



National Bank of Romania

# Analysis on CHF-denominated loans

*February 2015*





## **Analysis on CHF-denominated loans<sup>\*</sup>**

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<sup>\*</sup> The analysis is based on the presentation delivered by the National Bank of Romania top management in a press conference held on 30 January 2015 (Isărescu, 2015).



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## Overview

CHF-denominated loans do not pose a systemic risk. These loans hold a small share in GDP (1.4% in Romania, i.e. five times lower than in Poland and seven times lower than in Hungary) and a small share in total loans in banks' balance sheets (4.7%, whereas Poland and Hungary report three and five times higher shares respectively).

Nevertheless, a distinctive feature of CHF-denominated loans is that they were almost entirely extended to households. The share of these loans amounts to almost 10% of the total volume of loans to households, while the number of individuals having taken CHF-denominated loans (i.e. 75,412 persons) accounts for 2.1% of the total number of individual borrowers. For comparison purposes, in Poland, the number of CHF borrowers exceeds 500,000. The number of borrowers with CHF-denominated loans in the Romanian banks' balance sheets has seen a decrease over the last years (by 31.8% from December 2008, i.e. almost 35,200 persons).

The decision of the Swiss National Bank to scrap the 1.2 EUR/CHF floor, against the background of the European Central Bank's monetary policy decisions, triggered the appreciation of CHF versus the RON and led to an increase in the debt service for CHF borrowers. Borrowers' repayment capacity differs based on their characteristics.

The households having taken CHF-denominated loans are not a homogeneous group. The breakdown of these loans shows a wide variety by: (i) loan destination, (ii) loan volume, (iii) borrowers' income level, (iv) borrowers' indebtedness level, and (v) loan maturity. These characteristics prove that there are several individual specific situations calling for differentiated solutions. A one-size-fits-all solution is not effective in addressing the borrowers' issue.

Other EU countries' steps to resolve the issue of CHF-denominated loans show that the adopted solutions differed based on the specifics of these loans in each and every state. By way of consequence, Romania needs to identify adequate solutions, tailored to its specific situation. It is counterproductive to arbitrarily select only the favourable components of the measures taken by various countries without describing the related context and the associated costs.

Unrealistic solutions for Romania could turn an issue that at present poses no systemic risk (lending in CHF) into one posing potential risks to financial stability. The NBR's intervention to bring the CHF/RON exchange rate back to the level prior to the Swiss National Bank removing the 1.2 EUR/CHF floor would have serious negative consequences. The measure could only be kept in place for a short time and with major FX reserve losses. This would hurt exports (with negative consequences on economic growth and unemployment) and entail a large disequilibrium on the FX market. The conversion of CHF (and/or EUR)-denominated loans into lei at exchange rates other than the market exchange rate on the conversion date could generate significant problems for some banks. They would require substantial capital injections to meet the minimum solvency ratio. The loss of confidence in the system could spread to other banks as well, the contagion risk being a threat that frequently emerges in times of turmoil.

Realistic solutions refer to customised measures, negotiated by the parties involved. The solutions keeping the domestic currency equivalent of monthly instalments of CHF-denominated loans close to the December 2014 level could be an option. Converting CHF-denominated loans into lei at the market exchange rate and/or granting a discount on the debt service amount could be another option. A temporary cut in the interest rate on CHF-denominated loans in order to offset the effect of the stronger CHF could be a third solution. Moreover, the Ministry of Public Finance has come up with proposals to improve the legal framework (Government Emergency Ordinance No. 46/2014) in order to facilitate the rescheduling of loans (including CHF-denominated loans) with government support (burden-sharing approach among creditors, borrowers and the state) and ease the strain related to the adverse developments in the CHF exchange rate. The NBR took steps in order to ensure that prudential regulations are tailored to the new financial market conditions.



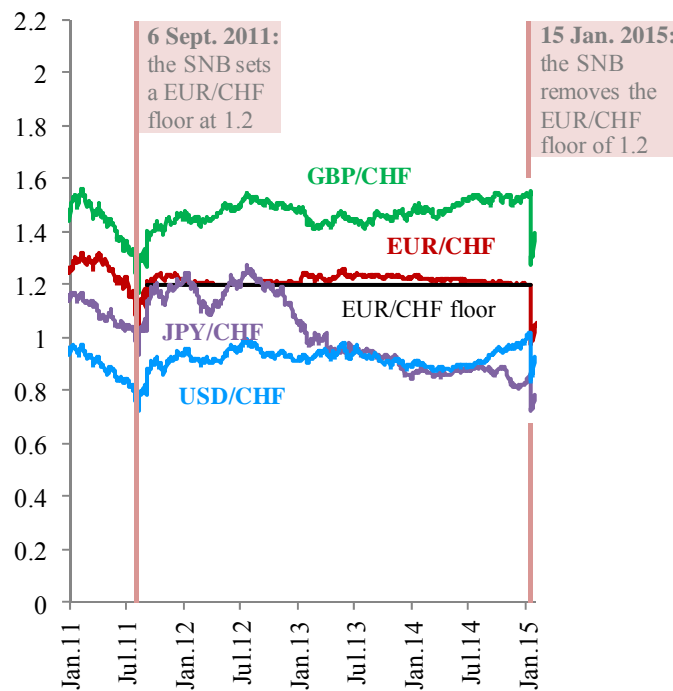
## **I. The Swiss National Bank's Decision**

On 15 January 2015, the Swiss National Bank (SNB) removed the 1.2 EUR/CHF floor, which led to the immediate and significant appreciation of the Swiss franc (CHF) against the euro, the US dollar and other currencies (Chart 1.1). The decision adopted by the monetary authority of Switzerland took into account the fact that the floor – implemented in September 2011, when the Swiss franc was substantially overvalued against the euro – had become increasingly difficult to keep in place given the quantitative easing initiated by the European Central Bank (ECB) and the significant capital inflows into Switzerland. The CHF appreciation against the leu was inevitable, even if the domestic currency had a relatively stable evolution against the reference currency (euro).

According to the professional literature, the Swiss franc is a safe haven currency, investors preferring to transfer capital to Switzerland upon emerging international economic or political issues (e.g. Rinaldo and Söderlind, 2007). Owing to the small size of the local financial market, the Swiss franc tends to strengthen significantly versus other currencies, despite the lack of economic fundamentals. This may negatively impact Swiss exports, given that the latter are concentrated in a few specialised sectors (Lampart, 2011). Furthermore, the Swiss economy is affected, as exports of goods and services take roughly 70 percent of GDP.

The measures the National Bank of Romania can take in order to influence the exchange rate of the domestic currency against the Swiss franc are limited. The CHF/RON exchange rate is set indirectly. The euro is Romania's reference currency on the FX market, given the intensity of the country's trade with euro area states, the EU membership and Romania's intention to adopt the euro in the future. The EUR/RON exchange rate is the result of the foreign currency demand and supply generated by trade and financial flows, while the CHF/RON exchange rate is determined indirectly depending on the EUR/RON and EUR/CHF exchange rates. The developments in the EUR/CHF exchange rate depend on the foreign currency demand and supply between the euro area and Switzerland, Romania having no influence on its quotation. The EUR/RON exchange rate is relatively stable (Chart 1.2). The recent depreciation of the RON against the CHF is therefore entirely attributable to the appreciation of CHF versus the EUR, USD and other currencies, as a result of the SNB removing the floor, following the European Central Bank's quantitative easing decision.

**Chart 1.1. Exchange rates of major currencies vs. CHF**



**Chart 1.2. EUR/RON exchange rate**



Source: Bloomberg

The NBR's intervention to bring the CHF/RON exchange rate back to the 14 January 2015 level is inappropriate, as the international arbitrage does not allow that only the CHF/RON exchange rate be influenced, while keeping unchanged the exchange rates of the leu versus the other currencies.

In order to reverse the impact of the SNB's decision on the CHF/RON exchange rate, the leu would have to appreciate versus the euro to approximately 3.7 RON per euro. Such an artificial EUR/RON exchange rate level could be maintained only temporarily, as pushing the EUR/RON exchange rate down to a level much lower than that perceived by the market to be correct would be made "against the stream". The NBR would have to resort to considerable foreign currency sales (amounting to EUR billions) not only for achieving this objective, but also for enabling the systematic interventions necessary for subsequently maintaining this exchange rate.

This intervention by the NBR would have significant economic consequences. The sizeable contraction in foreign currency reserves would trigger the worsening of investor perception, as mirrored by the rise in risk premia. The external borrowings would become costlier for the state and the private sector, while the risk of speculative attacks would increase.

The massive appreciation of the leu versus the euro would lead to the strong erosion of Romania's external competitiveness, having therefore a negative impact on the performance of Romanian exports. Under the circumstances, the economic activity would post a contraction, also reflected in an unfavourable evolution of the number of jobs. Furthermore, the decrease in exports, accompanied by the simultaneous spur in imports, would generate a worsening of the trade balance. In such a context, additional corrective pressures would emerge on the EUR/RON exchange rate towards the pre-intervention level.

Mention should be made that NBR's foreign currency sales would imply the absorption of liquidity in lei from the money market, leading to a substantial increase in domestic currency interest rates. This would not only deter lei-denominated lending and foster foreign currency lending (which would become cheaper), but it would also imply considerably higher costs for borrowers with outstanding lei-denominated loans. In other words, a low currency risk would come at the expense of a higher interest rate risk.

Moreover, the strengthening of the domestic currency would induce a deflationary shock across the Romanian economy, with the potential of creating a loop of mutually-reinforcing falling prices and broad-based delay in consumption, conducive to economic downturn and consequently to layoffs.

Apart from the adverse economic effects, the NBR's intervention to help the domestic currency appreciate against the CHF to a level similar to that recorded prior to SNB removing the 1.2 EUR/CHF floor would also impact public policy. Such an intervention would result in changing the benchmark currency on the foreign exchange market from EUR to CHF, contradicting not only the economic reality, but also the EU membership legally binding Romania to adopt the single currency at a certain point in time.

As for the possibility of the NBR imposing a ban on CHF-denominated loans, such a decision would have entailed the restriction of CHF-denominated capital flows, thus violating one of the fundamental prerequisites of Romania's accession to the EU: full capital account liberalisation, completed in 2006.

Besides, even assuming such a measure had been possible, it would have affected trade with and investment from Switzerland, as well as the financing of CHF hedged borrowers (exporters, as well as employees of companies with Swiss capital, whose incomes are expressed in CHF).

The relevant presence of the Swiss capital in Romania is pointed out by the direct investment from Switzerland (which totals around EUR 2 billion, Chart 1, Annex 1), as well as by the number of companies with Swiss capital: 2,417 in April 2013. These companies' annual turnover exceeded EUR 7 billion during 2011-2013 (Chart 3, Annex 1), the number of employees ranging between 50,000 and 60,000 (nearing the number of CHF borrowers). The main Swiss investors in Romania are present in significant economic sectors: building materials (Holcim, Swisspor, Sika), energy (ABB), petrochemicals (Greenfiber, Ameropa), pharmaceuticals (Roche, Sandoz, Helvetica Profarm), food industry (Nestlé, Pacovis, Valvis), tobacco (Philip Morris), agriculture and stockbreeding (Karpaten Meat). Over the last years, trade flows with Switzerland exceeded the EUR 250 million threshold for exports and the EUR 400 million threshold for imports (Chart 2, Annex 1).

The situation generated by the CHF appreciation should be approached rationally, rather than emotionally. First and foremost, before coming up with a solution, we should make sure that the situation has stabilised. Frequently, FX markets tend to overreact at the incipient stage of such events. From this standpoint, mention should be made that about one third of the rise in the CHF/EUR exchange rate was already corrected: 1 CHF = 4.54 RON on 15 January 2015 and 1 CHF = 4.18 RON on 6 February 2015. Moreover, given the considerable financial impact, time is necessary for solutions to be formulated so as the burden be rationally and realistically shared among the parties involved.

To sum up, before adopting any measures, the following should be analysed: the actual situation of CHF-denominated loans, the current economic environment, the approach to the effects generated by the stronger CHF in other countries in the region, as well as the viability of the solutions recommended.

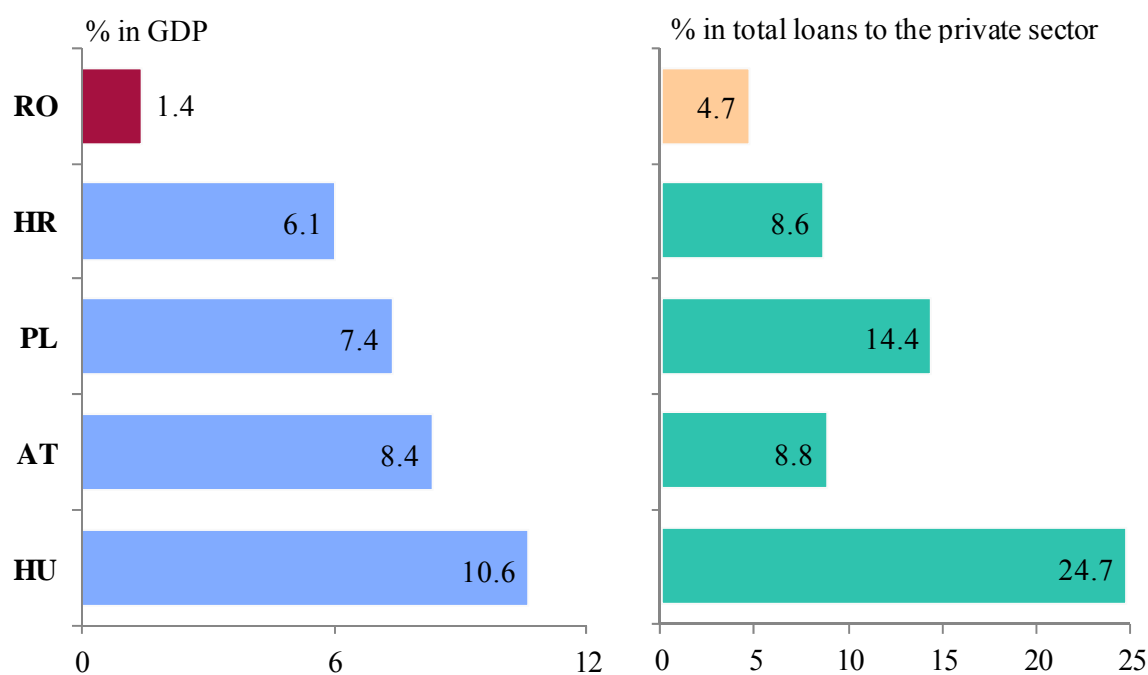
## II. Information on CHF-denominated loans

### II.1. Significance from an economy-wide perspective

CHF-denominated loans do not pose a systemic risk: they hold a small share in both GDP and total loans.

CHF lending to the private sector accounts for 1.4% of Romania's GDP, while Poland and Hungary report levels five and seven times higher respectively. The proportions are the same as regards the share of CHF-denominated loans in total private sector loans: in Romania they account for 4.7%, while Poland and Hungary report levels three and five times higher respectively (Chart 2.1; Chart 1, Annex 2). The weight of CHF lending in total loans to non-financial corporations and households in Romania has followed a downward path since 2012 (Chart 2, Annex 2), to 4.7% of total loans to these sectors (Table 1, Annex 2). The development is also attributable to the notable decline in CHF-denominated loans granted since 2009 (Table 6, Annex 2).

**Chart 2.1. The share of CHF-denominated loans in total private sector loans**



Source: NBR, Eurostat

CHF-denominated loans were almost exclusively taken by individual borrowers. These loans account for around 10% of total loans to households (Table 2 and Chart 3, Annex 2), and individuals with CHF-denominated loans (75,412) account for 2.1% of the total number of individual borrowers (Table 3, Annex 2). For comparison, in Poland, the number of CHF borrowers exceeds 500,000.

The rationale behind the boom in CHF lending during 2007-2008 is in close connection with the social factors. The CHF borrowing costs were lower at the credit agreement date, which ensured easier access to lending for lower income borrowers, as well as larger loans for larger income borrowers. On the other hand, the unfavourable developments in the CHF may have an adverse impact on debtors' capacity to repay the loans. A simulation of the instalments of a standard loan in CHF, RON and EUR respectively, extended in December 2008, shows that: (i) at the credit agreement date, the monthly instalments on CHF-denominated loans were lower compared with similar monthly instalments on loans granted in RON or EUR, and (ii) the impact of the change in exchange rate and/or interest rate was stronger on CHF loans (Tables 10 and 11, Annex 2).

The number of CHF borrowers is on the decline (by 31.8% in November 2014 compared with December 2008, i.e. by around 35,200). The drop is due to loan repayment, loan conversion into another currency, their removal from the balance sheets or their sale. The number of CHF borrowers fell at a faster rate compared with the loan dynamics at aggregate level (the number of debtors moving down 15% between December 2008 and November 2014). The number of CHF loans witnessed a similar development (Table 4, Annex 2).

