, see Section 5.3. Capital buffers with a view to preserving financial stability.

4) ESRB Recommendation on lending in foreign currencies (ESRB/2011/1)

Addressing asymmetric information between borrowers and lenders improves borrowers' risk awareness and hence fosters responsible lending. Therefore, national supervisory authorities are recommended to require financial institutions to provide borrowers with adequate information regarding the risks involved in foreign currency lending and to encourage financial institutions to offer customers domestic currency loans as well as financial instruments to hedge against foreign exchange risk

(Recommendation A). Furthermore, national supervisory authorities are recommended to monitor levels of foreign currency lending and of private non-financial sector currency mismatches in particular and adopt the necessary measures to limit foreign currency lending. In the context of determining borrowers' creditworthiness, financial institutions should consider setting more stringent underwriting standards, such as debt service-to-income and loan-to-value ratios (Recommendation B).

Table 5.5. Level of implementation of the ESRB Recommendation on lending in foreign currencies

	Lending in foreign currencies								
	Recommendations								Overall
	A	B	C	D	E.1	E.2	F	G	
Romania	LC	FC	FC	FC	FC		FC	FC	FC
Austria	FC	FC	FC	FC	FC		FC	FC	FC
Belgium	LC	LC	SE	SE	LC		FC	IE	LC
Bulgaria	PC	PC	SE	PC	LC		FC	SE	PC
Croatia	FC	LC	FC	FC	FC		FC	SE	FC
Cyprus	SE	LC	FC	SE	LC		FC	SE	LC
Czech Republic	SE	SE	FC	SE	SE		FC	SE	FC
Denmark	SE	SE	SE	FC	FC		FC	IE	LC
Estonia	FC	SE	FC	LC	FC		SE	SE	FC
Finland	SE	SE	SE	SE	SE		SE	SE	LC
France	IE	SE	FC	SE	SE		FC	SE	LC
Germany	LC	SE	FC	FC	SE		FC	SE	FC
Greece	FC	SE	SE	SE	SE		SE	FC	FC
Hungary	FC	FC	FC	FC	PC		FC	SE	LC
Ireland	SE	LC	FC	SE	SE		LC	SE	LC
Italy	LC	SE	SE	SE	SE		SE	FC	LC
Latvia	SE	LC	FC	LC	LC		FC	SE	LC
Lithuania	LC	LC	FC	FC	PC		LC	SE	LC
Luxembourg	FC	FC	FC	FC	FC		FC	SE	FC
Malta	FC	FC	FC	FC	FC		FC	FC	FC
Netherlands	SE	SE	SE	SE	SE		SE	SE	LC
Poland	FC	FC	FC	FC	FC		FC	SE	FC
Portugal	FC	FC	SE	SE	SE		FC	SE	FC
Slovakia	FC	SE	SE	SE	SE		SE	SE	FC
Slovenia	LC	LC	SE	SE	SE		LC	SE	LC
Spain	LC	SE	SE	FC	FC		FC	SE	FC
Sweden	SE	LC	SE	FC	SE		SE	SE	LC
United Kingdom	SE	SE	SE	LC	SE		LC	LC	LC

Source: ESRB

Supervisory authorities are recommended to monitor whether foreign currency lending is inducing excessive credit growth as a whole and, if so, to adopt new or more stringent rules (Recommendation C). The ESRB recommends national supervisory authorities to address guidelines to financial institutions so that they

better incorporate foreign currency lending risks in their internal risk management systems (Recommendation D). Supervisory authorities should require financial institutions to hold adequate capital to cover risks associated with foreign currency lending, particularly the risks stemming from the non-linear relation between credit and market risks (Recommendation E). National supervisory authorities are recommended to monitor funding and liquidity risks taken by financial institutions in connection with foreign currency lending, together with their overall liquidity positions (Recommendation F). Finally, national supervisory authorities of the home Member States of relevant financial institutions should impose measures addressing foreign currency lending at least as stringent as the measures in force in the host Member State (Recommendation G).

The Follow-up Report on the ESRB Recommendation on lending in foreign currencies shows that Romania fares well in this respect, with an overall assessment of "fully compliant". Looking at Recommendations A-G, the only exception is A, with a "largely compliant" grade, because it has been considered that the interest rate shock stipulated in NBR Regulation No. 17/2012 on certain lending conditions is somehow underrated in relation to historical fluctuations. The NBR is contemplating a reassessment of shocks that are pooled for determining the indebtedness ceiling in the case of borrowers applying for consumer loans, as laid down in the said Regulation, with a view to recalibrating macroprudential instruments.

5) ESRB Recommendation on funding of credit institutions (ESRB/2012/2)

The scope of the Recommendation includes the changes in credit institutions' funding structures and asset portfolios, affected by the strong links between credit institutions and sovereigns as well as by the uncertainties over asset quality and the sustainability of current business models. In order to restore confidence in the European banking sector, the ESRB recommends that national supervisory authorities intensify their assessments of the funding and liquidity risks incurred by credit institutions and put in place risk management policies to define their approach to asset encumbrance. With a view to complying with the Recommendation on funding of credit institutions, the Romanian authorities have drafted the bill on mortgage bond issues, so as to ensure enhanced investor protection and mitigate the risks generated by the issuance of mortgage bonds. In addition, several provisions of the Recommendation have been included in NBR Regulation No. 5/2014 supplementing NBR Regulation No. 5/2013 on prudential requirements for credit institutions.

6) ESRB Recommendation on US dollar denominated funding of credit institutions (ESRB/2011/2)

There is a material maturity mismatch in the US dollar assets and liabilities of EU credit institutions, with short-term wholesale funding being used to finance longer-term activities and assets. Therefore, national supervisory authorities are recommended to closely monitor US dollar funding and liquidity risks. Given the low share of USD-denominated balance sheet items in the domestic banking sector (below 3 percent of liabilities and below 2 percent of assets respectively), the US dollar is not a material currency for credit institutions in Romania. Following the ESRB

Recommendation, no changes have been made in terms of monitoring US dollar funding and liquidity, as the reporting and supervisory framework in place at the time of the assessment and the subsequent implementation of the CRD IV/CRR package have been considered adequate for this purpose. Therefore, Romania was assigned the "sufficiently explained" grade (the equivalent of "largely compliant"), given that the low volume of US dollar assets and liabilities is not a source of systemic risk for the domestic banking sector, and hence no additional action is needed to manage and mitigate this risk.

5.5. Developments of the Central Credit Register in order to obtain the information necessary for monitoring macroprudential objectives

The analysis of financial stability risks and the adoption of macroprudential policy decisions imply the use of various data concerning both creditors and borrowers. Many such data were not available to the decision-making bodies. As a result, at international level, attention was particularly attached in recent years to establishing and developing credit registers that focus on collecting information concerning mainly borrowers' debt service payment capacity. The National Bank of Romania has an over decade-long experience in using a central credit register, yet the international macroprudential developments required additional improvements for this instrument.

In order to achieve the above-mentioned objective, two significant directions can be identified in the CCR activity: (i) enhancing the scope of the reporting institutions that report credit risk information; apart from credit institutions, the scope now includes non-bank financial institutions listed in the Special Register, payment institutions with significant lending activity and electronic money institutions with significant lending activity; (ii) collecting and managing new data necessary for financial stability reviews, for the conduct of stress test scenarios, for macroprudential oversight at the NBR level and for the implementation of advanced techniques to determine credit risk for reporting institutions.

The information already included in the CCR database refers to: (i) the identification data of a borrower, natural entity or non-bank legal entity, (ii) loans and/or commitments whose cumulative level exceeds the reporting threshold (lei 20,000) for each borrower, (iii) the groups of natural and/or legal entities representing a connected group of clients/a single borrower and (iv) card frauds committed by holders.

The identification data of a borrower refer to the name, identification code, special situation, borrower's risk status, economic activity, ownership, institutional sector, country, county, legal entity branch, mergers and splits.

Loan and commitment data refer to the granted amounts, drawn and undrawn amounts, overdue amounts, currency, granting date, maturity date, type of loan, credit

card/debit card with an overdraft facility/leasing, granting period, loan/commitment taken on own account/together with other borrowers, the status of loans in the portfolio of the reporting entity (loans that were previously sold), the amounts of loans previously sold, the amounts of unrecovered loans recorded as losses, the type and total value of collateral, the rating grade, the probability of default, the debt service, the loan identifier.

Due to the need of having an EU-wide definition of non-performing loans, the European Banking Authority redefined the non-performing exposure and the unlikeliness to pay in Regulation (EU) No 575/2013 (Capital Requirements Regulation), so that these two indicators can be determined and subsequently reported uniformly to the ECB by central banks in EU Member States. Moreover, the establishment of the National Committee for Macroprudential Oversight (NCMO) in line with EU requirements calls for increasingly complex and thorough information adjusted to Basel III requirements for a documented rationale behind the decisions on safeguarding financial stability.

In this context, in early 2014, the CCR took significant steps to develop, expand and increase the database complexity and diversity by adding new credit indicators, such as the non-performing exposure and the unlikeliness to pay, default, impaired loans, debt service – the granularity of the past-due class of more than 90 days, monthly instalment (total, principal, interest), the annualised interest rate on the loan, the annual percentage rate of charge (APR), real estate collateral and its value, the loan-to-value ratio (LTV), the legal organisation and leverage of the borrower, off-balance-sheet debts (principal, related claims and amortisation, related claims accumulated after the removal from the balance sheet), forbearance, the value of risk-weighted assets, the conversion factor associated with off-balance-sheet items, the exposure to credit risk, the individual adjustments for impairment, the type of adjustments for impairment, the distinct recognition of credit lines within exposures, and the reason for the CCR database inquiry.

