CROATIAN NATIONAL BANK

PRESS RELEASE, 21 January 2015

Some facts about loans in Swiss francs and some options for government intervention

Over the last few days, after the Swiss central bank's decision to abandon the franc's peg to the euro and the consequent appreciation of the franc, we have witnessed numerous initiatives for government intervention with a view to mitigating the impact of the Swiss franc strengthening on the increase in credit liabilities of borrowers with loans indexed to that currency. In the context of such appreciation of the Swiss franc, some sort of response is obviously necessary. It need not be restricted to the efforts of the government alone.

Numerous inaccuracies could be heard in the course of the discussion over the last several days, and the discussion itself resembled more a heated political debate than a serious analysis of options, costs and benefits. In such a setting, unrealistic expectations emerged that the solution to the problem lies within the Croatian National Bank. We believe it is necessary to make the public aware of some facts as well as to repeat some other facts. Following the analyses carried out last weekend, we have also acquainted the Croatian government with most of these facts. We hope that this would steer the discussion in a constructive and informed direction with a view to finding the best possible solutions.

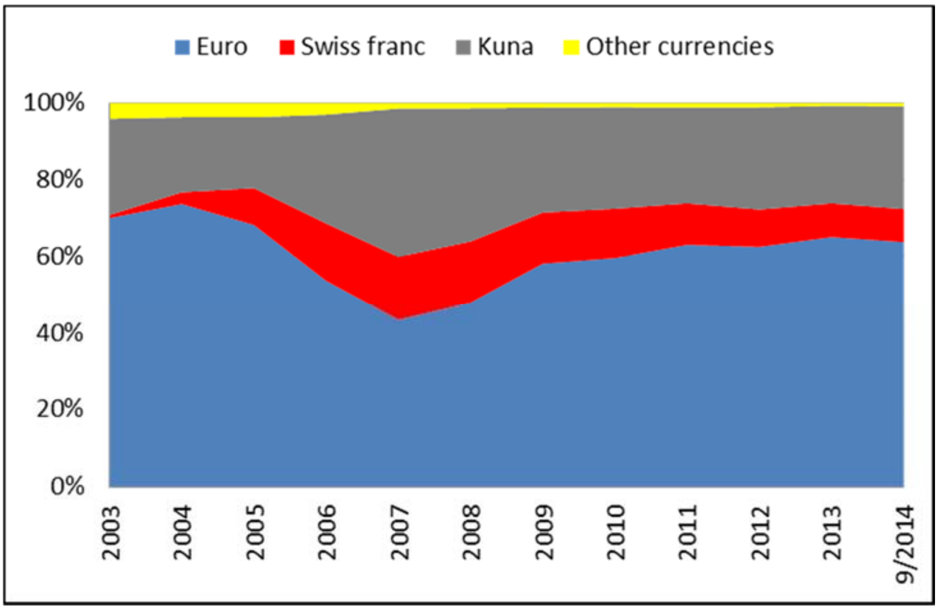
1. **The most recent episode of the strengthening of the Swiss franc was a direct response to the expected implementation of the ECB's quantitative easing programme.** The announcement of this programme has raised hopes that the expected positive effects on the eurozone would also spill over to Croatia. However, along with potential positive effects, quantitative easing entails a number of risks. Some of them could materialise quickly, even before the programme implementation, and the franc's appreciation is exactly such a case. Other risks will be discerned in the course of the quantitative easing programme and after its finalisation.

2. **The CNB has no influence on developments in the exchange rate of the Swiss franc against the kuna**, as we have repeated on numerous occasions. This results