Credit risk associated with CHF-denominated loans is relatively higher<sup>1</sup> compared with other currencies (the non-performing loan ratio<sup>2</sup> in CHF stood at 12% versus 9.4% for all foreign currency-denominated loans in November 2014), yet the dynamics were similar to those of foreign currency-denominated loans (Chart 2.2). Dedicated literature also identifies heightened risks associated with CHF loans to unhedged borrowers. Kingston (1995) shows that in Australia, in 1980, the debt service of thousands of companies that had resorted to such financing sources due to lower interest rates in CHF doubled. Baggus and Howden (2011)

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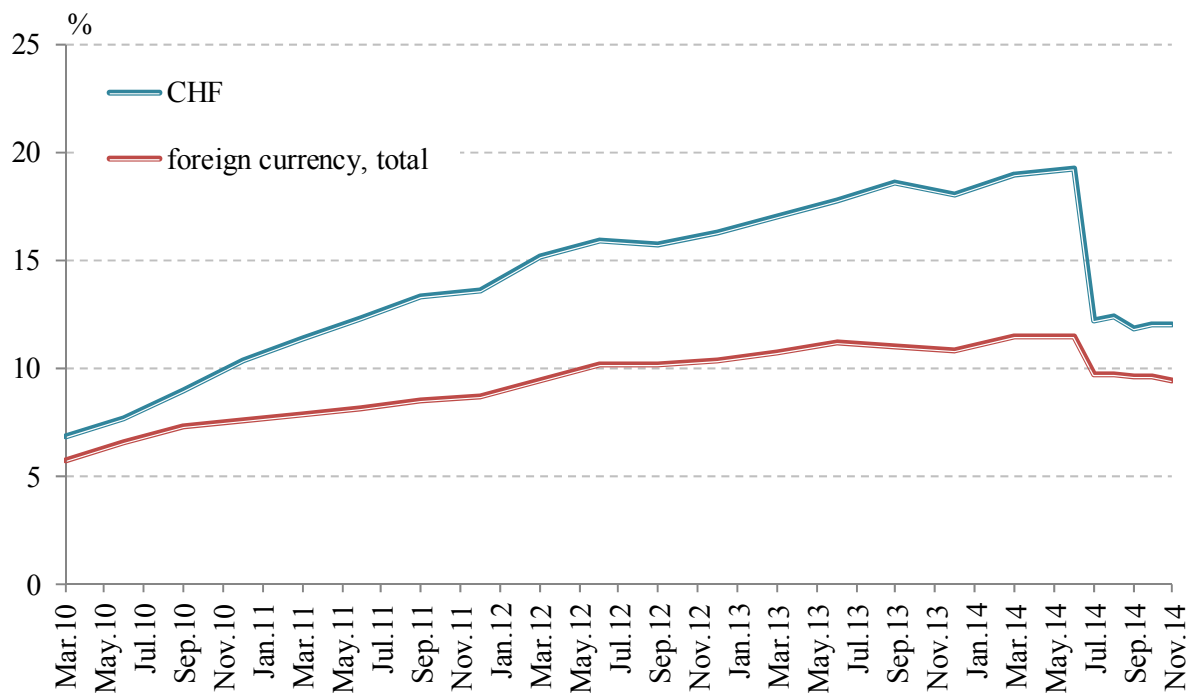
<sup>1</sup> For further details, see Chart 6, Annex 2.

<sup>2</sup> The NPL ratio is the share of loans overdue for more than 90 days (with debtor contamination) in total loan portfolio.

argue that in Iceland, in 2008, the debt service for mortgage loans to households went up between 100% and 150%, which took a heavy toll on these borrowers' repayment capacity.

Yeşin (2013) uses a set of data covering the loans granted during 2007-2011 in 17 European countries in order to determine the risks associated with foreign currency lending by introducing a foreign currency mismatch index. The results indicate that loans to unhedged borrowers hold a large share in Europe and the risks associated with this activity are more substantial in countries outside the euro area. Particularly, CHF-denominated loans, which are more frequently resorted to in the East European countries, might have a strong negative impact in case of CHF appreciation against the local currencies.

**Chart 2.2. The NPL ratio for household loans**



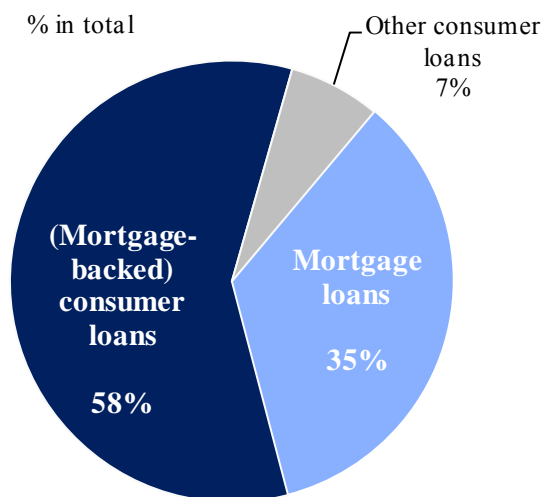
Source: Central Credit Register, Credit Bureau, NBR calculations

## II.2. Breakdown by borrower characteristics

Individuals with CHF-denominated loans are not a homogeneous group. The distribution of such loans shows a large variety in terms of: loan destination, loan value, borrowers' income level, borrowers' indebtedness level, and loan maturity.

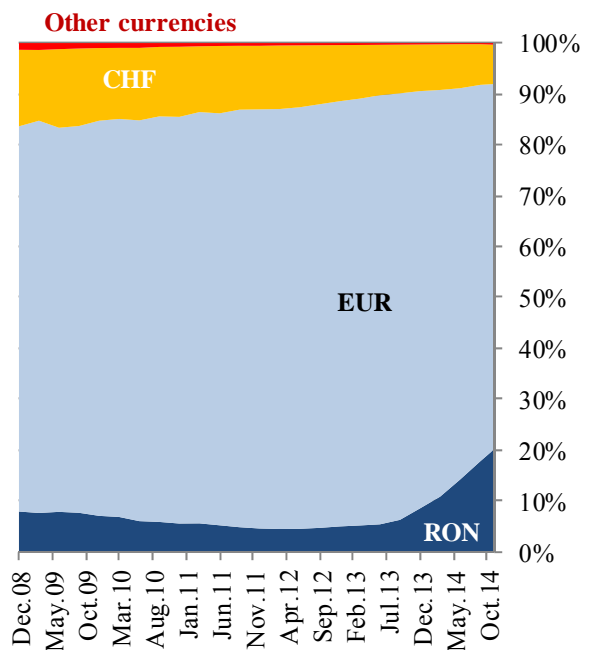
(A) CHF-denominated loans to households have had different purposes (Chart 4, Annex 2). About 35% of CHF-denominated loans are housing loans and 58% of them are mortgage-backed consumer loans (Chart 2.3). Real estate lending to households is mostly denominated in EUR, with CHF-denominated loans accounting for merely 7.7% of the said loans versus 37% in Poland (Chart 2.4).

**Chart 2.3. Breakdown of CHF-denominated loans to households by loan destination (November 2014)**



Source: Central Credit Register, Credit Bureau, NBR calculations

**Chart 2.4. Breakdown of real estate loans to households by currency**



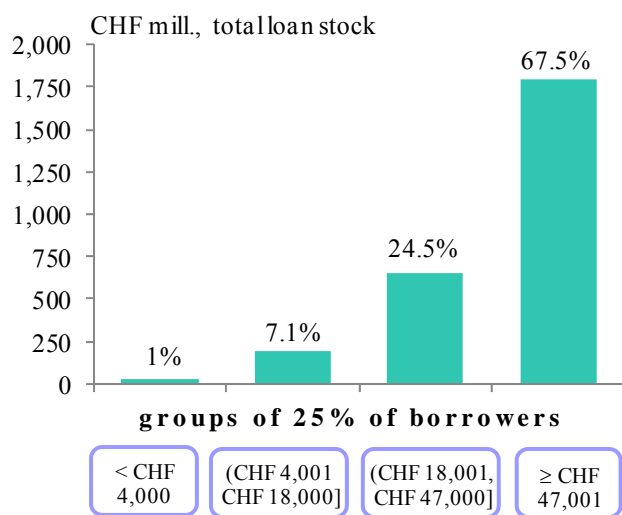
Source: NBR, NBR calculations

(B) CHF-denominated loans are not homogenous in terms of value (Table 5, Annex 2). Large value loans (exceeding CHF 47,000) are concentrated: around 25% of borrowers hold 67.5% of the loan stock (Chart 2.5). At the other end, 25% of borrowers have taken small value loans (lower than CHF 4,000), accounting for only 1% of the loan stock.

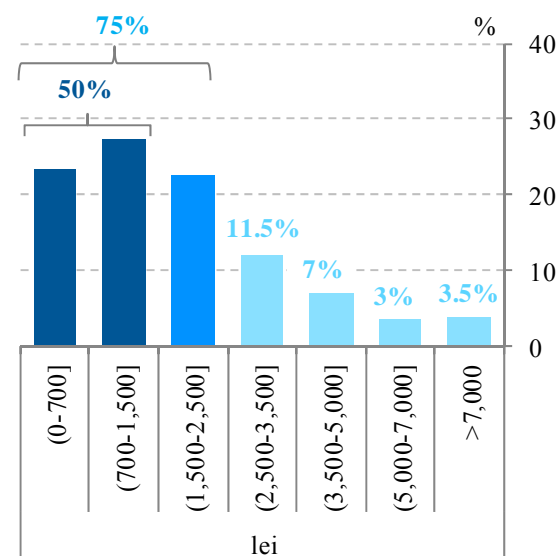


(C) The breakdown of CHF borrowers by income group<sup>3</sup> points to the existence of vulnerable social groups among them. About 50% of CHF borrowers have a net monthly income lower than lei 1,500 and up to 75% of them have a net monthly income lower than lei 2,500 (Chart 2.6).

**Chart 2.5. Breakdown of CHF borrowers by loan size**



**Chart 2.6. Breakdown of CHF borrowers by net monthly income**



Note: In order to identify the net average monthly wage and the debt-to-income ratio, the CHF loan data set has been intersected with the wage income data set for December 2013. The coverage of CHF bank exposure is about 65%. The debt-to-income ratio was calculated based only on the borrower's wage income (income of potential co-borrowers was left out of account).

Source: CCR, Credit Bureau, the National Fiscal Administration Agency, NBR calculations

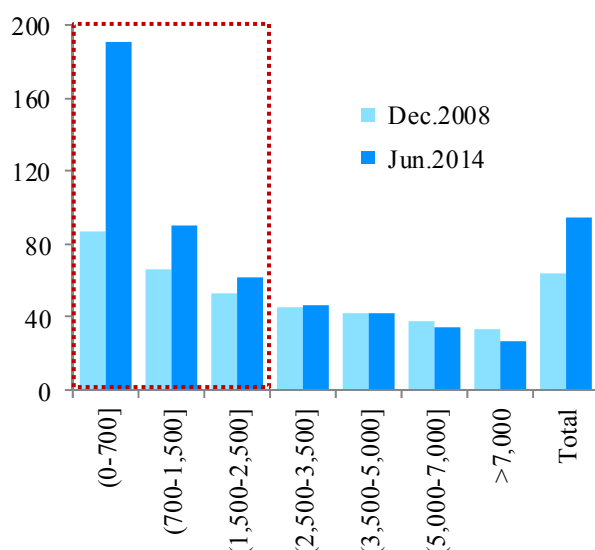
(D) The average debt-to-income (DTI) ratio of CHF borrowers currently stands at 92%, higher than in December 2008, i.e. 64% (Chart 2.7). Indebtedness distribution is strongly uneven, as borrowers with a net monthly income below lei 2,500 are currently over-indebted, as a result of both income contraction during the crisis and CHF appreciation (Table 8, Annex 2). Borrowers whose income is below the average wage economy-wide were the hardest hit by CHF appreciation. Debt-servicing costs of borrowers whose net monthly wage is lower than lei 500 rose by 32.2% of the said income, whereas those of borrowers with an income higher than lei 3,000 increased by less than 7% of their net monthly wage (Table 12, Annex 2).

<sup>3</sup> For details on the characteristics of CHF-denominated loans in terms of borrowers' income level, see Annex 2, Tables 8 and 9 and Chart 5.

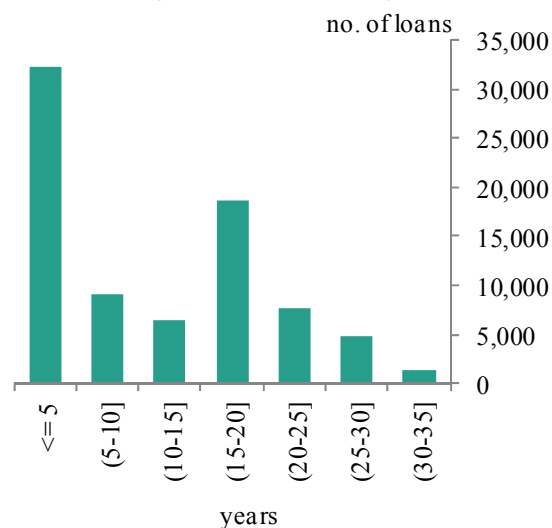
Designing similar solutions for both borrowers with income lower than lei 700 and an average DTI ratio of 184% and borrowers with income higher than lei 7,000 and an average DTI ratio of 26% is not warranted.

(E) CHF-denominated loans are usually long-term loans, with an average residual maturity of 13.2 years. About 40% of CHF-denominated loans have a residual maturity shorter than 5 years and another 40% of them have a residual maturity longer than 15 years (Chart 2.8; Table 8, Annex 2). In fact, the average value of CHF-denominated loans is significantly higher than that of leu-denominated loans (Table 7, Annex 2).

**Chart 2.7. Average indebtedness of CHF borrowers by income category**



**Chart 2.8. Breakdown of the number of CHF-denominated loans by residual maturity**



Note: In order to identify the net average monthly wage and the debt-to-income ratio, the CHF loan data set has been intersected with the wage income data set for December 2013. The coverage of CHF bank exposure is about 65%. The debt-to-income ratio was calculated based only on the borrower's wage income (income of potential co-borrowers was left out of account).

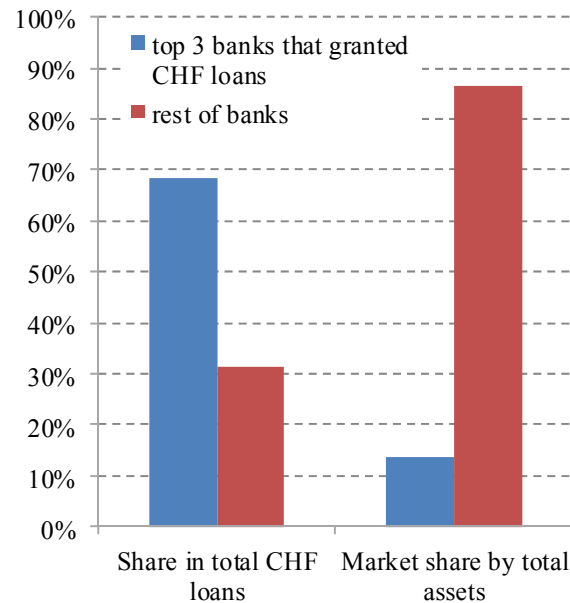
Source: CCR, Credit Bureau, the National Fiscal Administration Agency, NBR calculations

Such disparities argue against taking a similar approach to all borrowers' debt-servicing difficulties: there are various individual specific situations, therefore one size does not fit all, which calls for the adoption of several differentiated solutions.

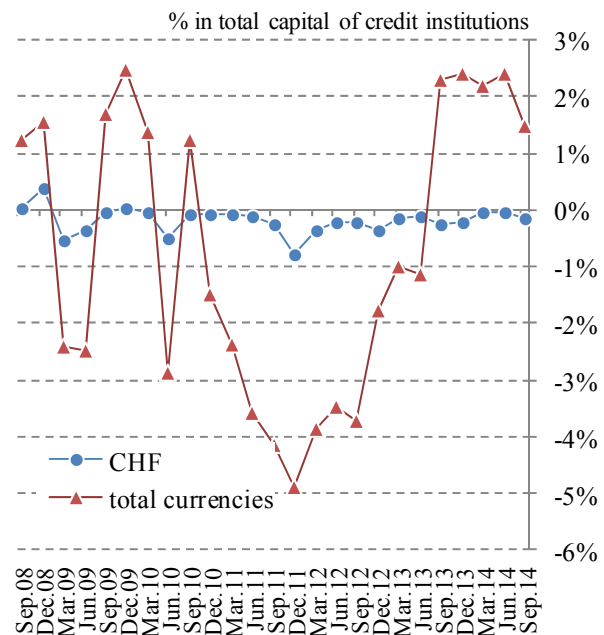
### II.3. Breakdown by creditor

CHF-denominated loans are concentrated among a handful of banks (3 banks account for 77.3% of CHF borrowers and for 68.6% of the CHF-denominated loan volume; these banks jointly held 13.6% of total bank assets in November 2014, Chart 2.9).

**Chart 2.9. Top-three banks that granted CHF-denominated loans relative to the banking system**



**Chart 2.10. The net currency position of credit institutions**



Note: Data refer to the last business day of the quarter.