In addition, the NBR participates in the ECB project to collect granular credit data (Analytical Credit Dataset – AnaCredit). Firstly, the project aims to harmonise the definitions and concepts used by central banks' credit registers to identify a common set of attributes specific to the credit registers that meet the ECB's analysis requirements. Secondly, credit registers will collect new information necessary for the ECB's own analyses. The ECB will issue a Regulation (currently a draft) representing the legal grounds for the national banks to report the required information. The Regulation will comprise provisions on reporting requirements, reporting entities, database access, information use, data protection, etc. Some information on borrowers and loans/commitments as well as on creditors, deposits and financial derivatives are not in the CCR database, which will imply additional collection efforts.

The additional borrower data are the size of the company and the date of assessing this indicator, the company's address, the initiation date of special legal proceedings, the annual turnover, the number of employees. The credit data refer particularly to minimum and maximum interest rates, the interest rate margin, the period when only interest is paid, the accounting standard applicable to CCR reporting entities, loan

securitisation, the provisions calculated for the off-balance-sheet exposure, the loan-to-income ratio (for legal entities), including the date of assessment, the collateral issuer, the location of the real estate collateral, the date of collateral valuation, etc.

5.6. EU regulations with implications on financial stability

5.6.1. Banking Union and Capital Markets Union

The Banking Union and Capital Markets Union are the most recent and important European projects in the field of financial market integration, their establishment being part of a larger plan to consolidate and take a more in-depth approach to the Economic and Monetary Union. The Capital Markets Union (CMU) will be different from the Banking Union, the latter representing a platform for stability which will support the CMU development in all EU Member States, while capital market integration will, in its turn, contribute to consolidating the resilience of the Economic and Monetary Union.

5.6.1.1. Banking Union

In response to the economic and financial crisis, a series of financial reforms are implemented at EU level, aimed at strengthening financial system resilience to future shocks. The reforms are included in a single set of regulations (single rulebook) and refer to: (i) stricter prudential requirements for credit institutions[99]; (ii) enhanced protection of depositors[100], and (iii) a single framework for the resolution of failing banks[101].

In view of the financial crisis evolving and transforming into a sovereign debt crisis in the euro area, the need for even a better integration of the single market and the European banking system became apparent. Specifically, the European institutions agreed to create the Banking Union, based on a single set of regulations.

The Banking Union rests on three major pillars: (i) the Single Supervisory Mechanism; (ii) the Single Resolution Mechanism, and (iii) a Single Deposit Guarantee Scheme. The objectives of the Banking Union are to ensure a sound banking sector at EU level, to break the negative feedback loop between banks and sovereigns, to reduce the fragmentation of the single market and to consolidate the financial stability of the euro area and the EU as a whole. The Banking Union encompasses euro area countries, as well as non-euro area EU countries that volunteer to participate in the project.

The Single Supervisory Mechanism is a new system of banking supervision for Europe which implies the transfer from national to European level of the main supervisory

99 Directive 2013/36/EU of the European Parliament and of the Council on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms.

100 Directive 2014/49/EU of the European Parliament and of the Council on deposit guarantee schemes.

101 Directive 2014/59/EU of the European Parliament and of the Council establishing a framework for the recovery and resolution of credit institutions and investment firms.

tasks and which comprises the ECB and the national supervisory authorities of the participating countries. Starting with November 2014, the ECB directly supervises 123 systemically important banks, which hold around 82 percent of banking assets in the euro area, while all other credit institutions are further supervised by national competent authorities, but in close cooperation with the ECB.

The Single Resolution Mechanism's objective is to ensure an orderly resolution of failing banks with minimal costs for taxpayers and to the real economy. The mechanism has been partly implemented since the beginning of 2015 and applies to banks in all euro area countries and in those non-euro EU Member States that choose to join the Banking Union. The components of the Single Resolution Mechanism are the Single Resolution Board and the Single Resolution Fund. The Single Resolution Board is the resolution authority at EU level which manages the Single Resolution Fund. The Single Resolution Fund has been operational since the beginning of 2015 and is financed by the banking sector via *ex ante* contributions, consisting of national compartments that will gradually be merged over an 8-year period at the end of which the fund resources should reach 1 percent of the guaranteed deposits of all credit institutions in the Banking Union Member States.

The Single Deposit Guarantee Scheme is the third pillar of the Banking Union for which no project has been made yet, but which ranks among the priorities in the period ahead. A Single Deposit Guarantee Scheme will have an increased resilience to future systemic crises as compared with nationally established schemes and will be less dependent on sovereigns, as the risks will be more dispersed and the contributions will be collected from more institutions.

5.6.1.2. Capital Markets Union

The EU capital markets are underdeveloped compared with other jurisdictions, feature a high degree of fragmentation and are generally organised based on national rules. The Capital Markets Union (CMU) is a plan that aims to create a single capital market for all 28 Member States by removing barriers to cross-border investment, diversifying funding sources for the economy and lowering the costs of access to capital markets. The CMU project contributes to the sustainable increase in long-term investment, aiming to improve the access to financing for all companies and infrastructure projects in Europe, and particularly for SMEs. At the current juncture, the European business environment is largely financed via the banking system, while capital markets are an underutilised alternative. Consolidating this market segment, as a funding source complementary to bank financing, may foster the allocation of additional investment to large companies and SMEs, fuelling at the same time the inflows of external funds in the EU.

The establishment of the Capital Markets Union will contribute to consolidating the resilience of the Economic and Monetary Union, while the harmonisation of national legislation, as well as the removal of barriers limiting the access to financing will ensure high transparency and, implicitly, a higher level of investor protection. Diversifying the available sources of funding will mitigate the concentration risk, i.e. the excessive reliance of some economic sectors on classical financing sources,

which will have positive effects on the development of companies, SMEs in particular. Considering the significant contribution of non-financial corporations to economic growth, the recommended measures can help consolidate financial stability across the EU, by defining harmonised development frameworks (the Banking Union, the Capital Markets Union) for all financial market segments.

The Romanian authorities consider that, prior to establishing the basic CMU elements, it is necessary to make thorough analyses that take account of factors such as: (i) the different development stages of capital markets in each Member State; (ii) the diversity and complexity of financial products and entities on the capital market, and (iii) the heterogeneous structure of capital market segments. Additionally, the action plan on building the CMU should highlight the expected impact on less liquid markets with a low level of capitalisation, given the possibility of capital flight to developed markets in the absence of a complete harmonisation of the regulatory framework at EU level.

5.6.2. The recovery and resolution framework for credit institutions

Directive 2014/59/EU establishing a framework for the recovery and resolution of credit institutions and investment firms (BRRD) institutes a single EU framework for the resolution of failing credit institutions and large investment firms, as well as cross-border cooperation arrangements for the resolution of financial holding companies. The BRRD provides the resolution authorities with a set of instruments for intervening in all stages of a banking crisis, namely prevention, early intervention and resolution measures. Credit institutions should draw up recovery plans in case of financial distress, while resolution authorities may review such plans so as banks can prevent insolvency. When insolvency occurs, resolution authorities have a set of instruments and measures for the orderly restructuring of those credit institutions, which ensure that shareholders and creditors bear losses, in line with a previously established resolution plan, thereby ensuring the continuity of critical functions without recourse to public funds.

Part of the Directive provisions became effective starting with 2015, while the bail-in instrument will be implemented as of 2016. In Romania, the draft law transposing the BRRD into the national legislation is currently under approval.

For resolution instruments to be implemented and in order to avoid contagion risk, the BRRD requires credit institutions to meet at all times a minimum requirement for own funds and eligible liabilities (MREL). The resolution authority establishes the MREL amount for each credit institution based on six criteria set forth in the BRRD. In July 2015, the European Banking Authority issued the Final Draft Regulatory Technical Standards[102] providing a more detailed description of such criteria and ensuring similar MREL levels for credit institutions with similar risk profiles, systemic importance and characteristics irrespective of their jurisdictions.

[102] EBA Final Draft Regulatory Technical Standards on criteria for determining the minimum requirement for own funds and eligible liabilities under Directive 2014/59/EU (EBA/RTS/2015/05).

According to the first criterion, the MREL consists of (i) a loss absorption amount, calculated as total own funds, including capital buffers and any other additional capital requirements imposed by the supervisory authority and (ii) an amount of recapitalisation which would be required following the resolution strategy chosen by the resolution authority. The latter amount will not be required from credit institutions that will undergo winding-up proceedings without resolution instruments being applied to them. Based on the second criterion, the MREL requirement should take account of the credit institution eligibility to enter resolution, which is determined based on its systemic importance. Moreover, the resolution authority should consider the possibility that certain classes of liabilities are excluded from contributing to loss absorption or recapitalisation (the third criterion), as well as the extent to which the Deposit Guarantee Scheme could contribute to the financing of resolution (the fourth criterion). The final two criteria refer to the size, business model, funding model and risk profile of the credit institution and to the potential adverse effects on financial stability of the failure of the institution respectively.

5.7. The new EU-wide harmonised definition of non-performing exposures

In response to the differing national practices for bank asset quality review, which have distorted the findings of EU-wide analyses on the level of non-performing loans reported by various countries, the European Banking Authority has issued the Implementing Technical Standards on supervisory reporting on forbearance and non-performing exposures. According to this document, the information on forbearance and non-performing exposures is included into the FINREP – the new consolidated financial reporting framework, being available with a quarterly reporting frequency (the first reference date was 30 September 2014).

The Regulation is directly applicable to EU credit institutions and aims to provide information for the assessment on a comparable basis across the European Union of the level of forbearance activities and non-performing exposures. EBA's harmonised definition of non-performing exposures includes:

(a) material exposures[103] which are more than 90 days past-due; and/or

(b) exposures in relation to which the debtor is assessed as unlikely to pay its credit obligations in full without realisation of collateral, regardless of the existence of any past-due amount or of the number of days past due.

Exposures that have been found impaired (for which provisions are set up in accordance with the applicable accounting framework) and exposures in respect of which a default is considered to have occurred (in accordance with prudential rules – Article 178 of Regulation (EU) No 575/2013) shall always be considered as non-performing exposures.