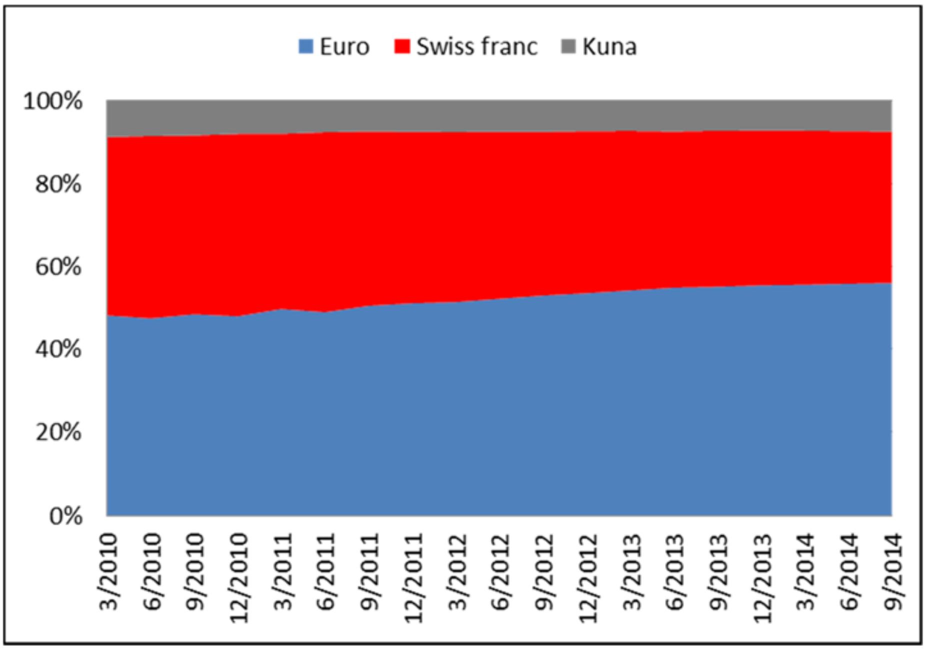
from the fact that the exchange rate of the kuna is indexed to the euro, which is in turn the consequence of the fact that the bulk of deposits and loans are denominated in or linked to the euro.

3. **Loans in Croatia are mostly linked to the euro.** In late 2014, loans in Swiss francs accounted for 16% of total loans to the household sector. Swiss franc loans mostly related to housing loans and accounted for 38% of the total amount of such loans.

Currency structure of total net loans



Currency structure of gross housing loans



4. **In current conditions, the instalments paid by debtors with liabilities in francs have not, until now, been larger on average than they would have been in case of loans initially granted in euro.** It is true that the outstanding principal amount in kuna has grown strongly for many debtors. Instalments have also grown strongly compared to those in the first years of loan repayment. Had the exchange rate of the franc remained at 6.39 kuna and the interest rate at 3.23%, the amount to be repaid by debtors with loans in Swiss francs would not, on average, be significantly higher than that paid by debtors with loans in euro, and it would be almost equal to the amount repaid by those with kuna loans. Although specific calculations for individual debtors depend on the time of the loan's inception and its maturity, the fact is that some debtors would have to pay more in current conditions, while some could even profit in the final run.

Assumptions for interest and exchange rates used in the above calculations

	HRK	EUR	CHF with CHF/HRK rate at 6.39	CHF with CHF/HRK rate at 7.57
	Kuna	Kuna	Kuna	Kuna
Annual nominal interest rate				
2006	6.5	5.5	4.4	4.4
2007	6.7	5.7	4.5	4.5
2008	7.0	6.0	5.4	5.4
2009	7.4	6.4	5.1	5.1
2010	7.3	6.3	5.7	5.7
2011	6.5	5.5	5.8	5.8
2012	6.4	6.0	5.3	5.3
2013	6.5	5.9	5.3	5.3
2014	6.2	5.8	3.2	3.2
2015 and later on	6.2	5.8	3.2	3.2
Average annual exchange rate				
2006	1	7.32	4.66	4.66
2007	1	7.34	4.46	4.46
2008	1	7.22	4.54	4.54
2009	1	7.33	4.85	4.85
2010	1	7.28	5.28	5.28
2011	1	7.43	6.03	6.03
2012	1	7.51	6.23	6.23
2013	1	7.57	6.14	6.14
2014	1	7.63	6.28	6.28
2015 and later on	1	7.68	6.39	7.57

Simulation of the repayment burden for a debtor with a 25-year housing loan worth EUR 100,000 and granted at the beginning of 2006