Source: NBR

Moreover, the net currency position in CHF was not a source of speculation for banks, given its very low share in total own funds (Chart 2.10), as well as its extremely low volatility when compared with other currencies. Banks showed caution in managing CHF-denominated assets and liabilities. The very low value of the net currency position in CHF confirms that CHF-denominated assets were backed at all times by funding raised in Swiss francs. Assuming a conversion of CHF-denominated loans into the domestic currency at an administrative rate (below the market rate on the conversion date), credit institutions with portfolios in Swiss francs would not see their profits diminish, but incur losses. The difference between the (higher) market rate and the administrative rate applied for conversion purposes would not constitute a mere shrinking of profit, because the credit institution has, in turn, raised funds in CHF. Banks use clients' repayments to buy CHF at the market rate in order to diminish the debt incurred for lending to customers. Thus, the entire difference between the administrative rate and the market rate stands as a sure loss for credit institutions.

### **III. The current economic environment**

The analysis of the current economic environment reveals two significant characteristics. First, Romania has maintained sustainable macroeconomic balances over the last years, also as a result of the counter-cyclical monetary and prudential policies (Georgescu, 2011). The influence of macroeconomic policies is severely constrained in the aftermath of a financial crisis, so that the adoption of appropriate policies during an upturn is of the essence (Isărescu, 2013). Romania further enjoys robust economic growth (one of the strongest in the EU) and solid growth prospects. The annual inflation rate has remained on a downward path and the general government balance and the current account balance stand in the comfort zone. These arguments show that the movements in the CHF/RON exchange rate should not be seen as a depreciation of the domestic currency (which is supported by strong economic fundamentals), but as CHF appreciation.

Second, the downtrend in interest rates on leu-denominated loans, also as a result of the NBR's decisions to gradually cut the monetary policy rate and to pursue adequate liquidity management, is supportive of solutions for the conversion of foreign currency-denominated loans into the domestic currency in the case of currently unhedged borrowers.

According to the European Commission's projections, in 2014 Romania's economic growth is estimated to have been 3%, one of the fastest paces in Europe (Table 2, Annex 3) and well above the EU average, i.e. 1.3%. The main determinant of this advance was private consumption, fuelled particularly by positive developments in household income and lower interest rates. For 2015, forecasts place real GDP growth at 2.7%<sup>4</sup>, further boosted by the expansion in domestic demand. Private consumption will most likely remain the main driver of economic growth, amid the favourable performance of disposable income and the improving labour market conditions.

The analysis of the latest statistical data points to a further decline in the annual inflation rate, which followed a lower-than-forecasted path and ran below the lower bound of the variation band of the flat target, due to the steeper drop in volatile prices and to the increasingly weak inflation on external markets, overlapping the lingering negative output gap and the ongoing downward adjustment in inflation expectations. In December 2014, the average annual

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<sup>4</sup> According to the European Commission's European Economic Forecast, winter 2015.

inflation rate stuck to 1.1%, while the average annual inflation rate based on the Harmonised Index of Consumer Prices – which is relevant for assessing convergence with the European Union – came in at 1.4%, the same as in the previous month (Chart 1, Annex 3).

The fall in the inflation rate allowed for successive policy rate cuts (to an all-time low of 2.25% in February 2015) and for interbank rates to decline markedly to record lows, amid favourable liquidity conditions in the money market. In August 2014, the NBR resumed the rate cutting cycle so that in February 2015 the monetary policy rate ran at 2.25% versus 5.25% in June 2013. Moreover, January through November 2014, the NBR gradually lowered the minimum reserve requirement ratios. Thus, at present the minimum reserve requirement ratio on leu-denominated liabilities of credit institutions is 10% (from 15% at end-2013) and the minimum reserve requirement ratio on foreign currency-denominated liabilities is 14% (from 20% in December 2013). The aforementioned movements in the policy rate and reserve ratios led to a significant reduction in the debt service of borrowers with loans in domestic currency, an increase in leu-denominated loans and a contraction in foreign currency-denominated loans, confirming the stronger preference for loans in domestic currency (Chart 2, Annex 3). Consequently, the currency risk has receded.

The general government balance and the current account balance stand in the comfort zone. According to the European Commission's forecast, in 2014 the current account deficit is estimated to have declined to 0.9% of GDP and the general government deficit to 1.8% of GDP (Table 1, Annex 3). Imports of goods and services followed an upward path in 2014 on the back of the rebound in domestic absorption. However, exports witnessed faster dynamics, with sales of equipment and transport means making a significant contribution hereto. The current account deficit has narrowed amid the increase in external competitiveness and energy efficiency, fiscal adjustment also contributing to the said development. The general government deficit has declined substantially and the public debt has tended to stabilise (Chart 3, Annex 3).

The unemployment rate fell to 6.4% in December 2014, standing on average at a five-year low of 6.8% in 2014.

Prudential indicators show that the banking sector is stable and sound. The loan-to-deposit ratio (LTD), a relevant financial stability indicator, has fallen below 1 (Chart 4, Annex 3). The LTD ratio in foreign currency decreased considerably, from 2.2 in 2008 to 1.5 in 2014.

The solvency ratio stood at 17.1% in September 2014 against 15.5% in December 2013, well above the international prudential requirements (Chart 6 and Table 3, Annex 3), and liquidity is at an adequate level (Chart 7, Annex 3).

The removal of non-performing loans from the balance sheets has led to negative profitability of the banking system (Chart 5, Annex 3). The deterioration of bank asset quality is also ascribable to high household indebtedness (accounting, on average, for 45% of borrowers' disposable income), which led to difficulties in servicing debt. It is to be noted that low income earners have an extremely high indebtedness level (namely 153% in the case of borrowers with gross income below lei 750, 109% in that of borrowers with gross income below lei 1,150 and 104% in that of borrowers with gross income below lei 1,210 respectively; these individuals needed the support of several co-borrowers to qualify for a loan).

Out of the total stock of loans to households amounting to lei 101.7 billion, foreign currency-denominated loans account for 61%, the value of which, when expressed in lei, is as follows: EUR-denominated loans worth lei 51.8 billion, USD-denominated loans worth lei 0.3 billion and CHF-denominated loans worth lei 9.7 billion. Mention should be made that out of foreign currency-denominated loans tantamount to lei 61.9 billion when expressed in domestic currency, EUR-denominated loans held 83.8%, USD-denominated loans took 0.5% and CHF-denominated loans accounted for 15.7% in November 2014.

Individuals' substantial foreign currency indebtedness and the adverse movements in the exchange rates of several currencies of late (the strong appreciation of the CHF and the US dollar respectively and the uncertainties surrounding the euro exchange rate) make it even more difficult for a number of borrowers to repay their debt (Chart 8, Annex 3).

Other countries reported similar repayment difficulties on loans to households as well and applied various government-backed schemes to support individuals improve their debt service (the United Kingdom, Ireland, the US, Latvia, Croatia, Iceland – for further details, see Section V of this paper).

## **IV. NBR measures vis-à-vis foreign currency lending**

The NBR has implemented at an early stage a mix of measures to deter the unsustainable increase in foreign currency lending. The measures envisaged: (A) monetary policy, (B) prudential regulation, (C) prudential supervision, (D) public warnings and (E) implementing the recommendations of the European Systemic Risk Board (ESRB) on lending in foreign currencies (2011). Neagu, Tatarici and Mihai (2015) show that Romania ranks among the countries that had to come up with unorthodox measures in order to deal with the challenges arising from the full capital account liberalisation, euroisation of the economy, massive foreign capital inflows, etc. Some of these measures, previously seen as administrative measures at the moment of their implementation, are currently deemed macroprudential instruments, i.e. debt service to disposable income ratio and loan-to-value ratio. Romania already counts a decade's experience with these instruments, boasting a somewhat unique expertise in this field at EU level. From this standpoint, Romania is mentioned in papers drawn by the International Monetary Fund staff (e.g. Jacome and Mitra, 2015).

### **(A) Monetary policy**

In order to deter foreign currency lending and, implicitly, to strengthen the traditional channels of monetary policy transmission, the NBR actively used as an instrument the minimum reserve requirements ratio on foreign currency liabilities. This ratio continued to be raised during 2004-2006<sup>5</sup>, its level increasing by 5 percentage points each time in August 2004, January 2006 and March 2006 to 40%. Additionally, the NBR extended the scope of minimum reserve requirements to foreign currency-denominated liabilities with residual maturity of over two years<sup>6</sup>, as follows: (i) starting February 2005, on the liabilities incurred subsequent to this date; (ii) starting July, on the liabilities incurred prior to February 2005.

The high restrictiveness thus imposed on the minimum reserve requirements ratio on foreign currency-denominated liabilities of credit institutions was kept in place until 2009.

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<sup>5</sup> In 2002, the minimum reserve requirements ratio on foreign currency-denominated liabilities had been increased in two steps from 20% to 25%.

<sup>6</sup> To which a 0 minimum reserve requirements ratio had been applied by then, similarly to leu-denominated liabilities with residual maturity of over two years.

## **(B) Prudential regulation**

- In 2003, prior to Romania's joining the European Union, the central bank issued norms setting forth certain conditions for granting loans to households:
  - capping the indebtedness level at 30% of the net income (namely the income left after the deduction of living costs) of the borrower and their families for consumer loans and at 35% of the net income for mortgage loans;
  - requiring from borrowers a down-payment of 25% of the value of purchased goods or collateral on consumer credit extended for goods purchase;
  - providing real and/or personal collateral equal to at least the amount of the loan requested for consumer loans that are not intended for goods purchasing;
  - capping the LTV ratio for housing loans at 75% of the property value and/or the cost estimate, so that the value of collateral is not lower than 133% of the loan value.
- In July-September 2005, additional lending requirements were imposed, as follows:
  - capping the overall household debt service ratio at 40% of net income conditional on the borrower's commitment arising from mortgage loans does not exceed 35% of their net income;
  - capping aggregate exposure from foreign currency-denominated loans at 300% of the credit institution's own funds, or endowment capital in the case of branches of foreign credit institutions, for loans granted to households and companies earning income in currencies other than the loan currency.
- In addition to the measures aiming credit institutions, 2006 marked the entry into force of the legal framework for regulating the lending activity of non-bank financial institutions.

Regulating this category of creditors had as the main objective to avoid loan market distortions by stopping the migration of loans from the banking sector to a non-regulated financial market segment.

Thus, in order to achieve the objective of slowing down the dynamics of credit to the private sector, the scope of the aforementioned measures was also extended so as to cover non-bank financial institutions.



- In the context of Romania's accession to the EU (in 2007), the prudential regulatory framework for lending activity was adjusted so as to be in line with the provisions of the *acquis communautaire*, including the provision on the full capital account liberalisation.
- Thus, in order to comply with Romania's commitment to capital account liberalisation, it was necessary to remove firstly the cap on credit institutions' aggregate exposure from foreign currency-denominated loans as of 1 January 2007. Keeping the cap in place would have been tantamount to a capital restriction, i.e. a breach of Romania's commitment to full capital account liberalisation at the time of EU accession.
- Additionally, in March 2007, the central bank's regulations on lending were aligned to the relevant EU practices, which did not comprise any administrative restrictions, by promoting the bank self-regulation model.

In line with the new framework, banks establish maximum indebtedness levels by category of customers based on internal lending norms, by observing the risk profile and strategy assumed by banks in relation to borrowers' financial capacity. These caps are subject to prior validation by the central bank.

After accession, the NBR's supervisory task was confined to Romanian legal entities. Much stricter prudential regulations than those in place in other European countries became inoperable because they could be easily circumvented by turning foreign bank subsidiaries (Romanian legal entities) into branches (foreign legal entities).

- In February 2008, stricter requirements were applied to the provisioning of foreign currency-denominated loans granted to borrowers earning income in currencies other than the loan currency.
- In August 2008, banks were required to amend their lending norms so that the indebtedness level of new borrowers might accommodate the debt service even assuming the materialisation of currency and interest rate risks, as well as higher fees and commissions, over the entire life of the loan.

On the same date, the legal provisions in the field of sound bank lending practices were supplemented by imposing the use of the borrower's tax record throughout the income validation process.

- In October 2011, the NBR introduced additional restrictions on foreign currency-denominated loans to households (for further details see letter E).

### **(C) Prudential supervision**

Prudential supervision of credit institutions is one of the NBR's main tasks, according to the law. To this end, the NBR is empowered to check based on reports and on-site inspections the compliance with legal provisions and the NBR regulations in order to limit and prevent risks specific to the banking activity. Based on the examinations and assessments it undertakes, the NBR ascertains to what extent the management framework, the strategies, processes and mechanism implemented by a credit institution ensure the proper management of risks given the particular risk profile of the credit institution.

In exercising its supervisory task, the NBR issues recommendations, adopts measures and imposes sanctions on the credit institutions themselves or on their executive and governing bodies in order to ensure that the proper remedial measures are adopted and compliance with the regulations in force is restored.

### **(D) Public warnings**

In the past decade, the NBR has constantly issued public warnings regarding the risks related to foreign currency loans, including CHF-denominated loans, taken by individuals earning income in currencies other than the loan currency. These recurrent warnings were disseminated via several communication channels: studies, conferences and workshops on financial stability and supervision issues and legal colloquia (available on the NBR's website), statements made by central bank representatives during the quarterly press conferences, monthly meetings with the representatives of the Romanian Banking Association and other specialised associations (Association of Financial-Banking Analysts Romania, National Association of Romanian Exporters and Importers, etc.). Most warnings were issued concomitantly with the release of prudential norms and/or restrictions. We hereby underline that these activities have a regular, ongoing nature, and are mentioned in the Annual Reports and Financial Stability Reports published on the NBR's website.

For instance, the 2006 Financial Stability Report states that "The weight of borrowings denominated in foreign currency in total credits widened noticeably [...] fostered also by lower lending rates and a stronger domestic currency. In this context, unhedged borrowers

should not be overlooked, as they are far more sensitive to interest and exchange-rate shocks”. The 2008 Financial Stability Report explicitly draws the attention to the risks related to lending in “exotic” currencies (such as CHF or JPY): “The dynamics of loans in exotic currencies could be justified by the initial lower cost, but the downside to these loans is the higher exchange rate volatility. The exchange rate change coefficients (computed as the ratio of standard change to the average exchange rate) in the case of CHF/RON and JPY/RON are higher than the specific EUR/RON coefficient (using the daily exchange rate for the period 3 January 2005 – 4 March 2008). Moreover, in times of stress, CHF becomes a safe haven for investors, which might lead to an even more important appreciation of the CHF versus all the other currencies”.

An NBR Occasional Paper (Neagu and Mărgărit, 2005) concludes that “A matter of concern is a possibly strong and long-lasting depreciation of the domestic currency, which will bring about a proportional increase in the debt service of unhedged borrowers. The higher the share of foreign currency-denominated loans in banks’ balance sheet, the stronger the danger of systemic risks to occur”. Attention is also drawn to the fact that the initially lower costs of loans denominated in foreign currency could lead to the worsening of the borrower’s debt service capacity throughout the entire life of the loan: “although this economic behaviour of households [n.a. indebtedness in foreign currency] is channelled towards reducing loan costs, the unfavourable, long-lasting movements in the domestic currency will produce a shock on household debt service and, implicitly, on households’ capacity to pay the debt service, which will have negative consequences on lenders”.

### **(E) Implementation of recommendations of the European Systemic Risk Board (ESRB) on lending in foreign currencies (2011)**

At EU level, the first recommendations on lending in foreign currencies were issued by the European Systemic Risk Board (ESRB) in 2011 (with implementation deadline in December 2012). The recommendations were not aimed at banning foreign currency-denominated loans by way of administrative measures, but at setting forth measures that would ensure borrowers the capacity to service their debt even in the context of adverse developments. The NBR has swiftly transposed all the recommendations into the national legislation.

Hence, in October 2011, the NBR issued regulations on household loans, which incorporate ESRB principles, such as:

- Establishing the maximum indebtedness level allowed for consumer loans by:  
(i) considering the risk of disposable income reduction over the entire life of the loan (implementing, to this end, a 6% cut in eligible wage earnings) and (ii) considering the following shocks when establishing the borrower's maximum indebtedness level: 0.6 percentage points for interest rate, irrespective of the currency; 35.5%, 52.6% and 40.9% exchange rate depreciation versus the EUR, the CHF and the USD respectively;
- Imposing real and/or personal collateral of at least 133% of the loan value in the case of consumer loans and reducing the initial loan maturity to 5 years at most;
- Capping the LTV ratio for housing mortgage loans at 85% for lei-denominated loans, at 80% for foreign currency-denominated loans extended to hedged borrowers, 75% for EUR-denominated loans granted to unhedged borrowers and 60% for loans in other currencies granted to unhedged borrowers.

In 2012<sup>7</sup>, the NBR also incorporated in bank regulations the ESRB recommendations on lending requirements for companies, as follows:

- The obligation of lenders to make the access to foreign currency-denominated loans of unhedged companies conditional on creditworthiness criteria ensuring the possibility of loan repayment even in the context of a severe depreciation of the currency in which companies have repayment sources;
- Creating a mechanism whereby credit institutions, Romanian legal entities, performing cross-border activity can identify the similar measures imposed by Member States in which they operate.

Up to now, other countries in the region have implemented the ESRB recommendations to a lesser extent.

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<sup>7</sup> NBR Regulation No. 17/2012 on certain lending conditions, amending and supplementing Regulation No. 24/2011 on loans to households.