[103] Materiality shall be assessed in accordance with Article 178 of Regulation (EU) No 575/2013, according to which competent authorities shall define a materiality threshold to reflect a level of risk that they consider to be reasonable.

The national definition currently used by the NBR for the non-performing loan ratio takes into consideration loans overdue for more than 90 days and/or in which case legal proceedings were initiated (the following financial asset components are considered: principal, related claims and amortisation). Non-performing loans are recorded at gross value, i.e. book value, without taking into account the existence of any collateral or adjustments for impairment. The calculation methodology is compliant with the provisions of the Compilation Guide on Financial Soundness Indicators prepared by the International Monetary Fund and is the most widely used in the world.

The key differences between the EBA methodology for reporting non-performing exposures and the methodology employed by the NBR for determining non-performing loans refer to:

(a) *Non-performance criteria* – the criterion regarding the past-due days of the loan/exposure under review is similar in both methodologies (more than 90 days), but in the case of the latter criterion the EBA methodology implies a more extensive approach, by including all exposures for which full repayment is unlikely (without taking into account the amounts recovered from collateral), not only those in relation to which legal proceedings were initiated (the NBR approach).

(b) *Scope* – the new methodology refers to both on- and off-balance sheet exposures (financial guarantees given, loan commitments given and other commitments given). With respect to on-balance sheet ones, all types of exposures are taken into consideration, except those held for trading (whereas the NBR methodology takes into account only loans and investments).

(c) *Materiality threshold* – the EBA methodology provides for the inclusion under non-performing exposures of any exposures that are past due by more than 90 days and that, in addition, exceed a materiality threshold set by the competent authorities to reflect a level of risk considered to be reasonable. The NBR methodology does not include any such additional criterion (all non-performing loans are taken into account, irrespective of the volume of overdue payments).

(d) *Contagion principle* – according to the EBA methodology, whenever an individual debtor is considered as non-performing it is advisable to monitor the situation of other debtors in the same group, to apply a contagion effect and consider them as non-performing as well, if necessary, even though the other entities, taken individually, do not meet the requirements to be included in the non-performing exposures category. The NBR methodology applies the contagion principle at debtor level.

(e) *Reporting level* – the indicators related to non-performing exposures in line with the EBA definition are reported on a consolidated basis[104], according to the prudential consolidation scope[105], whereas the non-performing loan ratio determined by the NBR in line with the national definition is calculated at individual level.

[104] Although the Implementing Technical Standards on supervisory reporting on forbearance and non-performing exposures under article 99(4) of Regulation (EU) No 575/2013 do not include provisions concerning the enforcement of the FINREP framework on an individual basis, the NBR has made sure this reporting framework continues to apply on an individual basis as well, by issuing a national regulation in this sense, also in effect starting 30 September 2014.

[105] Does not include insurance companies and non-financial corporations.

As regards the loans removed from the balance sheet, the EBA methodology provides for the explicit exclusion of the amounts for which, in compliance with the applicable accounting regulation framework and own policies, banks resort to the recognition of impairment losses by means of write-offs. The NBR methodology applies a similar treatment to non-performing loans removed from the balance sheet.

Table 5.6 lists the actual levels of key asset quality indicators, calculated based on the Implementing Technical Standards on supervisory reporting on forbearance and non-performing exposures published by the EBA, as of 31 December 2014.
The indicators calculated for the Romanian banking system point to a medium risk as compared with those reported by the other Member States, given that the higher non-performing exposure ratio is mitigated by the increased coverage with IFRS provisions.

Table 5.6. Key asset quality indicators (based on consolidated reporting)

percent

Country	Gross non-performing debt instruments/Total debt instruments	Net non-performing debt instruments/Total own funds	Accumulated impairment/Total gross non-performing debt instruments
Romania	15.8	61.7	59.7
EU average	9.4	54.3	49.4
Austria	6.2	30.1	55.8
Belgium	3.3	26.2	45.3
Croatia	12.9	40.5	59.1
Cyprus	35.6	277.2	33.9
Denmark	5.1	45.9	35.0
Estonia	2.6	9.0	43.9
Finland	1.4	13.8	36.0
France	3.6	21.0	61.1
Germany	2.5	21.3	39.1
Greece	34.0	210.2	45.1
Hungary	14.2	60.3	66.0
Ireland	16.3	74.9	49.9
Italy	15.8	91.1	48.1
Latvia	7.6	34.8	33.0
Lithuania	6.5	35.9	36.2
Luxembourg	0.7	5.7	52.9
Malta	3.2	20.9	38.1
Netherlands	3.0	24.7	43.2
Poland	5.4	20.2	64.1
Portugal	12.7	89.3	48.2
Slovakia	1.5	1.8	93.7
Slovenia	16.6	80.5	58.8
Spain	6.9	47.0	56.9
Sweden	1.4	14.3	31.6

Note: Countries that have not reported asset quality indicators in line with the EBA definition: Bulgaria, Czech Republic, United Kingdom.

Special feature. Romania's public debt sustainability seen from the perspective of financial stability

The connection between financial stability, on one hand, and public finance sustainability, on the other, has gained increasing importance in recent years, as the interdependence between the financial and public sectors has strengthened. Romania's public debt is lower than that of most EU Member States, yet its accelerated dynamics and the pro-cyclical nature of the fiscal policy warrant close scrutiny.

Romania's total public debt (domestic and external) stood at 39.9 percent of GDP at end-2014 (around EUR 59.3 billion), based on standard European methodology. However, it also includes the foreign currency buffer of the MPF, which neared EUR 7 billion at end-2014, meaning that the net public debt actually stood at 35.3 percent of GDP.

External public debt only accounts for approximately one third of the total external debt. External private debt, which has shed about EUR 7 billion in the past three years, amid the withdrawal of the financial sector's financing lines, remains a potential source of risk for public debt as well, as shown by the 1997 Southeast Asian crisis and, more recently, by the financial crises in Spain and Ireland. In 2009, Romania recorded a significant level of short-term external debt (around 80 percent of forex reserves) and this was one of the reasons behind the decision to sign a financing arrangement with international institutions (European Union, International Monetary Fund and the World Bank). The share of short-term external debt in foreign currency reserves currently stands at 67 percent (as of June 2015).

The rise in government debt from 13.2 percent of GDP in 2008 to 34.2 percent of GDP in 2011 (up 21 percentage points of GDP) and then to 39.9 percent of GDP in 2014 (up 5.7 percentage points of GDP against 2011) was primarily driven by the build-up of considerable primary budget deficits during 2009-2011. The foreign currency buffer of the MPF, which qualifies as an asset, has been gradually set up starting 2011, in line with the provisions of the financing arrangement signed with international partners.

The sustainability of public debt should be assessed from at least four perspectives: its size, the residual maturity, the financing costs and the composition of the investor base.

Looking at the size of public debt, the econometric model used in our analysis shows the critical threshold standing between 40 percent and 45 percent of GDP (any value

above it increases the likelihood of a recession to over 50 percent). The level of debt currently stands below, yet not far from the critical threshold – thus caution is warranted.

Hence, even assuming that the current public debt costs are kept in place and the economy continues to grow at potential, a budget deficit of around 3 percent of GDP per annum would mean exceeding the public debt critical threshold within the next three years. Maintaining the deficit within the limits set by the MTO and approved by law, a level reached in 2014, would accommodate the rise in nominal public debt, amid a slower pace of increase of debt relative to economic growth. This shows that the MTO level was not set arbitrarily, but aimed as well at reversing the rising trend of public debt.

Financing costs have dwindled steadily, from over 6 percent of total debt in 2008 to below 4 percent of total debt in 2015 Q1, in a context in which debt has tripled. Annual interest expenses have remained relatively unchanged 2009 through 2014, ranging between 1.5 percent and 1.7 percent of GDP, with the higher debt stock being offset by the lower financing costs. A source of risk is the potential increase in financing costs amid the normalisation of monetary policies globally.

The average residual maturity of government debt has risen from 3 years in 2008 to 5.4 years in 2015 Q1. This is essential for cutting the annual financing requirements and hence mitigating the refinancing risk. The episodes that Romania went through in 1999 and 2009 showed that the refinancing risk may be even more dangerous in terms of public debt sustainability than the actual debt level.

The concentration of the investor base in government securities on the domestic primary market dropped from over 60 percent in 2009 to around 20 percent in 2014.

Public sector financing on the domestic market is significant and is concentrated in the banking sector, which points to limited room for portfolio growth in this direction. The rise in banks' portfolio of government securities has also had positive effects on financial stability in the previous years, via at least two channels: it helped cushion the contagion risk, especially amid the uncertainty in the region, and avoid disorderly deleveraging. The strengthening of economic growth, the recovery of credit demand and the implementation in the years ahead of the European proposals on higher capital requirements for sovereign exposures will probably bring about a shift in banks' strategy regarding their holdings of government securities.

1. How much does Romania's public debt amount to?

There are several methodologies for calculating government debt (Table 1), the most important being: (i) the EU or Maastricht methodology, (ii) the extended ESA 2010 methodology, and (iii) the national methodology. For the scope of this analysis, only data in line with the Maastricht methodology will be used for public debt, because this approach ensures EU-wide comparability and is used by the Commission when assessing macroeconomic imbalances.

Table 1. Public debt

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	Gross debt (as a share of GDP)									
Maastricht methodology*	15.7	12.3	12.7	13.2	23.2	29.9	34.2	37.3	38.0	39.9
Extended ESA 2010 methodology**	20.0	15.7	18.0	19.8	32.0	37.6	42.6	45.8	44.9	45.8
National methodology***	20.3	18.3	19.7	20.9	28.9	36.4	39.5	40.4	41.9	44.4
	Net debt (as a share of GDP)									
Maastricht methodology	15.7	12.3	12.7	13.2	23.2	28.3	32.2	34.7	34.1	35.3

* Maastricht debt is defined in Council Regulation (EC) No 479/2009, as subsequently amended, as the total general government consolidated gross debt at nominal value outstanding at the end of the year.