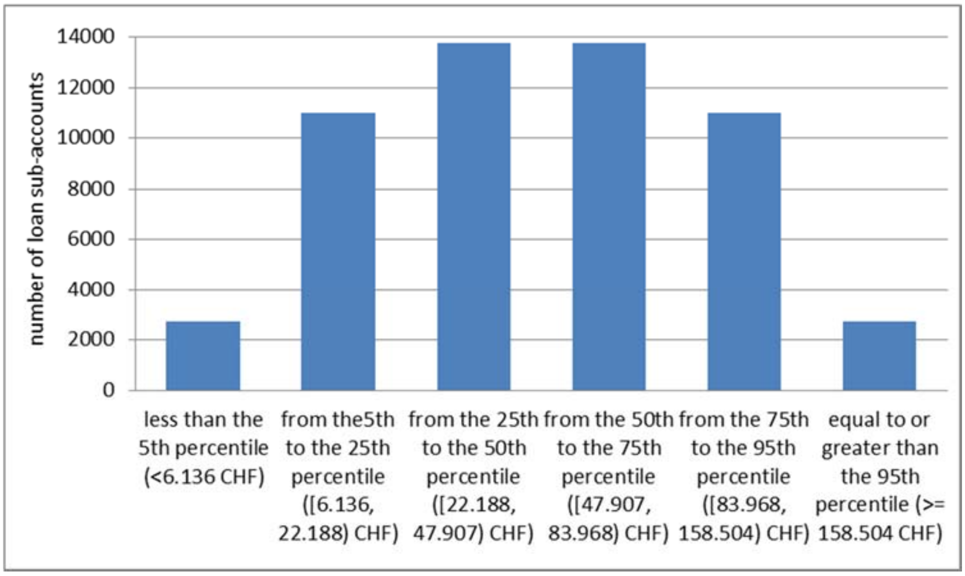
	HRK		EUR		CHF with CHF/HRK rate at 6.39		CHF with CHF/HRK rate at 7.57	
	Kuna	Relative to a loan in EUR	Kuna	Relative to a loan in EUR	Kuna	Relative to a loan in EUR	Kuna	Relative to a loan in EUR
Repaid by 15 January 2015								
Total annuity	550,894	108	510,187	100	526,943	103	526,943	103
of which: principal	141,287	91	154,446	100	194,649	126	194,649	126
of which: interest	409,607	115	355,740	100	332,295	93	332,295	93
To be repaid from 15 January 2015 until maturity								
Total annuity	941,773	101	935,296	100	977,188	104	1,157,111	124
of which: principal	597,356	98	607,916	100	762,312	125	902,671	148
of which: interest	344,417	105	327,379	100	214,876	66	254,440	78
Total								
Total annuity	1,492,666	103	1,445,482	100	1,504,132	104	1,684,055	117
of which: principal	738,643	97	762,363	100	956,961	126	1,097,320	144
of which: interest	754,023	110	683,120	100	547,171	80	586,735	86

Notes:

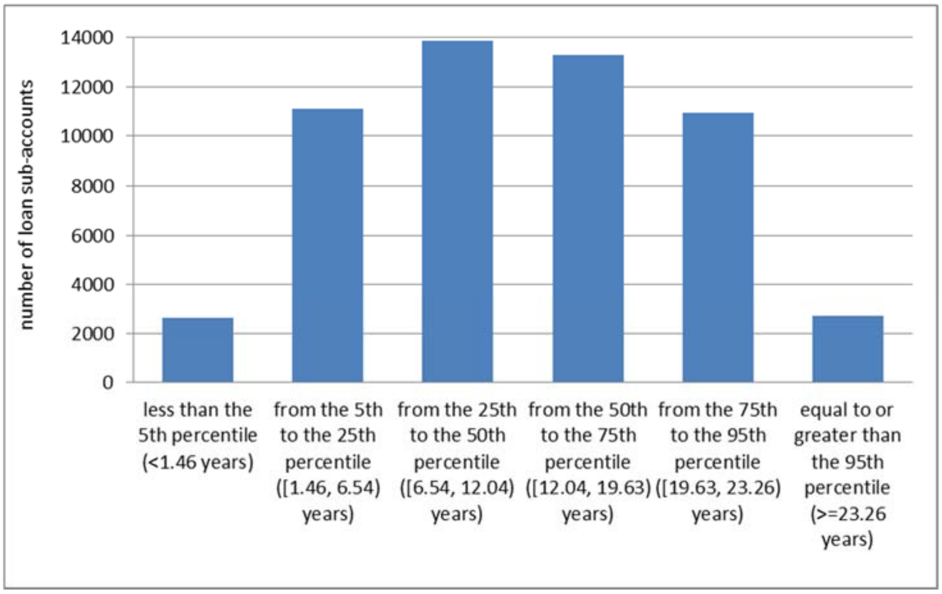
1. The difference between the two presented options for the Swiss franc lies in the exchange rate. The first option assumes the CHF/HRK exchange rate at 6.393405, while the second option assumes the CHF/HRK exchange rate of 7.570578, i.e. the exchange rate applicable on 21 January 2015, from 15 January to maturity.
2. Data on interest rates on housing loans after 2012 are taken from CNB Bulletin tables.
3. Data on interest rates on housing loans before 2012 are taken from internal databases, while the interest rate on kuna housing loans is estimated as the interest rate on housing loans in euro increased by 1 percentage point.
4. For the period after 15 January 2015, assumed were fixed EUR/HRK and CHF/HRK exchange rates and fixed interest rates.
5. Interest rates within a year were constant.