## **V. Other countries in the region – approaches to the situation caused by CHF appreciation**

The measures taken by other EU Member States to deal with the challenges posed by CHF-denominated loans show that the solutions were different relative to the particular features of such loans in each country. Therefore, Romania must identify solutions that would fit its own situation. It is counterproductive to arbitrarily select only the favourable components of the measures taken by various countries without describing the related context and the associated costs.

Since the onset of the crisis, currency risk management measures intended for unhedged borrowers have been largely resorted to across Europe<sup>8</sup>. For instance, in 2008, the United Kingdom introduced a measure allowing for a delay in interest payments supported by government-backed guarantees being provided to lenders. In Croatia and Hungary, steps were taken to extend the maturity of foreign currency-denominated mortgage loans and allow for their repayment at a favourable exchange rate (the Hungarian government resorted to partial subsidisation of the foreign currency difference resulting from the conversion of foreign currency household loans into forint). Icelandic authorities moved to subsidise the interest rate on household loans for a two-year period via a tax incentive for banks. One of the conclusions of the studies focusing on such measures taken in Europe is that reducing households' debt service may benefit consumption<sup>9</sup>.

The significant CHF appreciation in early January 2015 has entailed measures tailored to the particular features of each country. Polish authorities recommended banks to come up with solutions to cut down on debtors' debt service. Croatia introduced a fixed exchange rate of the kuna against the Swiss franc. The Hungarian authorities took over much of the effort of managing the consequences of the developments in the CHF/HUF rate, as CHF-denominated loans account for approximately 50% of local government borrowings.

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<sup>8</sup> For an overview of such measures, see Liu, Y., and Rosenberg, C., 2013, *Dealing with private debt distress in the wake of the European financial crisis. A review of the economics and legal toolbox*, IMF Working Paper, February.

<sup>9</sup> IMF, 2012, *World economic outlook – Growth resuming, dangers remain*, Chapter 3: Dealing with household debt, April.

Below are details regarding the measures taken by some European countries to deal with the appreciation of the Swiss franc.

### **(A) Poland**

Against the background of the sharp strengthening of the Swiss franc, Polish authorities recommended credit institutions to come up with solutions to translate the decline in CHF money market rates into a reduction in debtors' interest costs in a fast-track procedure (National Bank of Poland, 2015). Ministry of Economy officials suggested banks should give customers the option of converting their loans into local currency, at the exchange rate prevailing on the application day at no extra cost. Moreover, the Ministry of Economy encouraged banks to introduce repayment holidays of up to three years on mortgage-backed loans and a cap on instalments at their December 2014 level. The 3M interbank rate on the Swiss market fell from -0.13% on 14 January 2015 to -0.87% on 3 February 2015, exceeding significantly the 0.5 percentage point cut in the policy rate decided by the Swiss National Bank in its 15 January meeting.

### **(B) Croatia**

The Croatian government opted for the fixing of the Swiss franc at 6.39 kuna (HRK) for as long as one year (Government of the Republic of Croatia, 2015). The fixed exchange rate is on a par with that seen prior to 15 January 2015, when the Swiss National Bank decided to discontinue the minimum exchange rate of CHF 1.20 per euro. Commercial banks had earlier proposed a similar solution, i.e. a three-month freeze on the CHF/HRK exchange rate at the level recorded before 15 January 2015. The government might endorse a central-bank plan under which CHF mortgage borrowers would be offered long-term lease contracts for the property they bought, with a buy-back option. The monthly rent could be eligible for tax deductions and banks could grant a partial debt write-off. A consumption-boosting scheme in Croatia dubbed "Fresh Start" was introduced in early February. The programme stipulates debt write-off for certain debtors by municipal authorities, utility providers, tax authorities and credit institutions. Qualifying households must have debts lower than HRK 35,000 and their monthly income should not be higher than HRK 1,250. Croats who own property or have any savings will not benefit from the deal. People reliant on state support will take precedence (Government of the Republic of Croatia, 2015).

## **(C) Hungary**

The Hungarian government is not going to interfere with the management of the impact of CHF appreciation on borrowers in this currency (Reuters, 2015). The authorities are of the opinion that the problem should be dealt with by debtors and credit institutions, and the government should merely act as a mediator in these negotiations. Such an approach differs a great deal from the solutions implemented in the past, when the authorities made broad-based, hands-on interventions.

For example, according to the legislation concerning foreign currency loans that the Hungarian Parliament passed at end-November 2014, the loans referred to therein are to be converted into forint starting 1 February 2015 at the exchange rate set by the National Bank of Hungary. The interest rate on the new loans shall be calculated based on the 3M interbank market rate for forint. At the same time, the interest margin shall be kept at the level of the risk premium for the original loan, but no higher than 4.5% for residential mortgage loans and 6.5% for the real-estate-collateralised loans. These caps are mandatory and if the bank levies administration fees, the interest margin shall be lowered accordingly. The National Bank of Hungary provided liquidity to commercial banks tantamount to roughly EUR 9 billion in November 2014 (National Bank of Hungary, 2014).

The issue of forex loans, especially CHF-denominated loans, proved to be peculiar in Hungary. Loans in Swiss francs accounted for nearly 50% of local government borrowings. These entities being left to face payment default as a result of the steep depreciation of the Hungarian forint versus the Swiss franc would have put a significant strain on the country's government budget. Under the circumstances, direct measures involving government financial backing would be substantiated to a certain extent.

## **(D) Serbia**

The government of Serbia announced its support for the commercial banks that should assess their debtors' situation on a case-by-case basis, pointing out that there is no one-size-fits-all solution to this issue (National Bank of Serbia, 2015). Other options under consideration included debt restructuring and the conversion of CHF-denominated loans into euro.

## **VI. Pseudo-remedies vs. realistic and balanced solutions**

There may be various ways of action to solve the issue of CHF-denominated loans, but any negotiated solution should be based on the following principles:

- target those individuals in real need of support;
- reasonable burden-sharing;
- not generate moral hazard, i.e. not lead to unreasonable expectations in the future (related to not paying the debt service) and not discriminate debtors in other currencies (RON, EUR, USD);
- not impair financial and banking system stability. Financial system stability is essential for: (i) ensuring financial intermediation and hence the funding of economic growth, (ii) job creation, (iii) higher household income, (iv) paving the way for credit repayment, (v) preserving depositors' confidence in the banking sector;
- comply with the EU Treaty and Romania's accession conditions, meaning not to restrict free capital movement.

### **VI.1. Unrealistic solutions**

In our opinion, the following solutions are unrealistic in terms of the cost-benefit ratio:

- (A) NBR intervention to bring the CHF/RON exchange rate to the level of 14 January 2015 (CHF/RON=3.7);
- (B) Conversion of CHF-denominated loans into lei at exchange rates other than the market exchange rate applicable on the conversion date;
- (C) Conversion of CHF- and EUR-denominated loans into lei at exchange rates other than the market exchange rate applicable on the conversion date.

*(A) NBR intervention to bring the CHF/RON exchange rate to the level of 14 January 2015 (CHF/RON=3.7)*

The costs of the assumed implementation of such a solution in terms of financial stability and economic growth have been detailed in Section I. The CHF/RON pair is not directly quoted, but via the euro. Thus, the current EUR/CHF exchange rate would call for NBR intervention



in the forex market to generate an appreciation of the EUR/RON exchange rate from around 4.4 (where it currently stands) to 3.7. Such an operation would keep the desired level in place only in the short run, because the level would be unsustainable and would entail arbitrage. The associated costs would translate into FX reserve losses, a seriously detrimental impact on exports and a larger disequilibrium on the FX market.

*(B) Conversion of CHF-denominated loans into lei at exchange rates other than the market exchange rate applicable on the conversion date*

The provisions of *Directive 2014/17/EU on credit agreements for consumers relating to residential immovable property* have been unduly invoked when promoting the solution to convert CHF-denominated loans at a different exchange rate from the current one. The Directive does not stipulate the possibility of converting loans to an alternative currency at the historical exchange rate, but it explicitly states that conversion shall be done at the market exchange rate. Moreover, the Directive does not apply to credit agreements existing before its transposition into national law (the deadline for transposing the Directive is 21 March 2016).

According to the Directive, Member States need to set up a regulatory framework ensuring: (i) the consumer's right to convert the credit agreement into an alternative currency "at the market exchange rate applicable on the day of application for conversion unless otherwise specified in the credit agreement", (ii) any other arrangements available to consumers to limit their exposure to exchange rate risk under the credit agreement (Art. 23), or (iii) that the creditor warns the consumer on a regular basis at least where the value of the total amount payable by the consumer which remains outstanding or of the regular instalments varies by more than 20% from what it would be if the exchange rate applicable at the time of the conclusion of the credit agreement were applied. The warning sets out where applicable the right to convert into an alternative currency and the conditions for doing so and explains any other applicable mechanism for limiting the exchange rate risk to which the consumer is exposed.

In order to quantify the possible impact on financial stability assuming the conversion of CHF-denominated loans into lei at exchange rates other than the market exchange rate applicable on the conversion date, the NBR has conducted an impact assessment on credit institutions' profit and loss account. The aim is to find whether banks would cope with such a scenario without jeopardising financial soundness indicators to below the EU-wide critical threshold. The outcome in terms of the loss incurred by banks is summarised in the table below:

<b>Conversion rate</b>	<b>Loss incurred by banks</b>
Historical rate (month of extending the loan)	lei 5.7 billion (0.8% of GDP)
Historical rate + 10%	lei 5.1 billion (0.7% of GDP)
Historical rate + 20%	lei 4.5 billion (0.6% of GDP)
Historical rate + 30%	lei 3.9 billion (0.5% of GDP)
Monthly average rate (credit agreement date – present)	lei 3.2 billion (0.4% of GDP)

Assuming credit conversion **at the historical rate** in the month of extending the loan, banks would incur a loss (calculated as the difference between the exchange rate on 23 January 2015, i.e. 4.5817, and the historical CHF/RON rate) estimated at lei 5.66 billion (around 0.85% of GDP)<sup>10</sup>. Four credit institutions would see their solvency ratio fall below the minimum regulated threshold. The solvency ratio across the banking sector would diminish (according to available data, as of September 2014) from 17.06% to 14%.

Credit conversion **at the historical rate + 10%** would generate a loss worth around lei 5.1 billion for the entire banking sector and four credit institutions would see their solvency ratio fall below the minimum regulated threshold. The solvency ratio across the banking sector would diminish (according to available data, as of September 2014) from 17.06% to 14.3%.

Credit conversion **at the historical rate + 20%** would generate a loss worth around lei 4.5 billion for the entire banking sector and three credit institutions would see their solvency ratio fall below the minimum regulated threshold. The solvency ratio across the banking sector would diminish (according to available data, as of September 2014) from 17.06% to 14.6%.

Credit conversion **at the historical rate + 30%** would generate a loss worth around lei 3.9 billion for the entire banking sector. Two credit institutions would see their solvency ratio fall below the minimum regulated threshold. The solvency ratio across the banking sector would diminish (according to available data, as of September 2014) from 17.06% to 14.92%.

Credit conversion **at a monthly average rate** (from the credit agreement date to present) would generate a loss worth around lei 3.2 billion for the entire banking sector and two credit institutions would see their solvency ratio fall below the minimum regulated threshold.

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<sup>10</sup> Simulation based on individual credit data available at the Credit Bureau as of December 2014.

The solvency ratio across the banking sector would diminish (according to available data, as of September 2014) from 17.06% to 15.3%.

*(C) Conversion of CHF- and EUR-denominated loans into lei at exchange rates other than the market exchange rate applicable on the conversion date*

The NBR extended the scope of simulations on the conversion of CHF-denominated loans by including EUR-denominated credit portfolios as well, assuming exchange rates other than the market rate applicable on the conversion date. Similarly to the simulations above, the aim is to find whether banks would cope with such a scenario without jeopardising financial soundness indicators to below the EU-wide critical threshold (meaning that the solvency ratio should not fall below the minimum regulated threshold). The outcome of the assessments is summarised in the table below.

Assuming the cumulated conversion of CHF- and EUR-denominated loans **at the historical rates** in the month of extending the loan, banks would incur a loss (calculated as the difference between historical rates and the exchange rates on 23 January 2015, when the CHF/RON was 4.5817 and the EUR/RON was 4.4935) estimated at lei 9.8 billion<sup>11</sup>. The solvency ratio across the banking sector would diminish (according to available data, as of September 2014) from 17.06% to 11.7%. Four credit institutions would see their solvency ratio fall below the minimum regulated threshold.

<b>Conversion rate</b>	<b>Loss incurred by banks</b>
Historical rate (month of extending the loan)	lei 9.8 billion (1.4% of GDP)
Historical rate + 10%	lei 7.3 billion (1.0% of GDP)
Historical rate + 20%	lei 5.5 billion (0.8% of GDP)
Historical rate + 30%	lei 4.2 billion (0.6% of GDP)
Monthly average rate (credit agreement date – present)	lei 4.5 billion (0.6% of GDP)

Cumulated credit conversion **at the historical rates + 10%** would generate a loss worth around lei 7.3 billion for the entire banking sector. The solvency ratio across the banking sector would diminish (according to available data, as of September 2014) from 17.06% to 13.1%. Four credit institutions would see their solvency ratio fall below the minimum regulated threshold.

<sup>11</sup> Simulation based on individual credit data available at the Credit Bureau as of December 2014.

Cumulated credit conversion **at the historical rates + 20%** would generate a loss worth around lei 5.5 billion for the entire banking sector. The solvency ratio across the banking sector would diminish (according to available data, as of September 2014) from 17.06% to 14.1%. Four credit institutions would see their solvency ratio fall below the minimum regulated threshold.

Cumulated credit conversion **at the historical rates + 30%** would generate a loss worth around lei 4.2 billion for the entire banking sector. The solvency ratio across the banking sector would diminish (according to available data, as of September 2014) from 17.06% to 14.8%. Two credit institutions would see their solvency ratio fall below the minimum regulated threshold.

Cumulated credit conversion **at monthly average rates** would generate a loss worth around lei 4.5 billion for the entire banking sector. The solvency ratio across the banking sector would diminish (according to available data, as of September 2014) from 17.06% to 14.6%, considering that the indicator would fall below the required threshold in the case of two banks.

## **VI.2. Realistic solutions**

The NBR advocates the implementation of customised solutions, negotiated between the parties directly involved in the credit agreement (i.e. the credit institution and the borrower). The solutions take into account the specifics of CHF-denominated loans, in particular, and FX loans in general on the Romanian market and combine: (i) free market principles, (ii) state support for vulnerable social groups, and (iii) the carrying out by the NBR of its legal tasks on safeguarding financial stability.

The realistic solutions are complementary and each bank may apply an adequate mix tailored to each individual case. They are equally valid for loans in other currencies as well and may be optimised on a case-by-case basis.

The solutions which may be deemed as both realistic and balanced include those whose outcome is keeping the domestic currency equivalent of monthly instalments of CHF-denominated loans close to the December 2014 level, with several options available to the parties to credit agreements:

*(A) Converting CHF-denominated loans into lei at the market exchange rate and/or granting a discount on the debt service amount – which may be tantamount to a conversion at an exchange rate below the market rate*

*(B) Temporary cut in the interest rate on CHF-denominated loans in order to offset the impact of the stronger CHF*

This may be a valid option, given that both the benchmark rate of the Swiss National Bank and the CHF market rate have reached negative values. The NBR has conducted an impact assessment to estimate the interest rates on CHF-denominated loans that would fully offset the effect of CHF appreciation. Making up for the full impact of the higher CHF/RON exchange rate (by keeping the monthly instalment in line with the level of the CHF/RON prior to the January 2015 shock) would be possible assuming a cut in interest rates: (i) by 2.2 percentage points to 1.85% for housing loans (from an average lending rate of 4.05% currently) and (ii) by 2.32 percentage points to 2.97 percent for consumer loans (from an average lending rate of 5.29% currently).

*(C) Implementing a debt rescheduling scheme, with the award of a compensation by the government*

Such a solution would be efficient in light of at least four arguments. First and foremost, it would contribute to a higher disposable income of the beneficiaries of this scheme (well-performing borrowers), with favourable effects on consumption and economic growth. Secondly, it represents a burden-sharing approach among creditors, borrowers and the government. Thirdly, enforcing the relevant law implies favourable effects also in terms of managing the structural liquidity surplus in the banking sector. Fourthly, the measure targets the segment of vulnerable borrowers, with gross monthly incomes of up to lei 3,000, given households' high degree of indebtedness and its uneven distribution across various income groups (see Chapter 2 and Table 8, Annex 2). The measure proposed by the government consists in amending Government Emergency Ordinance No. 46/2014 by extending its scope of applicability and introducing simpler and more flexible loan rescheduling procedures, and may be applied to CHF-denominated loans as well.

The legislative enhancements are aimed at providing some relief to low-income borrowers facing temporary difficulties in repaying their loans, while also improving the mechanism so as to be promoted by banks and requested by eligible debtors. The main proposals by the Ministry of Public Finance to enhance Government Emergency Ordinance No. 46/2014 refer

to: (i) rendering the rescheduling mechanism and the maturity more flexible vis-à-vis borrowers' financial capacity, (ii) extending the scope of eligible debtors, (iii) simplifying the administrative procedures for loan rescheduling, (iv) strengthening borrower protection in relation to banks, which remain bound, during the rescheduling process, not to tighten contractual terms regarding the interest rate, the level of commissions, or fresh collateral.