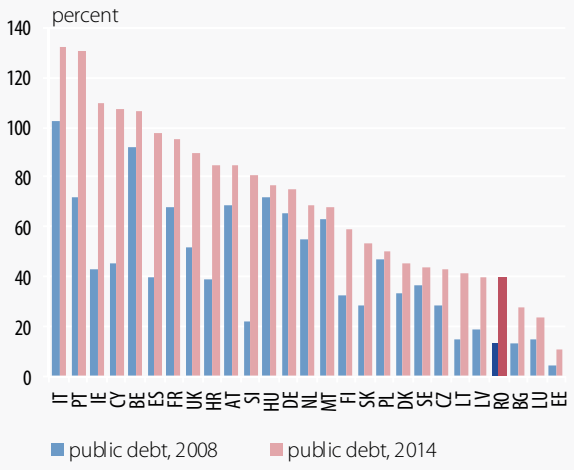
** Unlike the Maastricht methodology, when calculating public debt other financial instruments are included as well, such as insurance, pensions and standardised guarantee schemes and other accounts payable, according to the extended framework of the European System of Accounts 2010 (ESA 2010).

*** Unlike the aforementioned definitions, the national methodology includes all central and local government guarantees, in line with Government Emergency Ordinance No 64/2007, as well as the loans from the available funds of the State Treasury.

Source: MPF, NBR

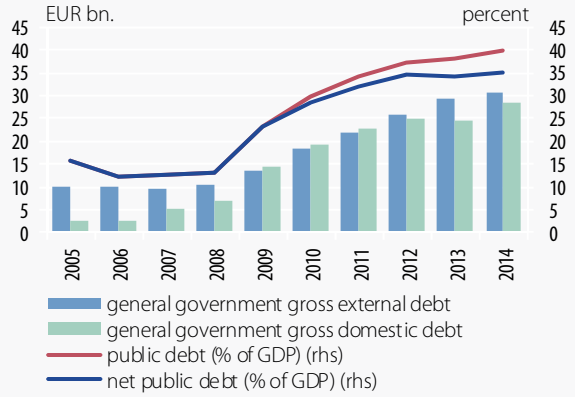
Romania's public debt stands at 38.4 percent of GDP (as of March 2015), with external debt accounting for almost half the figure, namely 18.8 percent of GDP. The current level of the total public debt is below the 60 percent ceiling stipulated in the Maastricht Treaty and trails behind the levels reported by most EU Member States (the fourth lowest reading across the EU, Chart 1). However, the rise from below 15 percent of GDP (the 2005-2008 average was 13.5 percent of GDP) to the current level, of almost 40 percent of GDP, occurred in a short time span (Chart 2). The expansion of debt in the period from 2009 to 2011 (as a result of covering large budget deficits) was mainly ascribable to borrowings from international institutions (IMF, EU, World Bank) and government bond issues on the domestic market, as well as on foreign capital markets starting March 2010, in the context of restrictive conditions on global financial markets in 2009.

Chart 1. Public debt – comparison between 2008 and 2014



Source: Eurostat

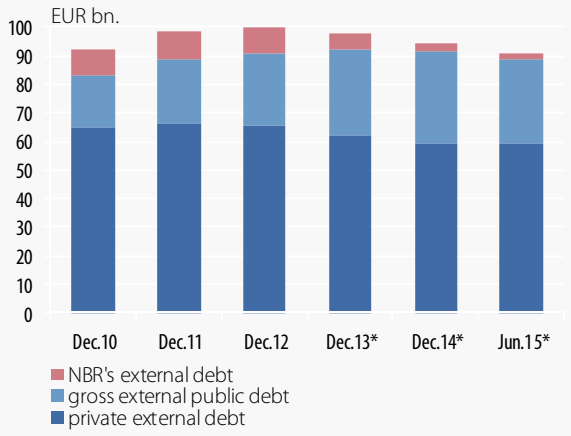
Chart 2. Public debt and external public debt (gross and net*)



* Net external debt is the gross external debt minus the foreign currency buffer of the MPF. Foreign claims have not been taken into account.

Source: NBR, MPF

Chart 3. Romania's external debt



* Starting December 2013, values have been calculated in line with the new international statistical standards, according to which SDR allocations from the IMF are included in the NBR's external debt.

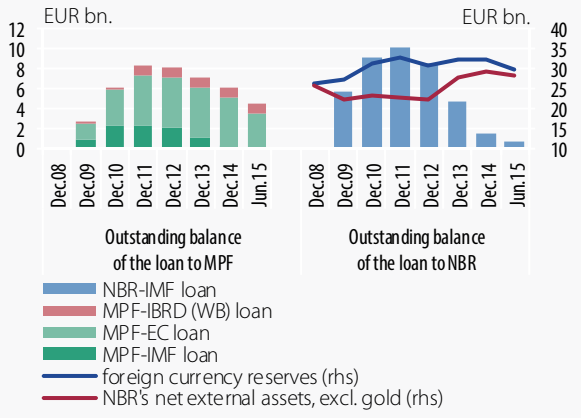
Source: MPF

Another major aspect in analysing public debt sustainability in terms of access to international financial markets is the level of Romania's total external debt[106], which rose after the outbreak of the global financial crisis. The public sector and the NBR accessed external resources in order to stabilise the financial system and counterbalance private sector deleveraging (Chart 3).

The NBR has almost fully repaid the IMF loan, while the Ministry of Public Finance has fully repaid the IMF loan and only to a small extent the funds taken from the World Bank and the Commission (Chart 4). It is important for the analyses on public debt to take into consideration the net value of the indicator as well (similarly, when analysing the evolution of the NBR's foreign currency reserves, the focus should also be on the central bank's net foreign assets). When looking at the net value, public debt is significantly lower (33.6 percent of GDP, as of March 2015). The difference owes to the foreign currency buffer of the MPF to address any unexpected financing need for at least four months (Chart 5).

The foreign currency buffer proved useful in February 2014, when Romania managed to avoid the increase in financing costs amid the spillover from a crisis on emerging markets.

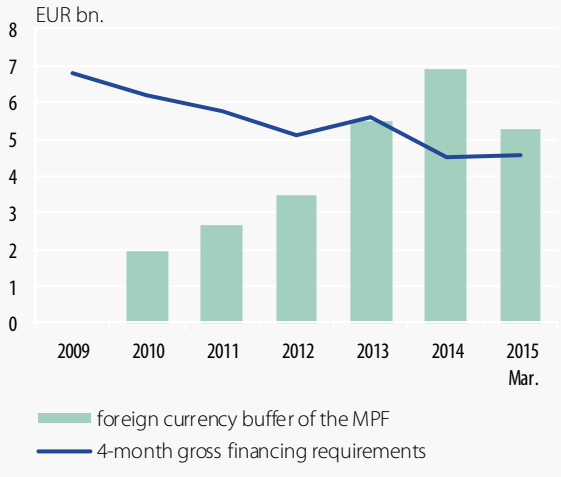
Chart 4. The financial assistance package provided by international institutions (IMF, EC, IBRD) to Romania in 2009



Note: Starting December 2013, values have been calculated in line with the new international statistical standards, according to which SDR allocations from the IMF are included in the NBR's external debt.

Source: NBR, MPF

Chart 5. Foreign currency buffer of the MPF



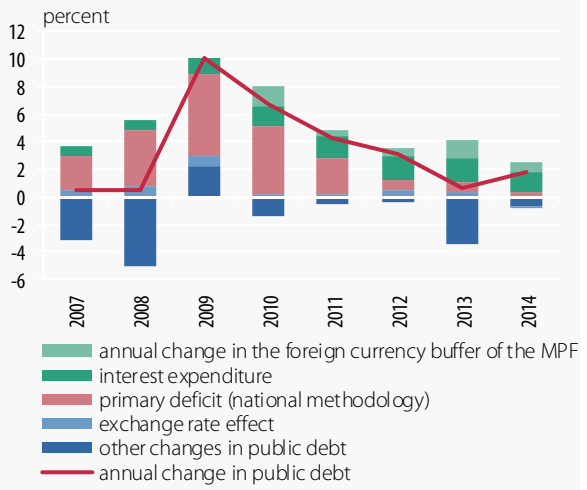
Source: MPF

106 Dăianu, D. (2015), *Îndatorarea: cât şi cum se face reprezintă problema*, article published in *Ziarul Financiar*, 5 August 2015, http://www.zf.ro/opinii/indatorarea-cat-si-cum-se-face-reprezinta-problema-14665173.

2. Why has government debt gone up?

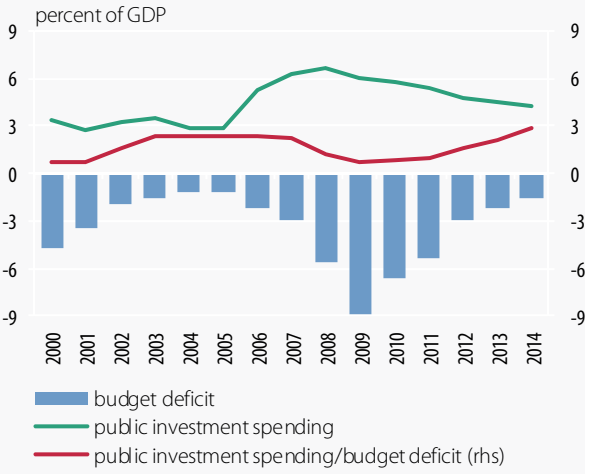
Several periods can be distinguished depending on the factors that contributed to the increase in public debt: (i) the period ahead of the global financial crisis (2005-2008), (ii) the period of fiscal consolidation (2009-2011), and (iii) the period of public debt stabilisation (from 2012 onwards).