5. **Around 4% of Croatian families have housing loans in Swiss francs. Debtors with housing loans are not necessarily the most vulnerable group of the Croatian society.** However, some debtors with liabilities in francs are Croatian subprime debtors, with very low and doubtful creditworthiness. When this is the case, banks have to take on losses arising from poor business decisions. Around 5% of the total debt refers to one-fourth of debtors with the lowest amounts of housing loans in francs. Some two-thirds of the total debt are accounted for by one-fourth of debtors with the biggest loans. Borrowers in the subprime category need every possible help – a radical restructuring and write-off of the principal loan amount for those that could pay substantially reduced annuities. Unfortunately, there are many to which even a radical write-off would not make debt service payments bearable and for which a different solution should be sought.

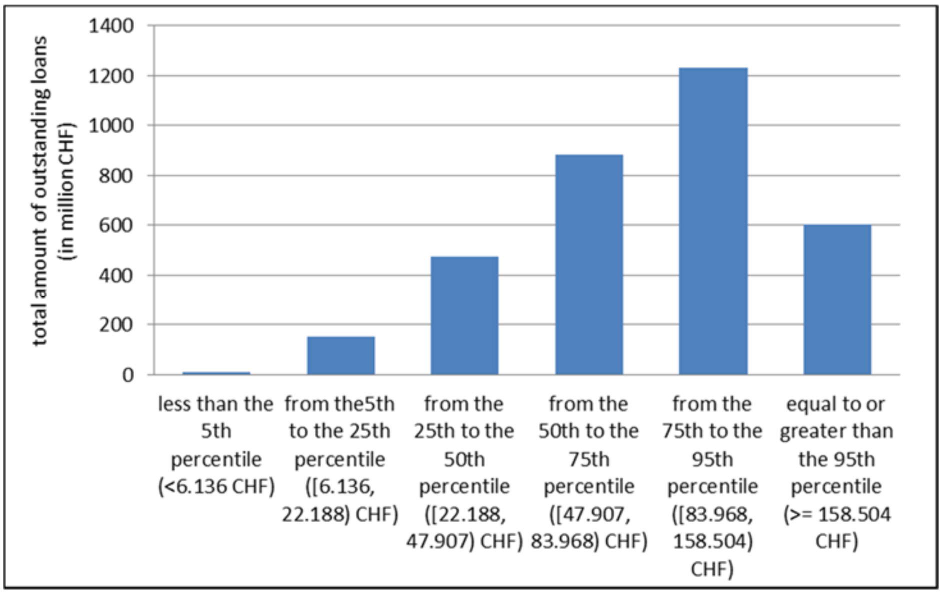
Distribution of outstanding Swiss franc-denominated loans (as at 31 October 2013)



Estimated distribution of the remaining maturity of Swiss franc-denominated loans (as at 15 January 2015)