With a view to tailoring banking prudential regulations to the new financial market conditions, the NBR has initiated several legislative changes to facilitate the conversion of foreign currency-denominated loans into lei and to ensure the effective enforcement of Government Emergency Ordinance No. 46/2014 with the amendments proposed by the Ministry of Public Finance:

a) *Amending NBR Regulation No. 17/2012 on certain lending conditions*

At present, in line with the provisions of Art. 4, para. (1) letter c) of the Regulation, restructuring operations carried out for reasons related to the borrower's financial distress are exempted from the restrictions on the degree of indebtedness, the maximum term of a consumer loan, collateralisation, etc. Given that, pursuant to the eligibility criteria laid down in Government Emergency Ordinance No. 46/2014, rescheduling operations address well-performing borrowers whose request should not be automatically linked to the financial distress criterion, the same derogations need to apply to operations stemming from the approval of requests submitted to lenders by virtue of Government Emergency Ordinance No. 46/2014 or of requests to convert a foreign currency-denominated credit into domestic currency or into the currency in which the borrower's funds for credit repayment are denominated or indexed.

b) *Amending NBR Regulation No. 16/2012 on the classification of loans and investments, as well as the establishment and use of prudential value adjustments*

At present, NBR Regulation No. 16/2012 institutes a stricter framework applicable to restructuring operations when calculating prudential filters, with a view to deterring the increasingly widespread practices of conducting restructuring operations to circumvent prudential requirements. Given that (i) this framework might hinder the implementation of government programmes such as those currently under debate, amid the unfavourable developments related to the stronger CHF and that (ii) the said Regulation provides for a stricter classification of a borrower's financial performance

than prior to restructuring, the NBR has drafted amendments to Regulation No. 16/2012. With regard to the operations for which tax incentives or other benefits are granted to borrowers by law, the draft Regulation introduces a provision according to which the said operations shall be exempted from the stricter framework mentioned above, considering that the positive effects on financial performance resulting from measures such as the aforementioned ones need to be taken into account.

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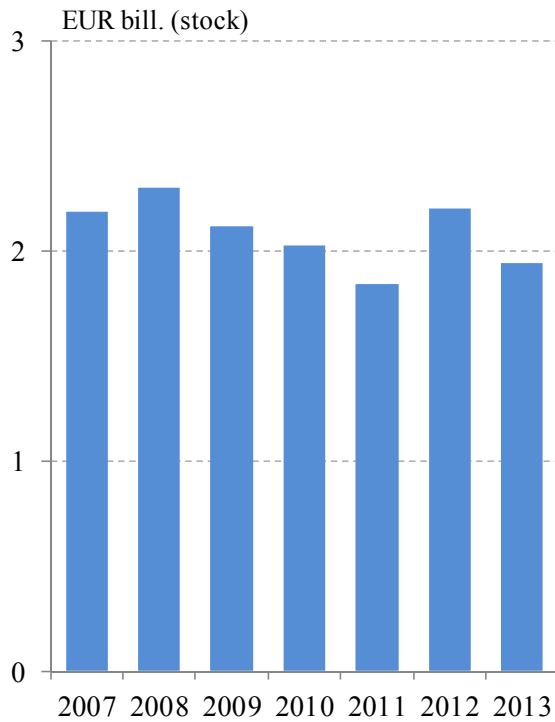
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## **ANNEXES**



**Chart 1. Swiss direct investment in Romania**



Source: NBR, Ministry of Foreign Affairs



**Good to know**

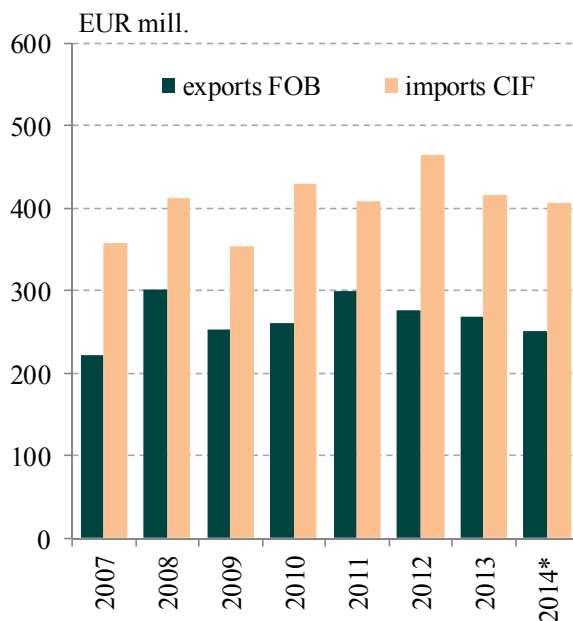
**CHF-denominated deposits totalled CHF 1.1 bill. in December 2014 (1.3% of total deposits)**

2,417 companies in 2013

**Top 15 investors:**

- ☐ **building materials:** Holcim, Swisspor, Sika
- ☐ **energy:** ABB
- ☐ **petrochemicals:** Greenfiber, Ameropa
- ☐ **pharmaceuticals:** Roche, Sandoz, Helvetica Profarm
- ☐ **food industry:** Nestlé, Pacovis, Carpalat, Valvis
- ☐ **tobacco:** Philip Morris
- ☐ **agriculture, stockbreeding:** Karpaten Meat

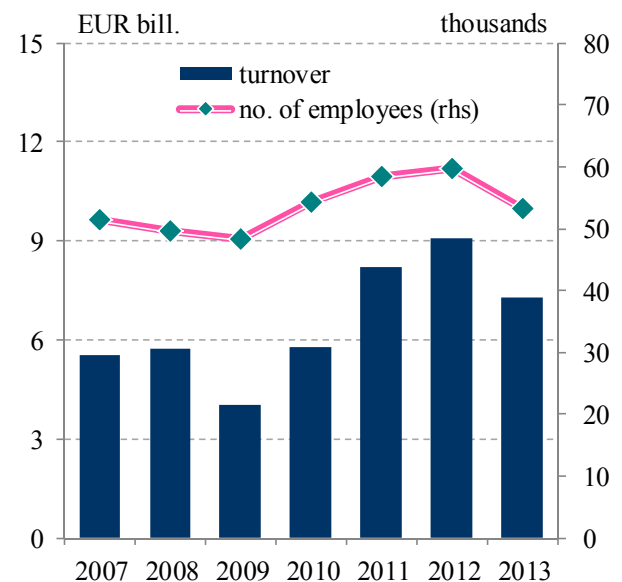
**Chart 2. Trade flows with Switzerland**



\* 10 months

Source: NBR

**Chart 3. Economic activity of Swiss capital companies operating in Romania**



**Table 1. Breakdown of credit to non-financial corporations and households by currency**

	Dec.2013		Nov.2014	
	RON mill.	Share (%)	RON mill.	Share (%)
<b>Credit to the private sector – total, of which:</b>	<b>218,462.3</b>		<b>213,665.7</b>	
– RON	85,354	39.07	93,601.1	43.81
– EUR	118,384.5	54.19	106,880.5	50.02
– USD	2,834.7	1.30	3,170	1.48
– CHF	11,868.6	5.43	9,965.8	4.66

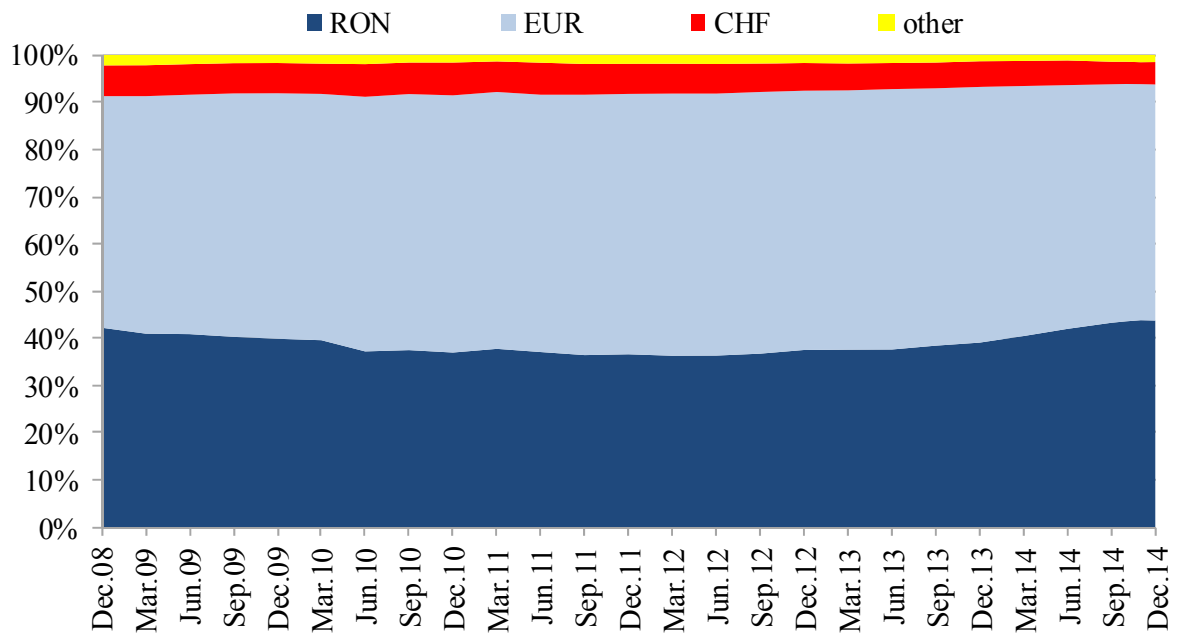
Source: Monetary Survey, NBR calculations

**Table 2. Developments in credit to the private sector by currency**

<b>Stock of credit to households (RON mill.)</b>	<b>Dec.08</b>	<b>Dec.09</b>	<b>Dec.10</b>	<b>Dec.11</b>	<b>Dec.12</b>	<b>Dec.13</b>	<b>Nov.14</b>
<b>total, of which:</b>	<b>96,726</b>	<b>98,160</b>	<b>102,100</b>	<b>104,256</b>	<b>104,461</b>	<b>103,244</b>	<b>101,718</b>
RON	38,301	36,389	35,915	35,046	34,378	34,622	39,884
EUR	45,945	49,208	51,995	55,352	57,081	56,979	51,851
CHF	12,020	12,162	13,815	13,527	12,729	11,418	9,677
USD	452	394	367	322	266	220	301
<b>Stock of credit to non-financial corporations (RON mill.)</b>	<b>Dec.08</b>	<b>Dec.09</b>	<b>Dec.10</b>	<b>Dec.11</b>	<b>Dec.12</b>	<b>Dec.13</b>	<b>Nov.14</b>
<b>total, of which:</b>	<b>94,837</b>	<b>95,404</b>	<b>104,618</b>	<b>115,374</b>	<b>118,789</b>	<b>112,340</b>	<b>108,658</b>
RON	38,053	35,865	39,978	44,610	48,824	48,994	51,788
EUR	51,805	55,557	60,985	66,276	65,906	60,326	53,695
CHF	859	725	714	673	511	447	286
USD	4,094	3,236	2,930	3,794	3,526	2,558	2,845

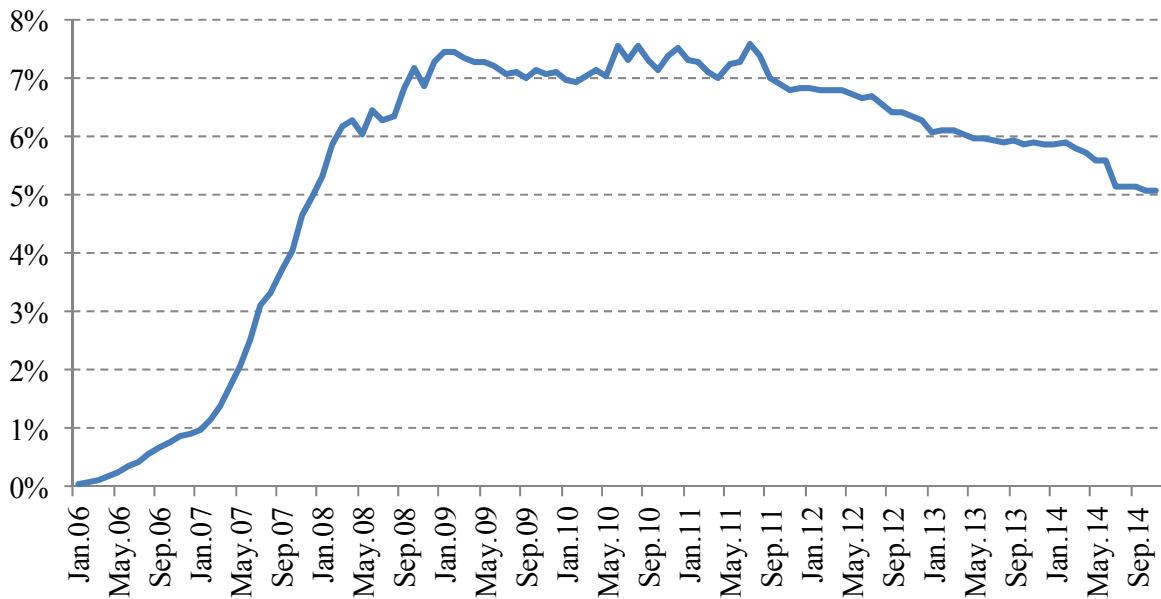
Source: Starting 2010, Monetary Survey. For 2008 and 2009, data come from Central Credit Register and Credit Bureau.

**Chart 1. Credit to the private sector – breakdown by currency**



Source: Monetary Survey, NBR calculations

**Chart 2. Share of CHF-denominated loans in total credit to the private sector (households and non-financial corporations)**



Source: Central Credit Register, NBR calculations

**Table 3. Number of debtors, households' sector – breakdown by currency**

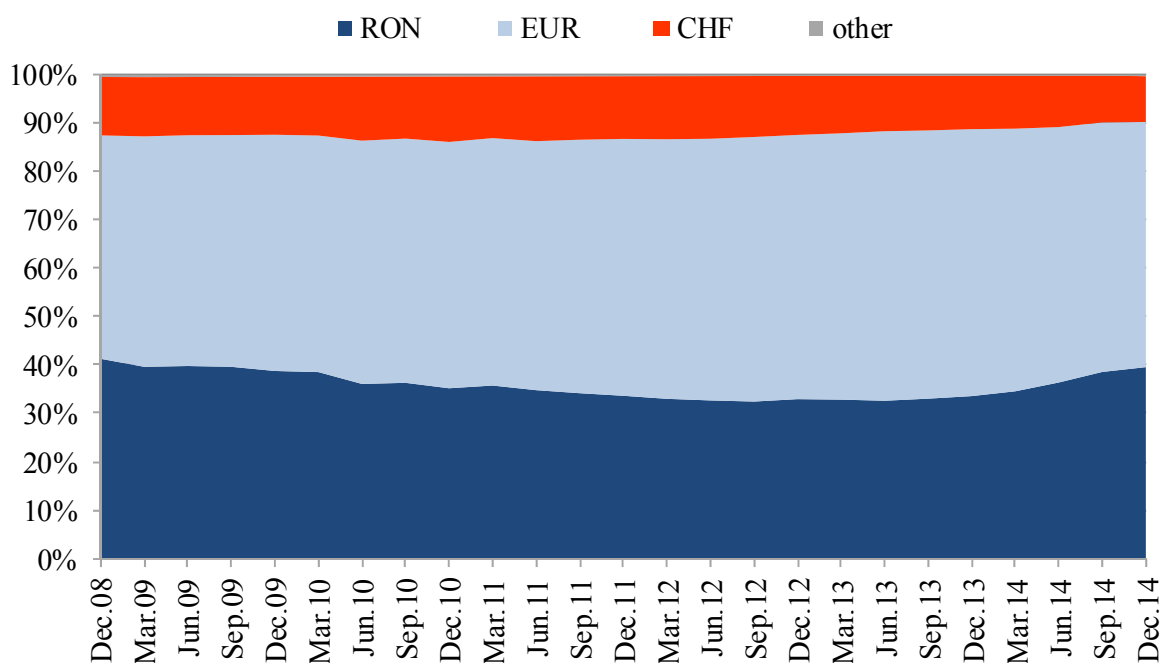
	Dec.08	Dec.09	Dec.10	Dec.11	Dec.12	Dec.13	Nov.14
Total, of which:	4,139,250	4,070,031	3,929,726	3,791,204	3,809,976	3,661,744	3,513,992
RON	3,808,537	3,744,266	3,616,830	3,489,357	3,516,800	3,378,660	3,260,555
EUR	646,218	641,503	599,410	557,942	529,454	485,804	428,036
CHF	110,638	109,218	103,668	92,355	87,547	84,399	75,412
USD	16,614	14,623	12,538	10,159	8,516	6,352	5,054

Source: Central Credit Register, Credit Bureau

**Table 4. Number of loans to households – breakdown by currency**

	Dec.08	Dec.09	Dec.10	Dec.11	Dec.12	Dec.13	Nov.14
Total, of which:	6,908,207	6,809,094	6,487,585	6,117,429	6,132,249	5,888,715	5,654,635
RON	6,013,411	5,935,696	5,679,021	5,377,033	5,435,058	5,249,041	5,094,670
EUR	757,465	742,017	685,050	631,239	594,173	540,932	474,345
CHF	119,748	115,979	110,409	98,546	94,190	92,142	80,275
USD	17,513	15,331	13,035	10,539	8,767	6,543	5,293

Source: Central Credit Register, Credit Bureau

**Chart 3. Loans to households – breakdown by currency**

Source: Monetary Survey, NBR calculations



**Table 5. Loans to households in CHF – breakdown by loan size (November 2014)**

Type of loan	CHF loans outstanding (RON)	Debtors with CHF loans (%)	NPL ratio for CHF loans (%)
Total exposure	9,761,462,227	-	12.00
Exposures > RON 20,000	9,600,924,343	69	11.84
Exposures < RON 20,000	160,537,884	31	20.65

Source: Central Credit Register, Credit Bureau, NBR calculations

Note: The analysis covers only information referring to on-balance-sheet loans notified by credit institutions to CCR and CB. Existing databases cover about 99% of total loans to households according to the Monetary Survey.