Chart 6. Annual change in public debt by main component (share of GDP)



Source: MPF, Eurostat, ECB

Chart 7. Public investment spending and budget deficit



Source: MPF, Eurostat

The global macroeconomic and financial developments in the run-up to the crisis, as well as the European integration process, created extremely optimistic expectations on future income developments, which led to the adoption of pro-cyclical policies. Public spending set at that particular point in time ignored the economy's position in the business cycle, i.e. the fact that the former was not sustainable over the medium and long term. However, the budget deficits incurred at the time had modest effects on the ratio of public debt to GDP (Chart 6), also as a result of the increase in GDP and the significant strengthening of the leu against the euro, so from a mathematical point of view debt expansion was offset by an alert pace of economic growth.

The global financial crisis that broke out in 2008 added to a challenging domestic environment, which seriously restricted Romania's access to international capital markets. Under the circumstances, the country could only resort to financing provided by international institutions, such as the IMF, the EU and the World Bank, conditional on taking restructuring steps domestically. Hence, the key driver behind the soaring public debt 2009 through 2011 (21 percentage points in GDP) was the need to finance the budget deficit (Chart 6).

Table 2. General government budget deficit

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
					National methodology					
Budget deficit (% of GDP)	-0.7	-1.4	-3.1	-4.8	-7.3	-6.3	-4.2	-2.5	-2.5	-1.7
					Maastricht methodology					
Budget deficit (% of GDP)	-1.2	-2.2	-2.9	-5.7	-9.0	-6.6	-5.3	-2.9	-2.2	-1.5
Primary deficit* (% of GDP)	0.0	-1.4	-2.2	-5.0	-7.5	-5.1	-3.7	-1.2	-0.5	0.2
Structural deficit** (% of GDP)	-2.5	-4.4	-5.2	-8.6	-8.8	-5.8	-4.4	-1.6	-1.5	-1.0
Interest payable (% of GDP)	1.2	0.8	0.7	0.7	1.5	1.5	1.6	1.7	1.7	1.7
Interest payable/Gross public debt	7.8	6.8	5.7	6.4	6.5	5.2	5.0	5.1	4.6	4.0

* The primary deficit is the government deficit excluding interest payable.

** A structural deficit occurs if the fiscal balance is in deficit when computed at potential output level.

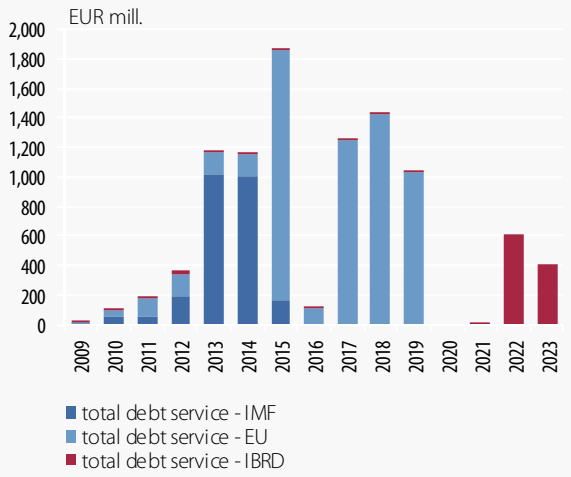
Source: MPF, Eurostat

Fiscal consolidation was successful in terms of restoring the budget balance, but this came at the cost of tougher adjustments than those brought about by the global financial crisis. During that time, in addition to domestic restructuring, several decisions were taken with a view to temporarily curbing spending (via wage cuts), which actually postponed the implementation of more sizeable budget corrections. The consolidation process also consisted in cutting public investment. Specifically, public investment dropped from 6.7 percent of GDP in 2008 to 4.3 percent of GDP in 2014 (Chart 7). However, part of the investment had a low multiplying effect, while the high level of investment was also distorted by overvalued costs in many instances, as subsequently indicated by the investigations conducted by law-enforcement agencies. Moreover, investment was also conditional on the low budget revenues, owing both to economic challenges and some economic agents' lack of payment discipline. Nevertheless, it should be pointed out that, after 2011, Romania observed the "golden rule" of public finance, according to which the investment volume should exceed the budget deficit. Even amid lower budgetary allocations for investment and tight and lasting budget constraints, investment efficiency can increase markedly provided the public investment prioritisation process initiated through Government Emergency Ordinance No 88/2013 is implemented.

Furthermore, the 5.6 percent of GDP budget adjustment in the period from 2010 to 2014 occurred primarily on the expenditure side, while the increase in revenues was due solely to improved absorption of EU funds. The budget adjustment based on the ESA methodology was even larger, i.e. 7.5 percent of GDP, mainly by curbing losses of state-owned companies monitored under the arrangements with international partners and by reducing arrears.

In order to weather the unfavourable developments generated by the global financial crisis and to offset the marked reduction in private capital flows (the short-term external debt was significant in 2009, around 80 percent of the value of forex reserves), in 2009 Romania turned to the international institutions (European Union, International Monetary Fund and the World Bank) for financial assistance worth almost EUR 20 billion. In 2010, an amount of around EUR 0.4 billion of the Stand-by Arrangement with the IMF was reallocated from the NBR to the MPF. Consequently,

Chart 8. The MPF's external public debt service in relation to the financial assistance package



Source: NBR, MPF

the external public debt surged to EUR 30.8 billion as of December 2014 (Chart 2). At this point in time, the amounts borrowed by the Government of Romania from the International Monetary Fund have been repaid, with EUR 604 million of those used for international reserves still outstanding (as of June 2014). On the other hand, the loans taken from the European Commission and the World Bank are due for repayment in the years ahead (2015-2019 and 2022-2023 respectively), which might lead to a reduction of the external public debt stock in the upcoming period (Chart 8).

Starting 2012, against the background of restoring macroeconomic balances, the public debt dynamics slowed down. The fiscal consolidation measures and, afterwards, the maintenance of fiscal policy within a prudent framework led to Romania's return on the private capital market and to improved public debt sustainability. As a matter of fact, the structural budget deficit (another indicator reflecting fiscal and budget sustainability) recorded high levels during 2008 and 2009 (8.6 percent of GDP and 8.8 percent of GDP respectively). These readings were subsequently corrected down to 1 percent of GDP in 2014, which is precisely Romania's medium-term fiscal objective (Table 2).

A driver behind the increase in public debt after 2012 was the set-up of a foreign currency buffer of the MPF for covering liquidity needs of the general government (it accounted for 2.6 percentage points in GDP out of the 5.6 percentage points in GDP rise in government debt December 2011 through December 2014). This buffer currently covers the external public debt service entirely and approximately 50 percent of the total public debt service.

3. Is Romania's public debt sustainable?

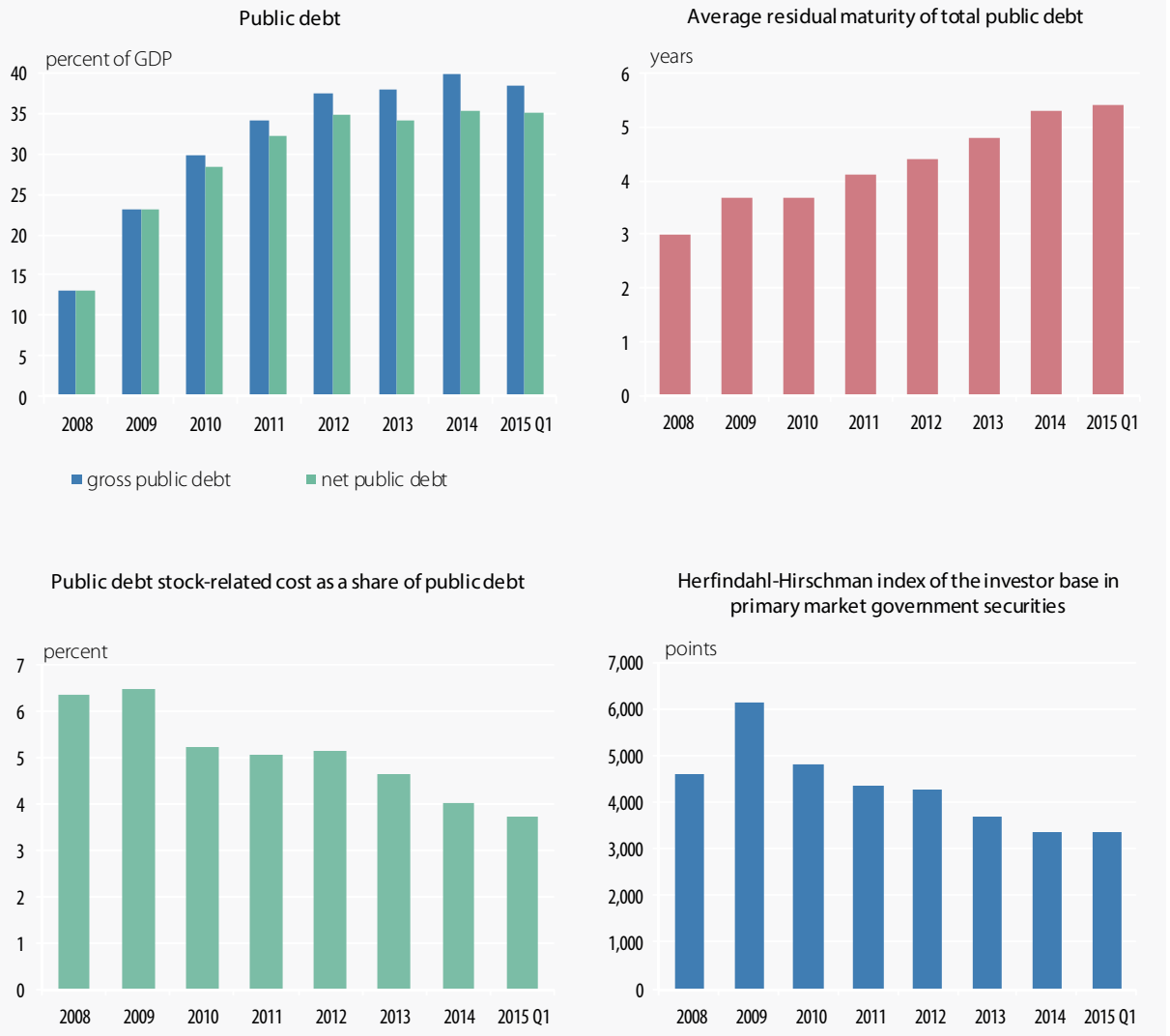
There is no single threshold for public debt sustainability, as each country has its own specificities. Emerging countries, Romania included, usually have a lower sustainability threshold than developed economies, because they are not reserve currency issuers, some have a high degree of dollarisation/euroisation, a lower capacity for revenue collection, etc. Advanced economies boast a higher borrowing capacity than emerging countries and also ampler room for manoeuvre, including in terms of a balance-of-payments risk.