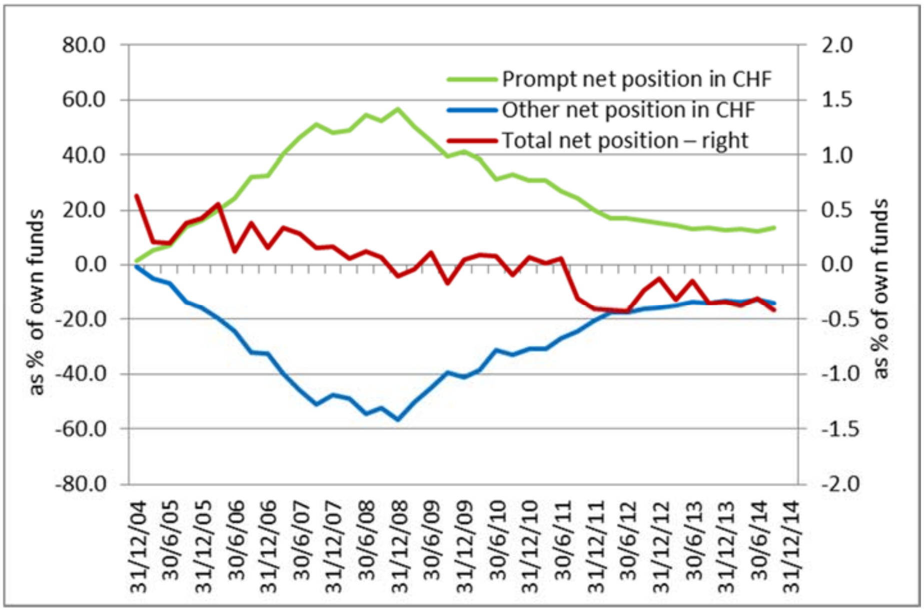


Total amount of outstanding Swiss franc-denominated loans by percentile of the remaining loan amount (as at 31 October 2013)

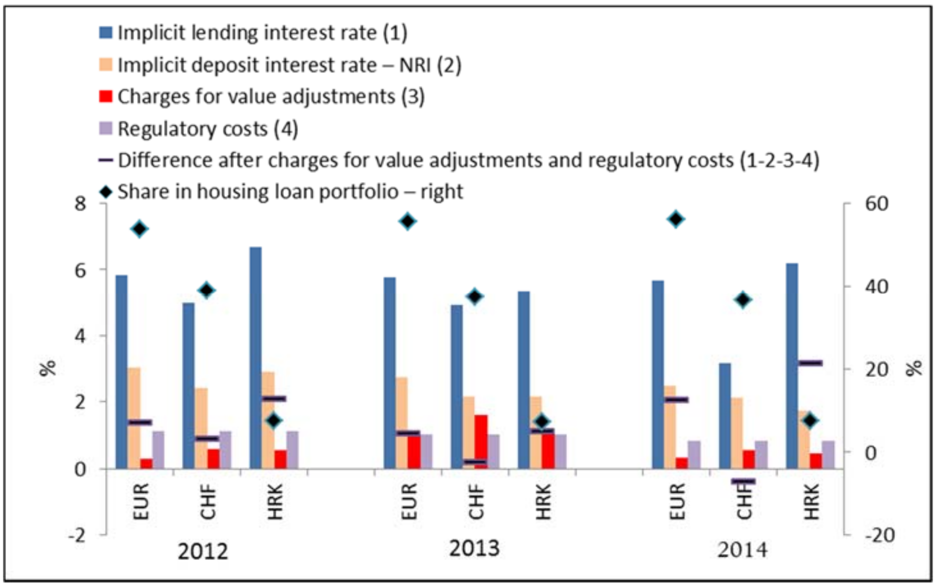


6. **Banks do not make profit from Swiss francs.** The CNB monitors the open foreign currency position of banks on a continuous basis. Historical data show that the open position has not been a source of bank profits. On the other hand, the reduction in the interest rate on loans in Swiss francs and a higher ratio of nonperforming loans have completely eliminated profits from these loans. For the sake of comparison, the banks earn around EUR 25 a year on EUR 1000 of housing loans. No such profits are made from loans in francs.

Banks' open position in Swiss francs, as % of own funds



Estimated profitability of housing loans with regard to the currency



7. **Conversion of loans to kuna at the exchange rate different from the market exchange rate leads to considerable costs.** This is due to the fact that each conversion of bank assets requires conversion of bank liabilities. The conversion of loans in Swiss francs at the exchange rate different from the market exchange rate requires the payment of exchange rate differences which, for instance, in the case of conversion of housing loans in Swiss francs at the exchange rate of 6.39 translates into a cost of almost HRK 3.8bn. Conversion at lower exchange rates would be much costlier. And one could not talk here of foregone earnings of banks as banks are already not making profit on loans in Swiss francs.