**Table 6. Information on CHF loans by year of credit agreement**

Year	Loans granted to households (RON mill.)	Number of debtors	Number of loans
2005	3	409	415
2006	185	10,359	10,859
2007	4,744	54,599	56,923
2008	7,124	58,493	62,221
2009	217	2,749	2,771
2010	309	2,693	2,738
2011	414	3,377	3,446
2012	227	1,893	1,919
2013	131	1,136	1,162
2014	113	752	761

Source: Central Credit Register, Credit Bureau, NBR calculations

Note: Excluding the loans granted before 2008, all reported data are at end of year. In the case of the loans granted before 2008, information available in September 2008 has been used.

**Table 7. Average value of loans to households (RON)**

	Dec.08	Dec.09	Dec.10	Dec.11	Dec.12	Dec.13	Nov.14
Total, of which:	14,002	14,416	15,738	17,042	17,035	17,533	17,988
RON	6,369	6,131	6,324	6,518	6,325	6,596	7,829
EUR	60,656	66,316	75,899	87,688	96,069	105,335	109,310
CHF	100,374	104,860	125,122	137,261	135,141	123,920	120,552
USD	25,819	25,697	28,117	30,572	30,284	33,654	56,924

Source: Starting 2010, Monetary Survey. For 2008 and 2009, data come from Central Credit Register and Credit Bureau.

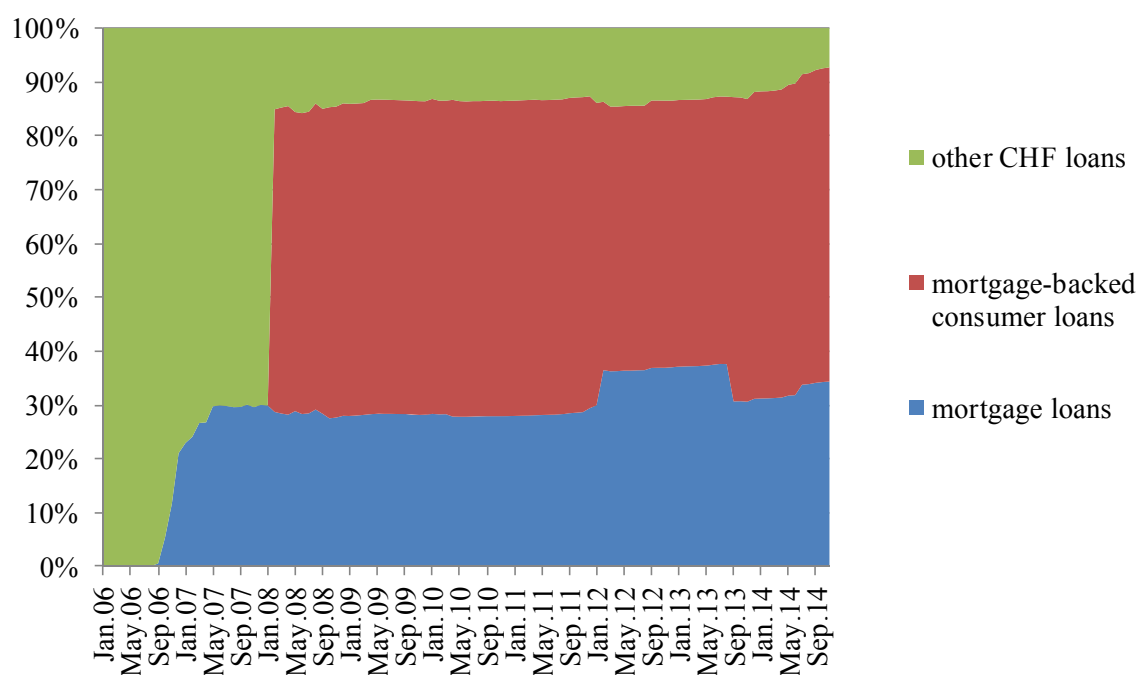
**Table 8. Features of CHF loans to households by net average monthly wage income (June 2014)**

	Income brackets	Average loan value (RON thou)	Number of debtors (%)	Average residual maturity (years)	Average debt-to-income ratio (%)	
Net average monthly wage income brackets	(0;500]	62.07	16.4	10.53	201.48	
	(500;900]	89.31	12.8	12.00	123.27	
	(900;1,500]	104.77	21.2	13.62	83.00	
	(1,500;2,000]	124.43	13.2	14.62	65.14	
	(2,000;2,500]	136.15	9.5	14.94	55.70	
	(2,500;3,000]	142.56	7.3	14.74	48.01	
	(3,000;3,500]	156.97	4.9	15.33	43.99	
	(3,500;4,000]	176.29	3.3	15.67	42.46	
	(4,000;4,500]	193.45	2.2	15.80	40.97	
	(4,500;5,000]	211.34	1.5	16.75	38.73	
	(5,000;5,500]	215.85	1.2	16.89	35.93	
	(5,500;6,000]	226.32	1.0	16.65	35.48	
	(6,000;6,500]	226.65	0.8	16.94	32.75	
	>6,500	281.76	4.6	17.28	26.58	
	Total	125.86	100	13.76	91.24	
		<=1,500	87.25	50.4	12.20	131.88
		<=2,500	100.58	73.2	12.99	109.91
	<=3,500	107.58	85.3	13.28	100.85	

*Source: National Agency for Fiscal Administration, Central Credit Register, Credit Bureau, NBR calculations*

Note: CHF loan data have been taken from the Central Credit Register and the Credit Bureau. In order to identify the net average monthly wage and compute the debt-to-income ratio, the CHF loan data set has been intersected with the wage income dataset for December 2013. The coverage of CHF bank exposure is about 65%. With a view to having relevant information about debt service, the outliers in terms of DTI and other loan characteristics were excluded. DTI is computed using solely the borrower's income, as there is no information available on co-borrower's income. Monthly loan instalments are based on the assumption of constant annuity.

**Chart 4. CHF loans to households – breakdown by destination**



Source: Central Credit Register, NBR calculations

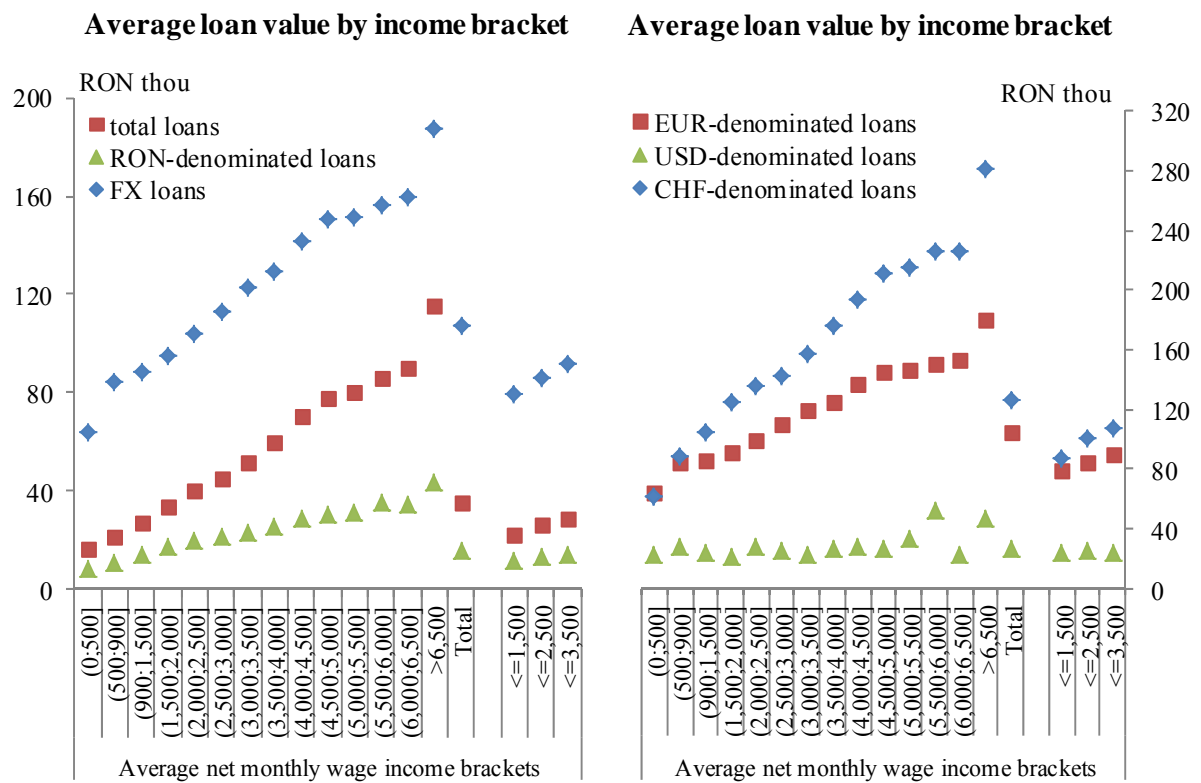
**Table 9. CHF loans to households – breakdown by destination and income brackets (June 2014)**

Net average monthly wage income	Mortgage loans	Mortgage-backed consumer loans	Other consumer loans
(0;700]	14.38	12.47	21.92
(700;1,500]	23.45	19.89	32.50
(1,500;2,500]	20.35	24.58	23.27
(2,500;3,500]	13.09	15.19	12.13
(3,500;5,000]	9.95	11.90	5.38
(5,000;7,000]	7.35	6.83	2.65
>7,000	11.43	9.14	2.15

Source: National Agency for Fiscal Administration, Central Credit Register, Credit Bureau, NBR calculations

Note: CHF loan data have been taken from the Central Credit Register and the Credit Bureau. In order to identify the net average monthly wage and compute the debt-to-income ratio, the CHF loan data set has been intersected with the wage income data set for December 2013. The coverage of CHF bank exposure is about 65%.

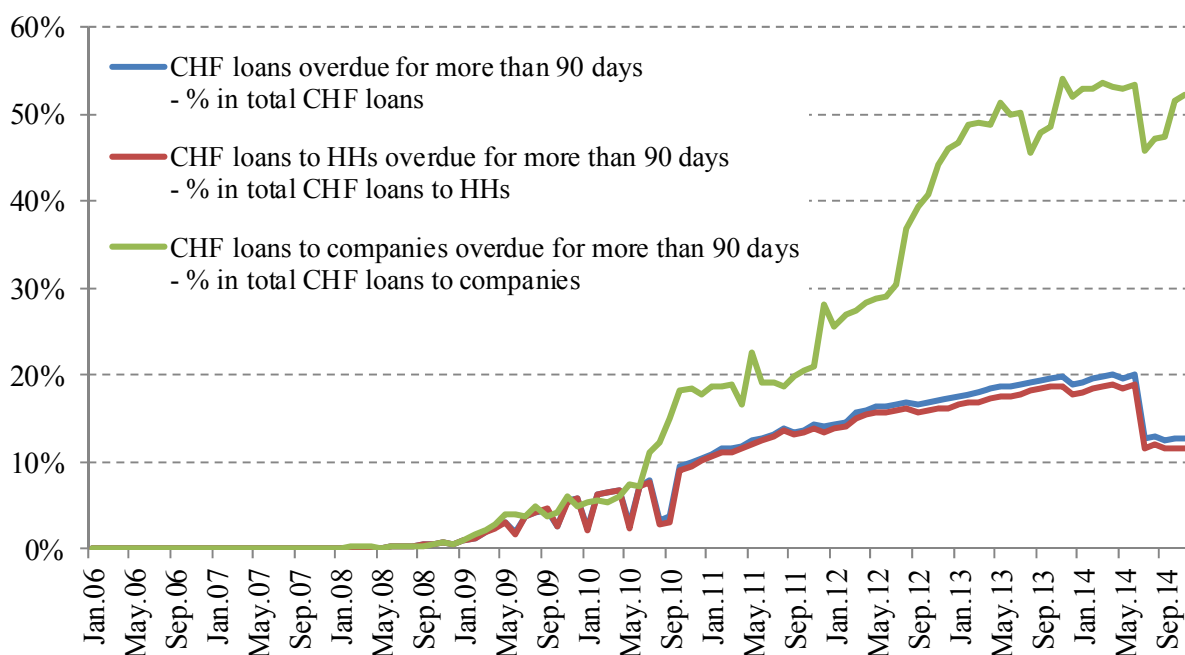
**Chart 5. Average loan value by currency and monthly wage income bracket**



Source: National Agency for Fiscal Administration, Central Credit Register, Credit Bureau, NBR calculations

Note: CHF loan data have been taken from the Central Credit Register and the Credit Bureau. In order to identify the net average monthly wage and compute the debt-to-income ratio, the CHF loan data set has been intersected with the wage income data set for December 2013. The coverage of CHF bank exposure is about 65%.

**Chart 6. CHF loans overdue for more than 90 days**



Source: Central Credit Register, NBR calculations

### **Simulation of the impact of the exchange rate increase and the interest rate decrease on monthly loan instalments**

The increase in the CHF/RON exchange rate from 2.5444 (December 2008) to 4.4840 (26 January 2015), with the interest rate remaining unchanged since December 2008 (contract agreement date of a standard CHF-denominated loan) triggered a 76% hike in monthly loan instalments (1st scenario in Tables 10-11). For a similar EUR-denominated loan, the monthly instalments increased by only 14% in the same time period.

The cumulative impact of the exchange rate increase and the interest rate decrease (2nd scenario in Tables 10-11) on the monthly instalment of a standard loan led to: (i) a 56% increase for CHF-denominated loans and (ii) a 4% decrease for EUR-denominated loans (from December 2008 to January 2015).

In assessing the impact on monthly instalments, the following assumptions were taken into account: (i) the standard loan in amount of RON 100,000, CHF equivalent, EUR equivalent in December 2008, (ii) the original interest rates of 10% (RON), 6% (CHF), 8% (EUR) in December 2008, (iii) interest rates used in November 2014 and January 2015 respectively stand at 5% (RON), 4% (CHF), 5% (EUR), (iv) the initial maturity is 20 years, and (v) the constant annuity payment formula was used to estimate the monthly loan instalment.