The sustainability of government debt should be appraised from at least four standpoints: (i) its size; (ii) maturity; (iii) financing costs, and (iv) the composition of the investor base.

The rise in public debt has been accompanied by the strengthening of debt sustainability indicators. The average residual maturity has gone up, interest

payments have diminished, while the composition of the investor base has diversified (Chart 9). Therefore, the sustainability of government debt has improved in recent years, counterbalancing the increase in public debt. However, close monitoring of the evolution of the public debt stock is warranted, given its considerable expansion versus the 2008 level.

Chart 9. The sustainability of Romania's public debt



Source: NBR, MPF, FSA

3.1. Public debt size

Maintaining public debt at a sustainable level over the medium and long term is one of the objectives of the domestic fiscal and budgetary policy, in line with the European framework for economic governance. The set of rules introduced by the Fiscal and Budgetary Responsibility Law has been defined with a view to limiting any slippages from the short- and medium-term objectives of fiscal indicators, yet they are not backed by a sufficiently-rigorous correction mechanism, while the intermediary

caps on public debt (i.e. 45 percent, 50 percent and 55 percent of GDP) are higher than the sustainable level that would be acceptable for an economy such as Romania's.

The actual debt size is not the only important element in analysing the sustainability of public debt, but also the access to the private capital market and the composition of the investor base. Thus, even though public debt was low in 2008 (13.2 percent of GDP), at the time Romania lacked access to global financial markets, owing mainly to considerable macroeconomic imbalances, to which added investors' high risk aversion, amid the financial crisis becoming manifest worldwide. Against this backdrop, exceeding the current critical level could pose similar problems, despite it being lower than in other countries (40 percent of GDP versus the EU average of 70 percent in 2014).

In addition, the assessment of public debt sustainability should also take into account private sector debt. The latter may behave similarly to public debt if the government needs to step in and support the private sector to improve its repayment capacity. Unlike other countries, in Romania there has been no need for public financial support directed to the banking sector since the outbreak of the global financial crisis.

Box 8. Methodological aspects underlying the analysis of public debt sustainability

Two different models were used for assessing public debt sustainability: (i) an empirical model and (ii) a structural model. Both approaches aim to determine the safe level of debt rather than its response to a number of key macro-financial variables. Both models indicate that any public debt level of up to around 40 percent of GDP will not impair Romania's future economic growth. The level is calculated for the gross public debt.

The *empirical model*[107] is a multivariate logit panel model in assessing the probability of a recession and builds on the specification used by Baum *et al.* (2013)[108]. Along with the variable of interest to this analysis (public debt), the model also includes other relevant variables to control the potential effects of other macroeconomic variables on GDP developments.

$$y_{i,t} = public\_debt_{i,t-4} + unemployment_{i,t-4} + consumption_{i,t-4} + budget\_balance_{i,t-4} + int\_rate_{i,t-4} + \\ + hicp_{i,t-4} \quad [1]$$

The dependent variable in the regression model ($y_{i,t}$) takes the shape of a binary recession indicator, built based on quarterly growth data. This indicator is assigned the value 1 if GDP dynamics stay in negative territory for two consecutive quarters or

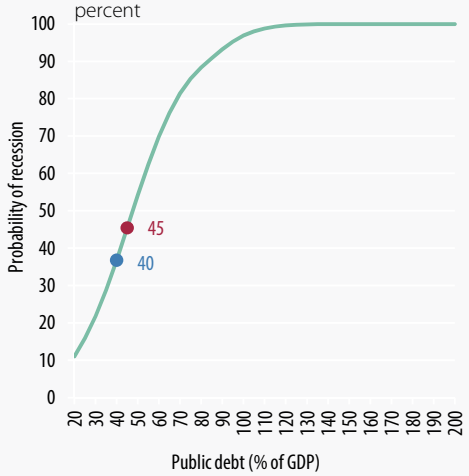
[107] Further details on the methodological aspects and the results of the two models for assessing public debt sustainability will be available in Voinea, L., Dragu, F., Alupoaiei, A. and Neagu, F. (2015), "Adjustments in the balance sheets – is it normal this 'new normal'?", nearing completion.

[108] Baum, A., Checherita-Westphal, C., and Rother P. (2013), "Debt and growth: New evidence for the euro area", *Journal of International Money and Finance*, No. 32, pp. 809-821.

the value 0 otherwise. The other independent variables taken into consideration were the unemployment rate, household consumption (as a share in GDP), government budget deficit, interest rate and the inflation rate. The estimation of the logit model was carried out in a panel of six CEE countries[109], over the years 2004-2014, by introducing fixed effects for each individual country. A four-quarter lag was applied to each independent variable. The robustness of the model was checked by changing the lag to two and eight quarters respectively. The discrimination capacity of the model was appraised via the Accuracy Ratio (AR), which came in at 79.1 percent.

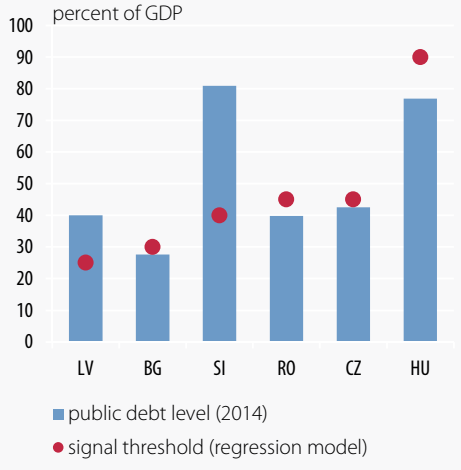
For analysing the obtained results it was deemed that public debt has an adverse effect on economic growth if the estimated probability of recession stands around 50 percent. In this vein, several government debt thresholds were tested, ranging between 20 percent and 200 percent of Romania's gross domestic product.
The coefficient on the public debt variable is positive, indicating that a rise in public debt will translate into a higher probability of recession (direct relation between the two variables). According to this model, the critical level of public debt (above which the probability of recession reaches approximately 50 percent) is of 45 percent of GDP. However, a more prudent share of public debt in GDP is indicated, namely 40 percent, with an associated probability of recession of 37 percent (Chart A). Moreover, the findings for other countries in the region, included in the estimation of the regression model, show that the level of debt nears the critical threshold in most of the cases under review (Chart B).

Chart A. The estimated probability of recession for various levels of public debt (based on the regression model)



Source: NBR

Chart B. International comparison – the level of the signal threshold in the case of public debt (regression model)



Source: NBR

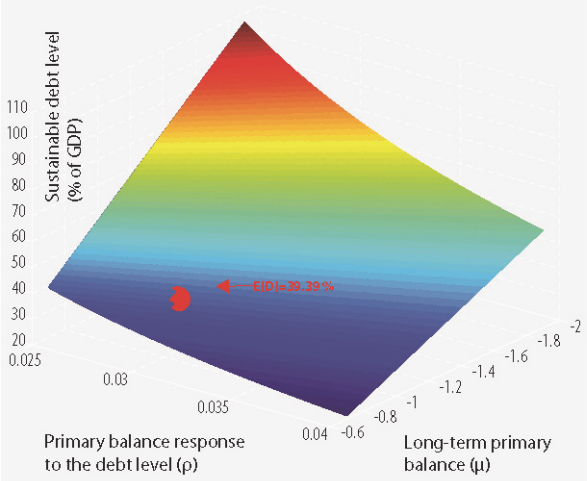
The *structural model* finds a critical threshold level of the public debt-to-GDP ratio at 39.4 percent (Chart C). The model is based on the method used by Mendoza *et al.* (2007)[110] and seeks to identify a maximum threshold of public debt, above which economic growth would be negatively affected.

109 Bulgaria, Czech Republic, Latvia, Hungary, Romania and Slovenia.

110 Mendoza, E. and Ostry, J. (2007), "International Evidence on Fiscal Solvency: Is Fiscal Policy 'Responsible'?", *IMF Working Paper*, WP/07/56.

$$D_{t-1}(s_t) = \tau_t - g_t + \sum_{j=1}^{\infty} \beta^j E_t \left[\frac{u'(y_{t+j} - g_{t+j})}{u'(y_t - g_t)} (\tau_{t+j} - g_{t+j}) \right] \quad [2]$$

Chart C. Calibrating the optimal level of public debt using the general equilibrium condition



Starting from the Euler equation, in the condition above *D* is the level of debt, s_t is a certain state of the economy, τ_t and g_t represent government revenues and spending respectively, β is the subjective discount factor, E_t denotes the expectation operator, while u' is the marginal utility of consumption, the aim is to equalise the present value of consumption for certain states of the economy. The level of consumption is subject to the economy's resource constraints. Specifically, at any date *t*, the state of the economy is determined by a combination between output (GDP) and government spending. Given the uncertain environment, a Markov process is used to model the dynamics of the economy, which involves defining a transition function between successive states. Finally, the objective is to find the stimulus which will prompt the private agent to give up a unit of consumption at date *t* and re-allocate that consumption to date *t+1*.