Loss on a one-off conversion of housing loans in Swiss francs

Conversion exchange rate	7.570578	6.393405	5.32
Explanation	CNB midpoint exchange rate as at 21 January 2015	Exchange rate before the recent increase of the Swiss franc	Average CHF/HRK exchange rate in 2006
Realised loss on the conversion of CHF-denominated loans, in billion HRK	0.00	3.77	7.21

8. **Were the loans to be converted to another currency at the initial exchange rate, the interest rate should correspond to loan currency.** The interest rate on loans in Swiss francs at the moment when those loans were granted stood at 4.6%. The interest rate on loans in kuna was higher by approximately 2.5 percentage points than the initial rate on loans in Swiss francs, or almost 4 percentage points higher than that currently paid by debtors with housing loans in Swiss francs. Although such levelling between debtors with loans in Swiss francs and debtors with loans in kuna would reduce the amount of the remaining debt, it would increase annuities for most debtors with debt in Swiss francs. The conversion of loans in Swiss francs to kuna at the initial exchange rate and the interest rate applicable to kuna loans would imply that most debtors have not "overpaid" their loans. Quite the opposite, there would be a substantial number of debtors who would have to make an additional payment to make up for the difference.

Simulation of the annuity of a housing loan equal to CHF 65,000 in various currencies

	Interest rate	Annuity (in HRK)
CHF	3.23%	3,485.08
CHF*	3.23%	4,199.45
EUR	5.75%	4,001.82
HRK	5.96%	4,046.76

* Converted at the exchange rate of 7.703927, while the other conversions were made at the exchange rate of 6.393405.

9. **And finally, the use of LIBOR as the benchmark rate for loans in Swiss francs, which is still often being proposed, is an extremely bad idea.** Nowadays, banks are inclined to link loans to LIBOR and consumers also support its use, although they do not necessarily agree with the method of interest rate calculation, and the legislator has prescribed LIBOR despite publicly expressed opposition of the CNB. LIBOR does not reflect conditions on the domestic financial market and introduces the element of unnecessary insecurity in the process of loan instalment calculation. Despite all that has been going on with loans in francs, it appears that the most important lessons have not been learned yet.

10. **Ensuring orderly execution and legal protection of agreements are the key preconditions for long-term economic development.** This does not mean that the execution of agreements which put debtors in impossible situations, with no quilt on their part, should be insisted upon. This is why the banks should have already developed and applied debt resolution models which would ensure that poorly off debtors have their interests protected. Had they done so, the problem at hand now would have been much smaller.

SOME OPTIONS FOR POSSIBLE APPROACHES TO THE PROBLEM

1. **Freezing the loan repayment exchange rate at CHF/HRK 6.39 over the next period of one year** through amendments to the Consumer Credit Act. This is the option chosen as a short-term measure by the Government of the RC. It makes it possible for debtors to pay their annuities over the next one year period at the exchange rate applicable before the decision by the Swiss central bank to abandon linking the exchange rate of the Swiss franc to the euro. The exchange rate differences are to be borne in entirety by the banks. The estimated approximate effect on interest income of banks over a period of one year, under assumed exchange rate of EUR/CHF 1, is a fall in interest income of banks by approximately HRK 400m. Competent authorities: the Government and the Parliament of the RC.

2. **Interest rate decrease.** In order for the average annuity for a loan indexed to the Swiss franc to remain approximately the same, given the current exchange rate for the Swiss franc, the interest rate would have to be cut to 0.7 percent. A bigger positive effect in relative terms would be achieved in loans with longer remaining

maturity, which generally means larger loans. It would not be possible to make any further considerable interest rate cuts in the case of further appreciation of the Swiss franc. The question is what would happen in the case of depreciation of the Swiss franc; how large a depreciation would have to be to lead to an upward correction in interest rates. If the aim is, similarly as in the previous option, to fix annuity at the level before the franc abandoned its peg to the euro, this would have to be determined. Under the assumption that the exchange rate is maintained at the current level over the next one year period, the estimated loss, to be borne in entirety by the banking system, would stand at approximately half a billion kuna. Competent authorities: the Government and the Parliament of the RC.