**Table 10. Simulation of the change in the monthly loan instalment of a notional amount of RON 100,000 extended in Dec. 2008, CHF equivalent, EUR equivalent (initial maturity = 20 years)**

		<i>1<sup>st</sup> scenario – exchange rate impact (interest rates are assumed constant)</i>	<i>2<sup>nd</sup> scenario – exchange rate and interest rate impact (interest rates are updated to their Nov. 2014 level and applied to the outstanding loan amount)</i>	<i>1<sup>st</sup> scenario – exchange rate impact (interest rates are assumed constant)</i>	<i>2<sup>nd</sup> scenario – exchange rate and interest rate impact (interest rates are updated to their Nov. 2014 level and applied to the outstanding loan amount)</i>
<i>Credit agreement date</i>	<i>Dec. 2008</i>	<i>Nov. 2014</i>		<i>Jan. 2015</i>	
RON-denominated loan	965	965	721	965	721
CHF-denominated (RON equivalent)	716	1,037	915	1,263	1,114
EUR-denominated (RON equivalent)	836	946	790	957	800

*Source: NBR calculations*

**Table 11. Details on the simulation of the change in the monthly loan instalment of a notional amount of RON 100,000 extended in Dec. 2008, CHF equivalent, EUR equivalent (initial maturity = 20 years)**

		<i>1<sup>st</sup> scenario – exchange rate impact (interest rates are assumed constant)</i>	<i>2<sup>nd</sup> scenario – exchange rate and interest rate impact (interest rates are updated to their Nov. 2014 level and applied to the outstanding amount of the loan)</i>	<i>1<sup>st</sup> scenario – exchange rate impact (interest rates are assumed constant)</i>	<i>2<sup>nd</sup> scenario – exchange rate and interest rate impact (interest rates are updated to their Nov. 2014 level and applied to the outstanding amount of the loan)</i>
<b>Credit agreement date</b>	<b>Dec. 2008</b>	<b>Nov. 2014</b>		<b>Jan. 2015</b>	
Outstanding balance, RON equivalent	100,000	87,317	87,317	86,601.8	86,601.8
RON interest rate, % per annum	10	10	5	10	5
<b>Monthly instalment in RON</b>	<b>965.0</b>	<b>965.0</b>	<b>720.8</b>	<b>965.0</b>	<b>720.8</b>
CHF loan outstanding balance	39,302	32,073	32,073.1	31,830.1	31,789.4
CHF loan outstanding balance, RON equivalent	100,000	118,103	118,103	142,726.2	142,543.6
CHF interest rate, % per annum	6	6	4	6	4
<b>Monthly instalment in CHF</b>	<b>281.6</b>	<b>281.6</b>	<b>248.5</b>	<b>281.6</b>	<b>248.5</b>
<b>Monthly instalment, RON equivalent</b>	<b>716.4</b>	<b>1,036.8</b>	<b>915.2</b>	<b>1,262.6</b>	<b>1,114.4</b>
Average CHF/RON exchange rate	2.5444	3.6823	3.6823	4.4840	4.4840
EUR loan outstanding balance	25,541	21,620.0	21,620.0	21,480.5	21,442.9
EUR loan outstanding balance, RON equivalent	100,000	95,752.7	95,752.7	96,232.8	96,064.0
EUR interest rate, % per annum	8	8	5	8	5
<b>Monthly instalment in EUR</b>	<b>213.6</b>	<b>213.6</b>	<b>178.5</b>	<b>213.6</b>	<b>178.5</b>
<b>Monthly instalment, RON equivalent</b>	<b>836.4</b>	<b>946.2</b>	<b>790.4</b>	<b>957.1</b>	<b>799.5</b>
Average EUR/RON exchange rate	3.9153	4.4289	4.4289	4.4800	4.4800

Source: NBR calculations

**Table 12. The impact of CHF appreciation on the debt-to-income (DTI) ratio by net monthly wage income bracket (June 2014)**

Net monthly wage income	DTI (average) prior to CHF appreciation, %*	DTI (average) after CHF appreciation, %*	Change in DTI (average) following CHF appreciation (pp)	Change in monthly instalment, average values, RON
(1)	(2)	(3)	(3)-(2)	
(0;500]	201.5	233.7	32.2	100.3
(500;900]	123.3	143.0	19.7	135.5
(900;1,500]	83.0	96.3	13.3	156.7
(1,500;2,000]	65.1	75.6	10.4	180.6
(2,000;2,500]	55.7	64.6	8.9	198.6
(2,500;3,000]	48.0	55.7	7.7	209.5
(3,000;3,500]	44.0	51.0	7.0	227.5
(3,500;4,000]	42.5	49.3	6.8	252.9
(4,000;4,500]	41.0	47.5	6.6	278.2
(4,500;5,000]	38.7	44.9	6.2	294.1
(5,000;5,500]	35.9	41.7	5.7	301.9
(5,500;6,000]	35.5	41.2	5.7	325.3
(6,000;6,500]	32.8	38.0	5.2	327.4
>6,500	26.6	30.8	4.3	400.3
<b>Total</b>	<b>91.2</b>	<b>105.8</b>	<b>14.6</b>	<b>183.1</b>
<b>&lt;=1,500</b>	131.88	152.98	21.1	132.9
<b>&lt;=2,500</b>	109.91	127.50	17.6	150.1
<b>&lt;=3,500</b>	100.85	116.99	16.1	159.6

\* A 16% depreciation shock was considered (the figure reflects the change in average CHF/RON exchange rate in February 2015 against June 2014).

*Source: National Agency for Fiscal Administration, Central Credit Register, Credit Bureau, NBR calculations*



Table 1. Forecast of Romania's main macroeconomic indicators

	2013		1995-2010	Annual percentage change					
	RON bn.	Current prices		% of GDP	2011	2012	2013	2014	2015
GDP	637.6	100.0	3.0	1.1	0.6	3.4	<b>3.0</b>	<b>2.7</b>	<b>2.9</b>
Private consumption	395.0	62.0	5.6	0.8	1.2	1.2	<b>5.0</b>	<b>3.0</b>	<b>2.7</b>
Public consumption	90.5	14.2	0.2	0.6	0.4	-4.8	<b>2.5</b>	<b>0.3</b>	<b>3.2</b>
Gross fixed capital formation	151.6	23.8	5.9	2.9	0.1	-7.9	<b>-5.4</b>	<b>3.5</b>	<b>4.1</b>
Exports (goods and services)	253.4	39.7	9.3	11.9	1.0	16.2	<b>8.4</b>	<b>5.7</b>	<b>5.8</b>
Imports (goods and services)	257.6	40.4	12.8	10.2	-1.8	4.2	<b>6.6</b>	<b>5.8</b>	<b>6.3</b>
Contribution to GDP growth		Domestic demand	5.8	1.4	0.9	-2.1	<b>2.2</b>	<b>2.7</b>	<b>3.1</b>
		Inventories	-0.4	-0.2	1.4	1.2	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>
		Net exports	-2.2	-0.1	1.1	4.3	<b>0.6</b>	<b>0.0</b>	<b>-0.2</b>
Unemployment rate (a)			6.9	7.2	6.8	7.1	<b>7.0</b>	<b>6.9</b>	<b>6.8</b>
Unit labour cost – economy-wide			28.2	-5.8	3.5	-1.3	<b>1.8</b>	<b>0.9</b>	<b>1.5</b>
Real unit labour cost			-1.0	-10.1	-1.4	-4.5	<b>-0.6</b>	<b>-1.4</b>	<b>-0.9</b>
Saving rate of households (b)			-2.9	-7.0	-8.0	-10.4	<b>-13.3</b>	<b>-13.4</b>	<b>-14.2</b>
GDP deflator			29.5	4.7	4.9	3.4	<b>2.4</b>	<b>2.3</b>	<b>2.5</b>
Harmonised consumer price index			-	5.8	3.4	3.2	<b>1.4</b>	<b>1.2</b>	<b>2.5</b>
Trade balance (goods) (c)			-7.9	-6.7	-5.8	-3.9	<b>-3.6</b>	<b>-3.6</b>	<b>-3.6</b>
Current account deficit (c)			-6.6	-4.7	-4.7	-1.2	<b>-0.9</b>	<b>-1.1</b>	<b>-1.1</b>
General government balance (c)			-3.6	-5.5	-3.0	-2.2	<b>-1.8</b>	<b>-1.5</b>	<b>-1.5</b>
Structural budget balance (c)			-	-3.3	-2.1	-1.4	<b>-1.3</b>	<b>-1.2</b>	<b>-1.3</b>
General government gross debt (c)			18.1	34.2	37.3	38.0	<b>38.7</b>	<b>39.1</b>	<b>39.3</b>

(a) Eurostat definition; (b) Gross saving/Gross disposable income; (c) percent of GDP.

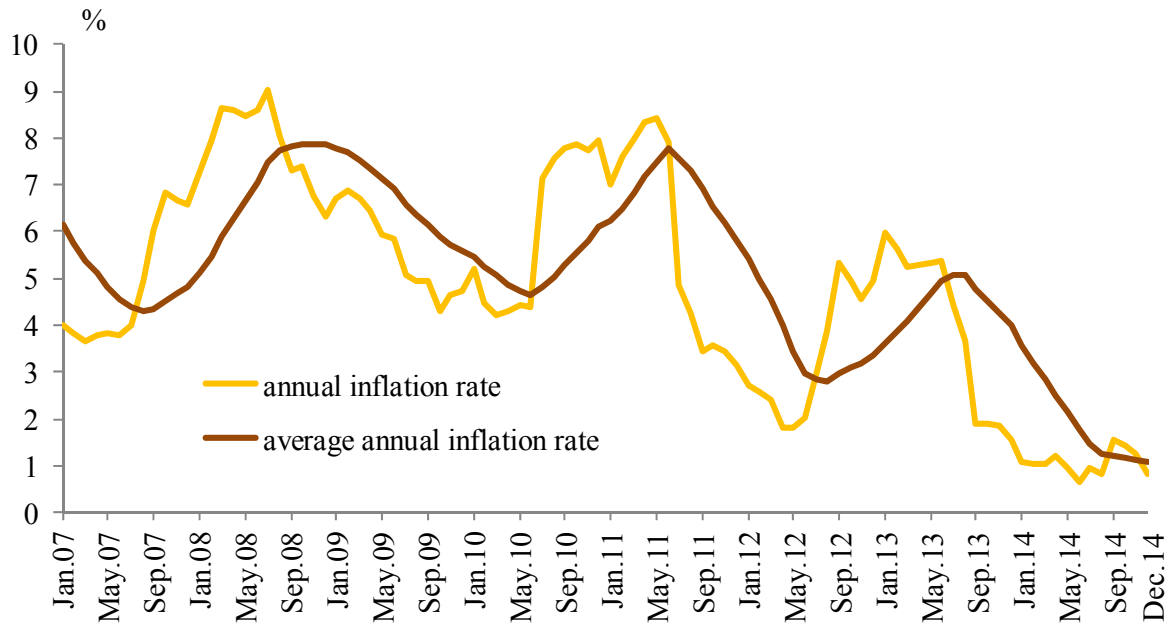
Source: European Commission – Winter Forecast, 5 February 2015

**Table 2. Real GDP (percentage change)**

	5-year average			Winter Forecast 2015					
	1996-2000	2001-2005	2006-2010	2011	2012	2013	2014	2015	2016
Belgium	2.9	1.7	1.3	1.5	0.1	0.3	1	1.1	1.4
Germany	1.9	0.6	1.2	3.6	0.4	0.1	1.5	1.5	2
Estonia	6.7	7.1	-0.3	8.3	4.7	1.6	1.9	2.3	2.9
Ireland	9.6	4.9	0.1	2.8	-0.3	0.2	4.8	3.5	3.6
Greece	3.7	3.9	-0.3	-8.9	-6.6	-3.9	1	2.5	3.6
Spain	4.1	3.4	1.1	-0.6	-2.1	-1.2	1.4	2.3	2.5
France	2.9	1.7	0.8	2.1	0.3	0.3	0.4	1	1.8
Italy	2	0.9	-0.3	0.6	-2.3	-1.9	-0.5	0.6	1.3
Cyprus	3.9	3.6	2.4	0.3	-2.4	-5.4	-2.8	0.4	1.6
Latvia	5	8.4	-0.2	5	4.8	4.2	2.6	2.9	3.6
Lithuania	4.7	7.8	1.2	6.1	3.8	3.3	3	3	3.4
Luxembourg	6.1	3.1	2.2	2.6	-0.2	2	3	2.6	2.9
Malta	4.5	2.1	2	2.2	2.5	2.5	3.3	3.3	2.9
The Netherlands	4.1	1.2	1.5	1.7	-1.6	-0.7	0.7	1.4	1.7
Austria	3	1.7	1.3	3.1	0.9	0.3	0.2	0.8	1.5
Portugal	4.1	0.9	0.6	-1.8	-3.3	-1.4	1	1.6	1.7
Slovenia	4.3	3.6	1.7	0.6	-2.6	-1	2.6	1.8	2.3
Slovakia	3.5	5	4.6	2.7	1.6	1.4	2.4	2.5	3.2
Finland	5.1	2.6	0.8	2.6	-1.5	-1.2	0	0.8	1.4
Euro area	2.8	1.5	0.8	1.6	-0.7	-0.5	0.8	1.3	1.9
Bulgaria	0.8	5.2	2.9	2	0.5	1.1	1.4	0.8	1
Czech Republic	1.8	3.9	2.4	2	-0.8	-0.7	2.3	2.5	2.6
Denmark	3	1.3	0	1.2	0.7	-0.5	0.8	1.7	2.1
Croatia	3.4	4.5	0.5	-0.3	-2.2	-0.9	-0.5	0.2	1
Hungary	3	4.2	0.1	1.8	-1.5	1.5	3.3	2.4	1.9
Poland	5.4	3	4.7	4.8	1.8	1.7	3.3	3.2	3.4
Romania	-0.3	5.8	2.9	1.1	0.6	3.4	3	2.7	2.9
Sweden	3.6	2.6	1.6	2.7	-0.3	1.3	1.8	2.3	2.6
United Kingdom	3.1	2.9	0.3	1.6	0.7	1.7	2.6	2.6	2.4
European Union	2.9	1.9	0.9	1.7	-0.4	0	1.3	1.7	2.1
USA	4.3	2.5	0.8	1.6	2.3	2.2	2.4	3.5	3.2
Japan	0.8	1.2	0.3	-0.5	1.8	1.6	0.4	1.3	1.3

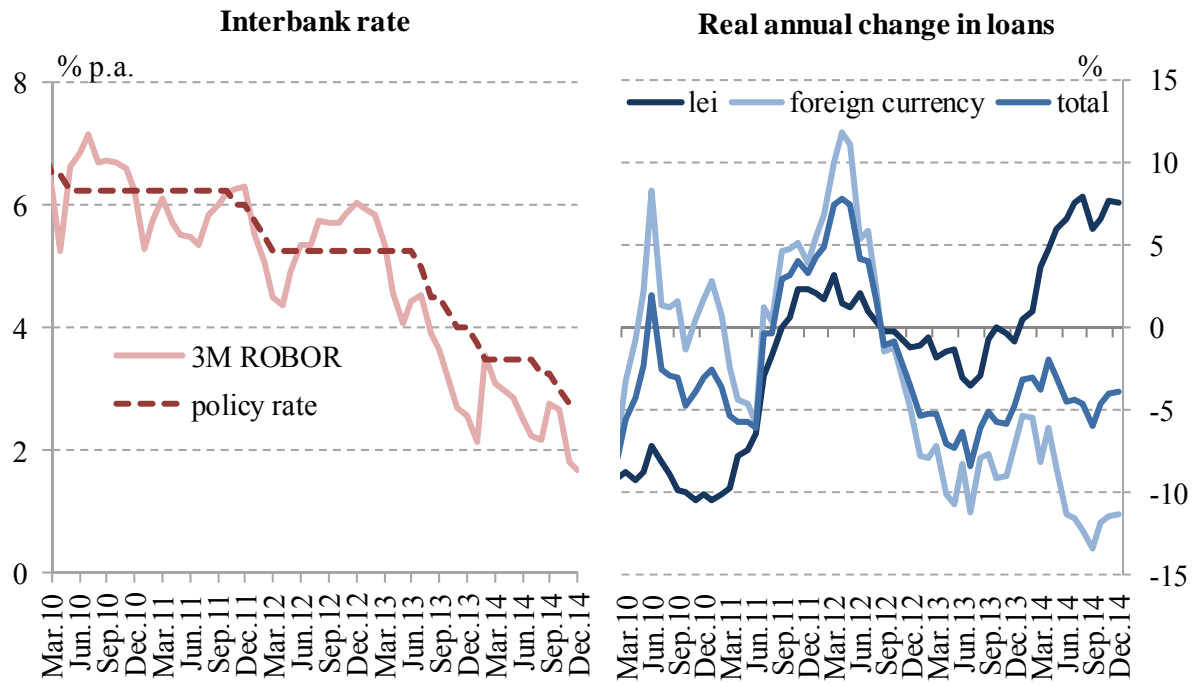
Source: European Commission – Winter Forecast, 5 February 2015

**Chart 1. Inflation rate**



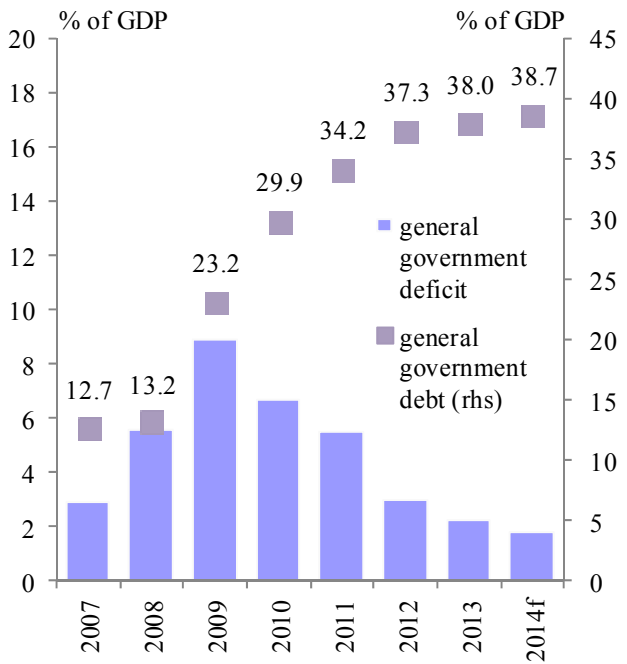
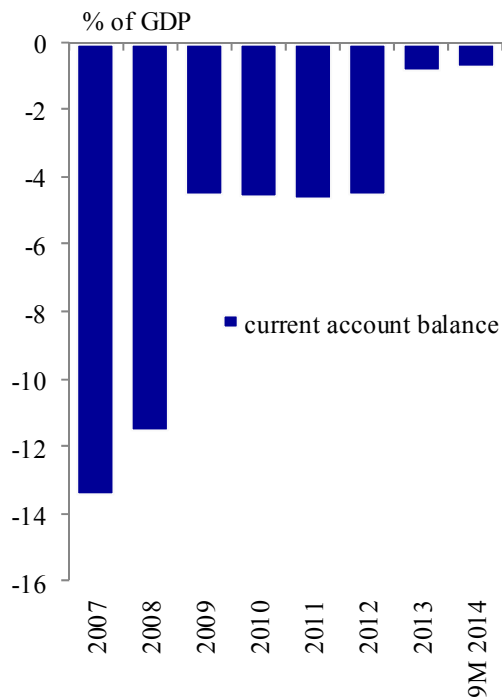
Source: NIS