By means of standard budget constraints for optimizing and deriving general equilibrium conditions, and of observing the necessary solvency conditions for conducting sustainability tests, the following equation was used for calculating the maximum threshold of public debt:

$$E[D_t] = \frac{-\mu}{\rho(1+\bar{r})-\bar{r}} \quad [3]$$

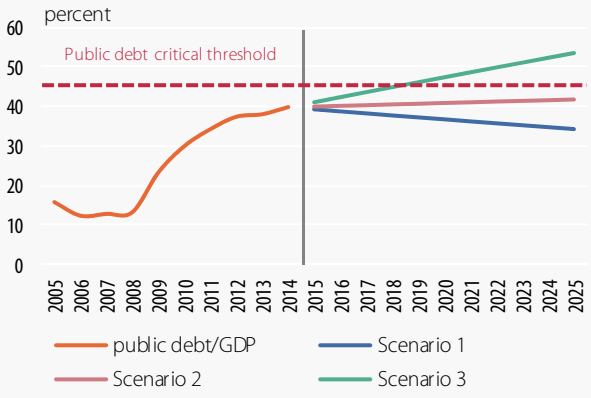
The optimal level of government debt was calculated using condition [3], where $E[D_t]$ is the maximum level of public debt at date *t* so as not to affect economic growth, $\bar{r}$ denotes the difference in the long-run averages of the real interest rate and the growth rate of real GDP, ρ is the response function of the primary deficit to the prevailing level of government debt, while μ represents a long-term average of the primary balance. The optimal level of public debt represents the point of maximum likelihood. One can notice an inverse correlation between the optimal level of government debt and the response function of the primary deficit to past values of public debt. In other words, if the government resorts to wider primary deficits at present (given high levels of debt in the past), this will translate into a lower capacity to take on new debt in the future.

As for the general equilibrium model, the maximum debt level was simulated for various scenarios on the levels recorded, at the same moment in time, by the

response function of the primary deficit to the prevailing level of government debt and by the long-term budget balance. The two ranges were built based on the dispersion of the values of the two parameters around their central tendencies. For the difference in the long-run averages of the real interest rate and the growth rate of real GDP, the following approach was taken: the results yielded by Cox-Ingersoll-Ross and Vasicek models for the term structure of rates were used for the interest rate, while the central tendency was used for economic growth.

The current level of public debt is sustainable, yet it has neared the critical threshold above which there would be major negative consequences on economic growth (with a probability of recession of over 50 percent) and on the subsequent borrowing capacity in adequate conditions. The analyses conducted at the National Bank of Romania, based also on relevant international approaches (see Box 8 for details), highlight the risks stemming from both the breakdown and especially the dynamics of government debt. Depending on the method used, estimates of the critical threshold in the case of Romania range between 40 percent and 45 percent of GDP. The results of the estimates may differ depending on the model used and the assumed hypotheses. Calculations are made based on gross public debt data, without taking into account the foreign currency buffer of the MPF (the equivalent of 4.6 percent of GDP).

Chart 10. Public debt sustainability in the long run



	Scenario 1 (decreasing public debt)	Scenario 2 (stabilising public debt)	Scenario 3 (rising public debt)
Interest rate on public debt (%)	4.05[1]	4.05	4.05
Primary government budget balance (% of GDP)	+0.30[2]	-0.40	-1.50
Growth rate of real GDP (%)	2.80[3]	2.80	2.80

Note: 1) Public debt interest payments as a ratio to average public debt in 2014.
2) The primary government budget balance of 0.3 percent of GDP corresponded to a structural deficit of around 1 percent of GDP (MTO – Medium-Term Budgetary Objective) in 2014.
3) 2.8 percent is the real growth rate in 2014.

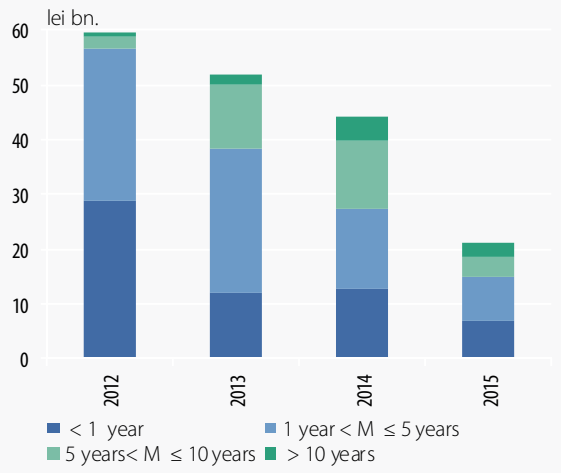
Source: MPF, NBR calculations

A primary deficit of up to 0.4 percent of GDP in the years ahead would enable the stabilisation or even the reduction of government debt, provided the economic growth rate, the public debt costs and the exchange rate stick to their 2014 levels. A significant widening of the primary deficit, for instance up to 1.5 percent of GDP, may translate into government debt exceeding 50 percent of GDP, with a serious detrimental impact on economic activity and the debt refinancing capacity (Chart 10).

3.2. Public debt maturity

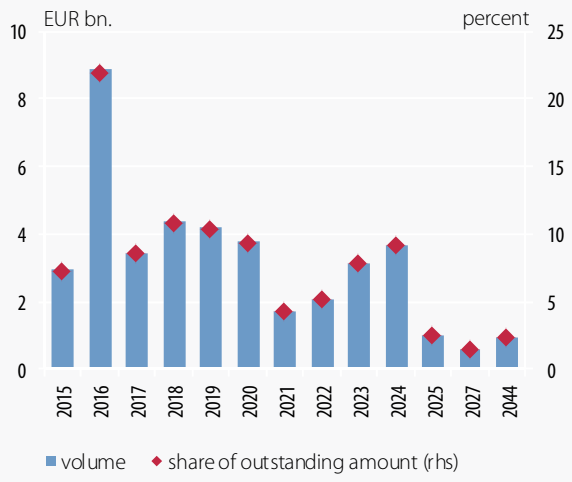
The maturity structure of public debt has improved recently, ensuring predictability of repayments and keeping financing costs within an acceptable range. Nevertheless, Romania has still one of the lowest debt-to-GDP ratios over the long term. Public debt with a maturity of more than 10 years accounts for 27 percent of the total (compared to 41 percent in Poland and 58 percent in the Czech Republic in 2014, according to Eurostat). On the domestic market, there are still limitations stemming from the structure and development stage of the financial sector, which depress demand for long-term debt, but recent developments point to an improvement (Chart 11). Residual maturity for locally-issued government securities nears three years, whilst for the securities issued on external markets it stands at 7.4 years (weighted average, June 2015).

Chart 11. Maturity structure of new domestically-issued government securities



Source: NBR

Chart 12. Breakdown of the current stock of government securities by maturity year (July 2015)



Source: NBR

The steps aimed at achieving fiscal consolidation and restoring macroeconomic equilibria, Romania being upgraded by the major rating agencies, as well as the inclusion of Romanian government securities into the calculation of global benchmark indices for investments in emerging market assets prompted an increase in the average maturity of newly-issued bonds and an improvement in secondary market liquidity.

Over the period ahead, special attention should be devoted to managing the need for refinancing the older issues, with a peak in public debt being expected for 2016 (Chart 12). Moreover, approximately 29 percent of outstanding government securities (EUR 11.8 billion) fall due in 2015-2016, with the remainder being scheduled until 2044. Under the circumstances, the budgetary and fiscal policy stance for 2015-2016 should remain prudent, aiming to ensure debt repayment as conveniently as possible in terms of cost and maturity.

3.3. Public debt financing cost

Public debt financing cost dropped markedly during the reviewed period (to 4 percent in 2014, from 6.5 percent in 2009, Table 2). Behind this stood the same factors mentioned above, i.e. fiscal consolidation and a brighter macroeconomic picture, as well as the inclusion of Romanian government securities into the calculation of global benchmark indices for investments in emerging market assets. However, total interest payments remained relatively steady at 1.7 percent of GDP in 2014, compared to 1.5 percent in 2009), as the improvement in financing conditions was countered by the swiftly-growing public debt stock. Thus, a prudent fiscal policy stance is a prerequisite for ensuring access to the international financial markets at low costs.

A risk factor for public debt sustainability is a possible increase in financing costs, given that interest rates are currently at all-time lows and for the coming period the monetary policies of some of the world's major central banks are expected to get back to normal. Furthermore, the fact that a significant share of the financing cost change is associated with the risk premiums should not be overlooked. As for Romania, the analysis of developments in CDS spreads is indicative of their going hand in hand with the exchange rate, i.e. short-lived swings around the long-term average (Chart 13).

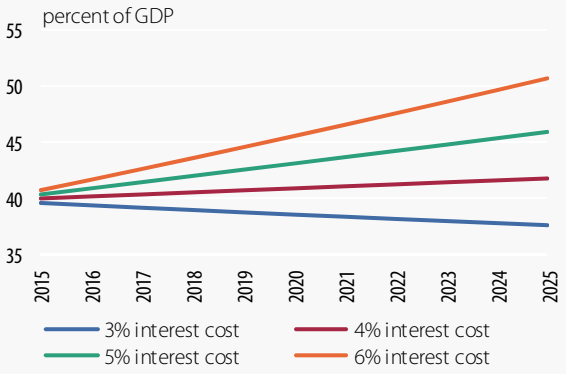
The explanation for the reduction in public debt financing costs lies with favourable external conditions (very low interest rates and abundant liquidity), as well as with the domestic macroeconomic structural adjustments (narrowing of government deficit, curbing of inflation) and the liquidity conditions on the money market in Romania.

Chart 13. CDS spreads, interbank money market rate and exchange rate*

* relative to January 2015

Source: Bloomberg, NBR

Chart 14. Scenario-based evolution of public debt stock-related interest payments



Note: Scenarios assume a real 2.8 percent economic growth rate (as recorded in 2014) and a primary deficit of 0.4 percent of GDP (in line with stabilising public debt over the long term).