3. **Deferred claims "balloon" formation.** This option also enables debtors to pay their annuities over the next one year period at the exchange rate applicable before the Swiss central bank decided to abandon linking the exchange rate of the Swiss franc to the euro. However, in this case, the exchange rate differences between the market and the fixed rate for annuity repayment are transferred in a certain period of, for instance 5 years, into a “balloon”, if the market exchange rate of the Swiss franc is higher than that fixed, as a deferred claim and if it is lower, as a reduction of the claim in question. Upon expiry of the "balloon" period, the balance is determined and a decision is taken as to how, if the balance of claims is positive, the claims are to be resolved (by deferred payment, write-off of a part or the entire claim, distribution of claims between creditors and debtors with participation of the RC...). Competent authorities and bodies: the banks, clients, CNB (regulatory treatment) and the Government, if necessary

4. **Conversion options**

a) **Conversion of currency-indexed housing loans to kuna.** The conversion of all currency-indexed housing loans to kuna at market exchange rate, as applied in the Hungarian model, would imply a reduction in international reserves of the Republic of Croatia of EUR 7.8bn or 73% and their fall to EUR 2.9bn. Should debtors with loans in euro be excluded from this conversion, which is questionable from the point of view of equality of the position of debtors, the international reserves of the Republic of Croatia would fall by EUR 3.2bn or 30%.

Therefore, conversion of all housing loans indexed to a foreign currency to kuna would have extreme implications on the adequacy of international reserves of the Republic of Croatia. Were we to use the methodology used by the IMF to assess the adequacy of international reserves, Croatia's indicator of reserve adequacy would fall from 79.5% to 28.3%, much below the so called comfort zone of between 100% and 150%, with all the ensuing ramifications.

Gross international reserves as a percentage of RAM (RAM – indicator of the IMF's ARA metrics – measure of reserve adequacy)

	Q3/2014	Q3/2014*
Croatia	79.5	28.3
Hungary	134.5	100.6

Note: All calculations are based on BPM6.
* Under the scenario where all housing loans indexed to a foreign currency are converted to loans in domestic currency.

b) **Conversion of housing loans indexed to the Swiss franc to euro.** In this case there would be no fall in international reserves of the RC, but the conversion of loans in Swiss francs to other currencies would imply an increase in the interest rate for users of loans from the present 3.23% (see items 7 and 9). The conversion of housing loans at the exchange rate different from the market exchange rate would generate losses equal to those generated by the conversion to kuna at the exchange rate different from the market exchange rate (item 7). The conversion of housing loans indexed to the Swiss franc to euro is an option available on the market in Croatia (in contrast with Hungary where it was prescribed by law).

5. **Without resorting to legal intervention, devise a package of regulatory and tax measures which would, with no reliance on budgetary funds, additionally encourage banks towards resolution of this issue with clients who are financially poorly off.** Given the current state of affairs, it is in the interest of banks to solve this problem as real estate prices are low, markets illiquid and the odds for collecting a payment from a client after the sale of real estate are very small. That is why it is in most cases better for the banks to reach a mutual agreement with debtors, allowing them to hold the property, than to resort to eviction. Such solutions are also better for debtors as they expose them to much smaller stress and generate fewer expenses. In order for the banks to assume a more active role in creating solutions, it is necessary to provide them with regulatory support. The possible solutions could include loan renegotiation, starting from today's value of the real estate and the debtor's creditworthiness and eventually the transfer of the real estate to the bank which ensures a long-term lease agreement and a pre-emptive right. During the term of the lease, the client would have much lower costs than presently while tax bonification would provide

advantages to the client when deciding to purchase this real estate anew.
Responsible authorities: the banks, CNB and the Government of the RC

The choice between different options, whether those mentioned above or some other options, is primarily a political choice due to the nature of such decisions. The CNB has neither mandate nor instruments to take decisions of *ex ante* fiscal and redistributing character. But, the CNB will continue to exert all efforts within its mandate to make sure that, in cooperation with other stakeholders, the best solutions are found, hopefully in an atmosphere of argumented discussion, as this will be the only way that leads to such solutions, in the interests of the Republic of Croatia.