**Chart 2. Interest rates and lending**



Source: NBR

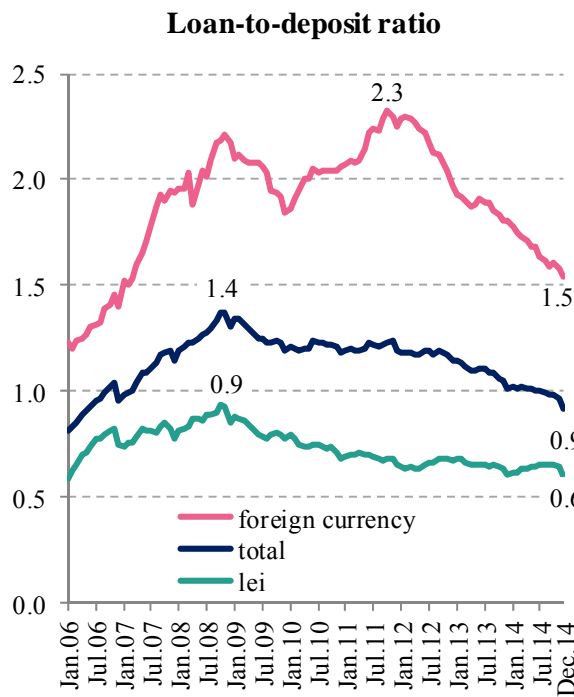
**Chart 3. Current account balance and general government balance**



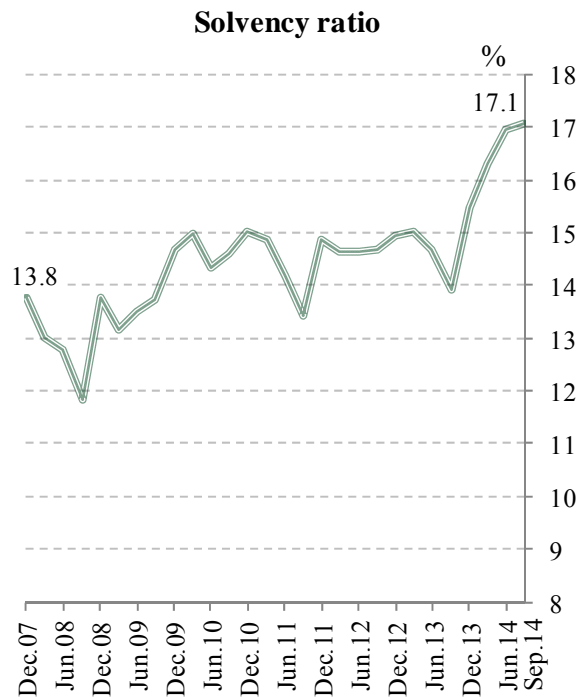
Source: NIS, Eurostat

f) European Commission – Winter Forecast, 2015

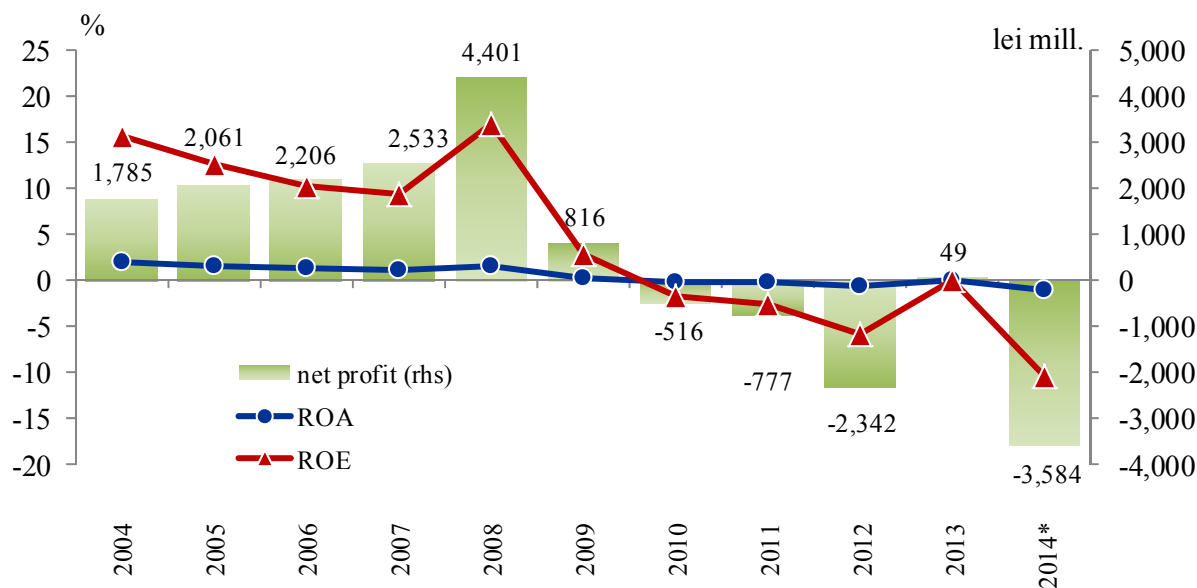
**Chart 4. Prudential indicators**



Source: NBR



**Chart 5. Banking system profitability**

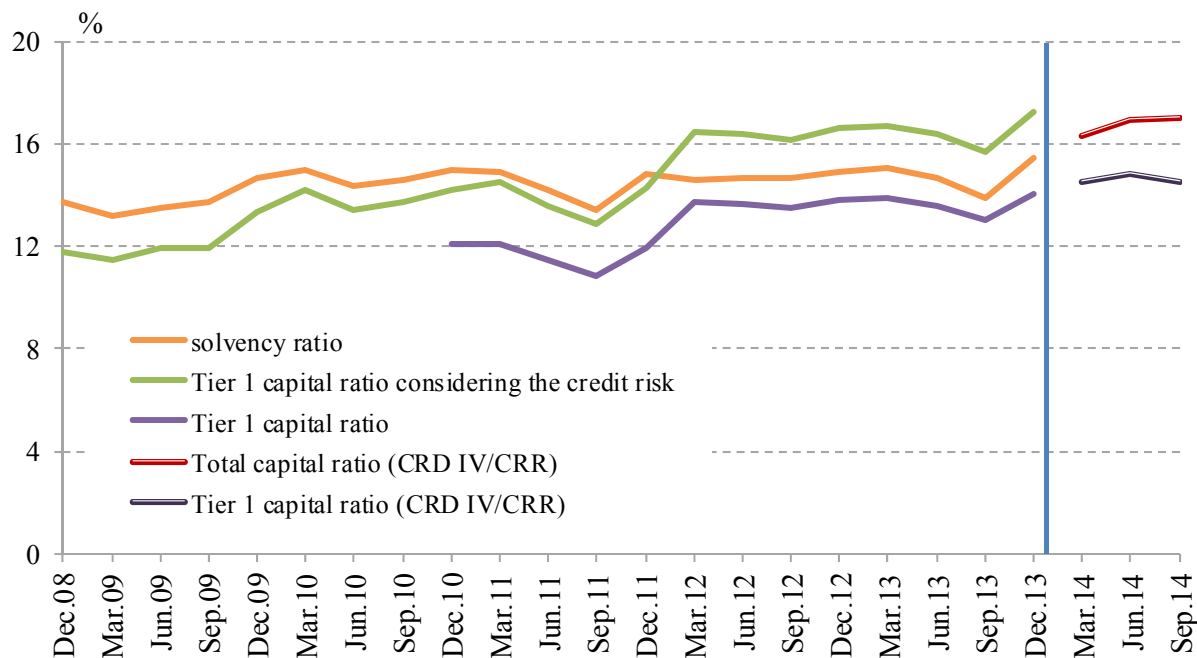


Note: Starting January 2012, indicators have been calculated according to IFRS-compliant reports.

\* November

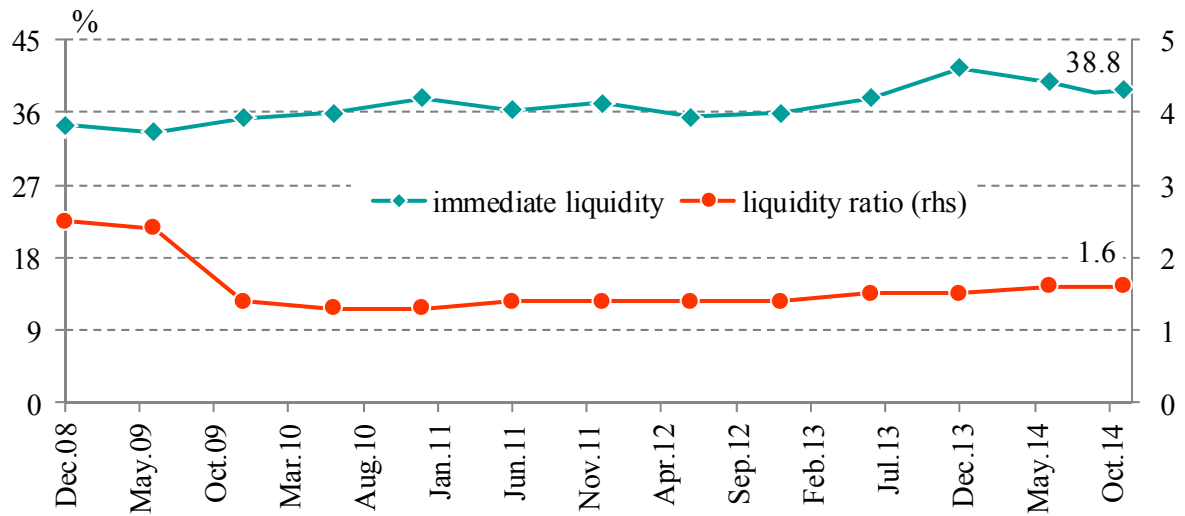
Source: NBR

**Chart 6. Capital adequacy indicators**



Source: NBR

**Chart 7. Liquidity indicators**

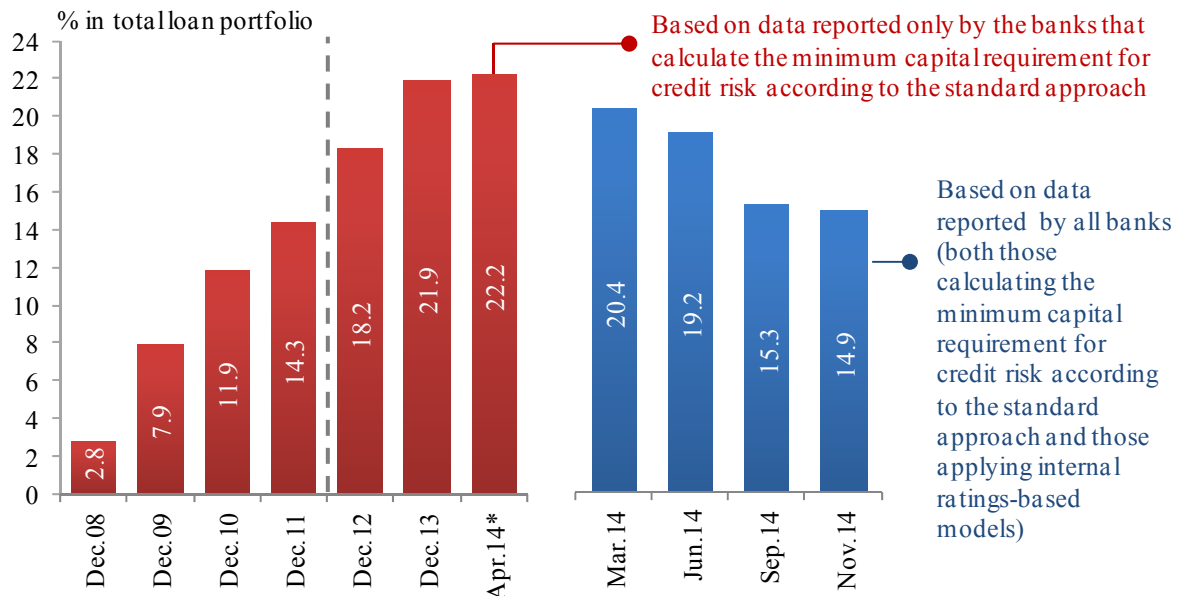


**Immediate liquidity** = (cash, demand deposits and time deposits with banks+ unpledged government securities)/Total liabilities (prudent level > 30%)

**Liquidity ratio** = effective liquidity/required liquidity (regulated threshold = 1)

Source: NBR

**Chart 8. Developments in non-performing loans**



\*) Latest available data determined based on this definition.

Note: Starting January 2012, Romanian credit institutions apply the IFRS. The NPL ratio is calculated as gross exposure of loans and related interest overdue for more than 90 days and/or for which legal proceedings were initiated.

Source: NBR

**Table 3. Banking indicators\***

		%												
Indicators		Dec.08	Dec.09	Dec.10	Dec.11	Dec.12	Mar.13	Jun.13	Sep.13	Dec.13	Mar.14	Jun.14	Sep.14	Nov.14
<b>Capital adequacy**</b>														
1	Solvency ratio (>8%)	13.76	14.67	15.02	14.87	14.94	15.03	14.67	13.92	15.46	16.32	16.95	17.06	x
2	Tier 1 capital ratio (Tier 1 capital / Risk weighted assets)	10.64	11.53	12.13	11.97	13.79	13.86	13.57	13.00	14.09	14.51	14.87	14.54	x
3	Leverage ratio (1)	8.13	7.55	8.11	8.07	8.02	8.20	8.02	7.49	7.96	8.55	7.87	7.63	x
<b>Asset quality</b>														
4	Overdue and doubtful loans to non-bank clients / Total loan portfolio (net value) (2)	0.32	1.50	2.28	2.33	...	...	...	...	...	...	...	...	...
5	Overdue and doubtful loans to non-bank clients / Total loan portfolio (gross value) (2)	1.37	3.94	7.08	8.82	...	...	...	...	...	...	...	...	...
6	Overdue and doubtful claims to non-bank clients / Total assets (net value) (2)	0.29	1.01	1.47	1.50	...	...	...	...	...	...	...	...	...
7	Impaired loans to non-bank clients (gross value) / Total non-banking loan portfolio (gross value)	...	...	...	...	21.88	22.74	23.25	23.97	24.27	24.98	23.67	20.46	20.17
8	Impaired loans to non-bank clients (net value) / Total non-banking loan portfolio (net value)	...	...	...	...	12.00	12.28	12.16	12.42	11.64	12.17	11.42	10.15	9.59
9	Impaired loans to non-bank clients (net value) / Total assets (net value)	...	...	...	...	7.05	7.29	7.21	7.32	6.50	6.91	6.45	5.77	5.42
10	IFRS provisions for NPLs / NPLs (3)	...	...	...	...	61.00	61.99	62.83	63.77	67.64	67.64	68.40	66.20	69.40
<b>Profitability</b>														
11	ROA (Net profit / Total assets, average)	1.56	0.25	-0.16	-0.23	-0.64	0.55	0.65	0.55	0.01	0.67	0.12	-0.60	-1.11
12	ROE (Net profit / Own capital, average)	17.04	2.89	-1.73	-2.56	-5.92	5.08	5.96	5.04	0.13	6.30	1.10	-5.58	-10.37
<b>Liquidity</b>														
13	Immediate liquidity (4)	34.43	35.28	37.82	37.17	35.88	37.60	37.77	38.23	41.49	40.36	39.82	38.38	38.83
14	Liquidity ratio (effective liquidity / required liquidity) (5)	2.47	1.38	1.35	1.36	1.42	1.46	1.48	1.48	1.53	1.53	1.55	1.60	1.61

\* Starting January 1, 2012, Romanian credit institutions apply the IFRS for accounting purposes.

\*\* In the absence of prudential filters, the solvency and T1 capital ratios would be 4-5pp higher.

Note:

(1) Tier 1 capital / Total average assets (net value).

(2) These ratios are based on balance sheet data and include overdue loans / claims with maturity shorter than 30 days and those under legal proceedings. After shift to IFRS, indicators from 4 to 6 are no longer available and have been replaced by those from 7 to 9.

(3) The NPLs represent gross exposure of loans and related interest overdue for more than 90 days and/or for which legal proceedings were initiated. The definition is in line with the IMF's recommendations and allows international comparisons.

(4) The numerator of this ratio is represented by cash, demand and time deposits with banks at net value plus unpledged government securities, while the denominator includes total liabilities.

(5) Starting January 2012, NBR Rules 25/2011 on credit institutions' liquidity replaced the former NBR Rules 24/2009.

x = it is not the case because the frequency is quarterly.

"..." = missing data

Source: NBR