Source: NBR calculations

A further falling interest rate on public debt[111] might push the debt lower, but a significant interest rate hike might lead to a long-run increase in the government deficit and public debt, unless the government deficit is subject to adjustment (Chart 14). Moreover, public debt could become unsustainable over the long term if the average rate on the debt stock were to reach 6 percent.

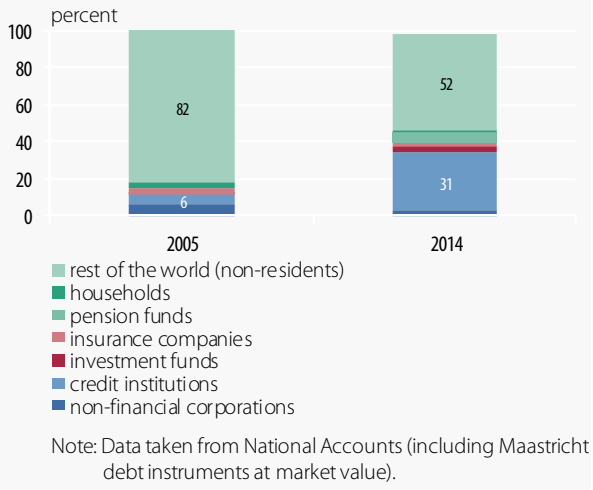
111 In 2014, interest payments on public debt neared 4 percent of the debt stock (NBR calculations).

3.4. Investor base

The Herfindahl-Hirschman index reflecting the concentration of the base of investors in government securities on the domestic market dropped from 6,124 points in 2009 to 3,360 points in 2014. Moreover, the concentration of the government bond investor base on the primary market fell from over 60 percent in 2009 to around 20 percent in 2014.

Behind this positive development stood largely the joint action of at least three factors: participation of new investor classes (pension funds in particular) after the launch of a 30-year USD-denominated Eurobond issue in January 2014, JP Morgan's decision to include Romania's sovereign bonds into its GBI-EM Global Diversified Investment Grade index as from July 2014, and Standard & Poor's upgrading the sovereign rating to BBB- in May 2014 (as some investors could invest only in securities issued by investment-grade countries, rated as such by all major agencies). As a matter of fact, these developments sent financing costs down as well.

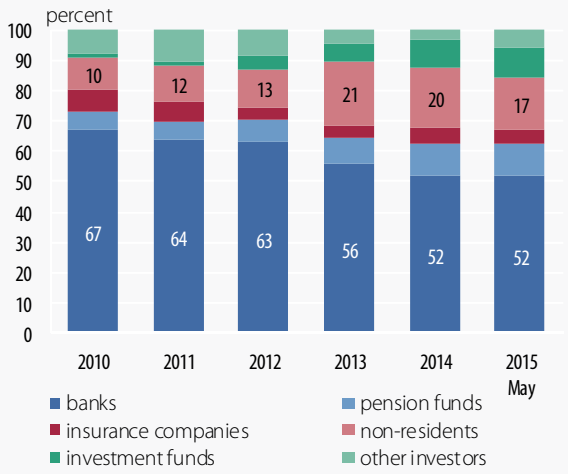
Chart 15. Public debt breakdown by type of investor



Note: Data taken from National Accounts (including Maastricht debt instruments at market value).

Source: NBR, MPF

Chart 16. Breakdown of locally-issued government securities by type of investor



Source: MPF, FSA, NBR

Public debt breakdown by type of investor reveals a moderate contagion risk induced by a possible shift in investor sentiment on the world's financial markets (Chart 15). Although the share of government securities in total public debt widened in terms of volume to 70 percent in 2014, against 34 percent in 2008, they are held largely by residents (57 percent, December 2014), with local credit institutions making a significant contribution (41 percent of total government paper). The share of non-resident investors in total locally-issued government securities is decreasing (17.5 percent in June 2015 versus 21 percent in December 2013) and trails behind other countries in the region (50 percent in Poland and Hungary, May 2015).

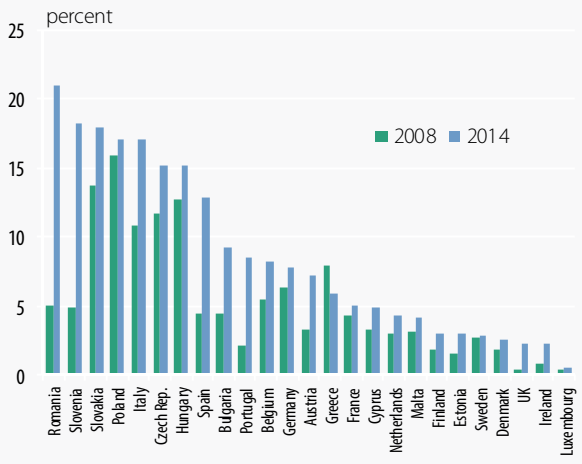
Since 2012, Romania has diversified its external financing sources by tapping the US market. Currently, USD-denominated bonds account for one third of the value of Romania's government securities on external financial markets (July 2015). A widening of the fiscal deficit will most likely have to be financed mainly by

non-residents (considering the residents' already large exposure to such portfolios; for further details, see below). The growth of non-residents' share in public debt financing would augment the contagion risk that could materialise if international financial markets witness shifts in investors' risk appetite.

4. Can the local financial system further cope with the rising public debt financing?

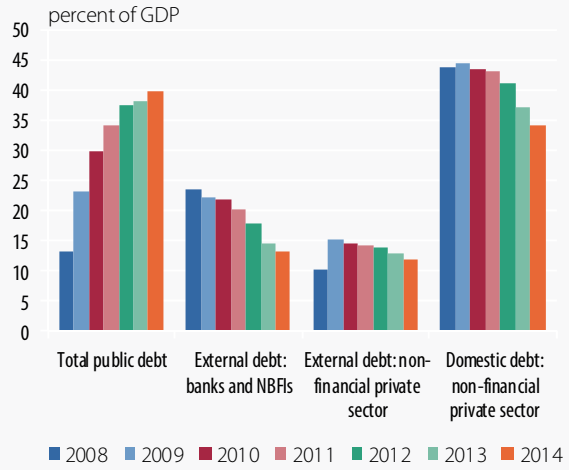
Public sector financing on the local market is significant and concentrated in the banking sector, so that future tapping of this market for government debt expansion will come at the cost of higher risks to financial stability. Domestic public debt stood at 19 percent of GDP in 2014, up from 5.3 percent in 2008. The banking sector holds about 67 percent of the debt, accounting for 21 percent of credit institutions' assets, making it the largest exposure of an EU banking sector to the government sector (Chart 17).

Chart 17. Exposure of monetary financial institutions to the government sector (in total assets)



Source: ECB

Chart 18. Total public debt and private debt by component



Source: Eurostat, NBR

Other non-bank financial institutions in Romania also have significant exposures to the public sector, which points to limited room for portfolio growth in this direction. Insurance sector exposure stands at lei 5 billion (34 percent of the assets covering technical reserves), investment fund exposure at lei 10.3 billion (25 percent of total assets) and pension fund exposure at lei 13.7 billion (68 percent of total assets in December 2014, with the investment ceiling being set at 70 percent).

Over the past few years, the increase in government securities holdings by the resident banking sector benefitted financial stability: (i) by helping improve banks' liquidity position, since such instruments are eligible collateral to access the central bank's lender-of-last-resort facilities, (ii) by supporting an orderly deleveraging, as banks substituted part of the exposure to the private sector by government paper, amid balance sheet adjustments by non-financial corporations and households (Chart 18), and (iii) direct contagion risk to Romania's debt instruments was low.

A further increase in government securities holdings by banks tends to become counterproductive, given that banking sector profitability remains weak, credit demand shows signs of recovery, the risk of a rate hike should not be overlooked, and regulatory bills at EU level provide for stronger capital requirements[112] related to sovereign exposures. From an economic perspective, the opportunity of being exposed to the public administration is conditional on the risk-adjusted yield difference among the various exposure classes. During a recession, with credit risk materialising, credit institutions prefer assets which are not significantly affected by this risk (assets for which the likelihood of a payment default to occur is very low and/or the loss in case of default is moderate). With economic growth strengthening, this recessionary behaviour appears set to change.

112 At present, prudential regulations provide for a differentiated treatment of these exposures: (i) zero capital requirements for credit risk, (ii) no limits on large exposures, and (iii) they are classified as high-quality liquid assets.

Abbreviations

BSE	Bucharest Stock Exchange
CB	Credit Bureau
CCR	Central Credit Register
CDS	credit default swaps
CRR/CRD IV	Capital Requirements Regulation and Directive
DSTI	debt service-to-income
EBA	European Banking Authority
EBIT	Earnings Before Interest and Taxes
EC	European Commission
ECB	European Central Bank
EIOPA	European Insurance and Occupational Pensions Authority
ESA	European System of Accounts
ESRB	European Systemic Risk Board
EU	European Union
Eurostat	Statistical Office of the European Union
FDI	foreign direct investment
FSA	Financial Supervisory Authority
GDP	gross domestic product
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
LTD	loan-to-deposit
LTV	loan-to-value
MPF	Ministry of Public Finance
NCMO	National Committee for Macroprudential Oversight
NBFIs	non-bank financial institutions
NBR	National Bank of Romania
NIS	National Institute of Statistics
NPLs	non-performing loans
NTRO	National Trade Register Office
PIR	Payment Incidents Register
ReGIS	Romanian electronic Gross Interbank Settlement
ROA	return on assets
ROBOR	Romanian Bid Offered Interest Rate
ROE	return on equity
SENT	Electronic Net Settlement System
SMEs	small- and medium-sized enterprises

Tables

Charts

Special feature

Box 8