INTERDEPENDENCE OF EUROIZATION AND CURRENCY CLAUSES IN THE REPUBLIC OF CROATIA

Dražen KOŠKI, Ph. D.
Assistant Professor
Faculty of Economics in Osijek, Gajev trg 7, 31000 Osijek
e-mail: koski_hr@yahoo.com

Abstract

In the Republic of Croatia, currency clauses are frequently applied in loan agreements. Foreign currency for indexation is, in most cases the euro, and to a less extent, the Swiss franc.

Throughout the past period, the euro was symmetrically fluctuating against the kuna, so the loss due to its changes was evenly divided between lenders and borrowers. In contrast, the Swiss franc was, on average, appreciating against the kuna so only the borrowers suffered the loss. Therefore, the public started to request the abolition of currency clauses.

Originally, the banks' liabilities are mainly denominated in foreign currency, and claims are mainly denominated in domestic currency. Consequently, banks are exposed to exchange rate risk which they hedge by imposing currency clauses in loan agreements. The solution to this problem, argue banking stakeholders, is not the abolition of currency clauses, but decreasing euroization in Croatian economy.

However, borrowers are confronted with a similar situation. They have liabilities indexed for foreign currency, so they want to save in this currency to hedge exchange rate risk. In other words, borrowers save in foreign currency because they have currency clauses imposed in their loan agreements, and lenders impose currency clauses because borrowers save in foreign currency. This is the main reason for high euroization in the Republic of Croatia.

An alleviation for this problem is suggested in the paper.

Key words: euroization, currency clauses, indexation, exchange rate, exchange rate risk;

JEL Classification Codes: F39; G18;

This paper was presented at 6th International Conference "An Enterprise Odyssey: Corporate governance and public policy – path to sustainable future", Šibenik, the Republic of Croatia, 13 – 16 June 2012.

Introduction

In the early 1990s, the fundamental reason for euroization in the Republic of Croatia was a high inflation rate linked with domestic currency depreciation. Nowadays, the inflation rate is low and it cannot be considered as an overwhelming reason for euroization. The high level of euroization is narrowly linked with frequent applications of currency clauses in loan agreements. In fact, neither commercial banks nor borrowers do not have confidence in the stability of domestic currency so both parties make efforts that, as much as they can, hedge exchange rate risk by adjusting the currency structure of assets to that of liabilities. Commercial banks do this by imposing currency clauses in loan agreements and on borrowers by saving in foreign currency. In this way, the interdependence of euroization and currency clauses emerges.

In such a situation, a problem appears for those borrowers who do not succceed in hedging against the exchange rate risk. They, in case of currency shock, i.e. domestic currency depreciation, suffer financial losses. Therefore, they publicly request the abolition of currency clauses. However, the abolition would damage banks and could, in the end, result in the instability of the financial system. Banking stakeholders consider the solution is not to abolish currency clauses but to reduce euroization of the system. The reducement of euroization of the system would subsequently bring less need for currency clauses in loan agreements because the banks' exchange rate risk would be decreased. Actually, banks are aware that they did not fully solve the problem. by using, currency clauses. Although they shifted the exchange rate risk to borrowers by the application of currency clauses, in this way they exposed themselves to other type of financial risk, to currency-induced credit risk, i.e. the possibility that borrowers because of domestic currency depreciation will not be able to repay the loan at all. Due to this fact, in case of more significant domestic currency depreciation, both parties could lose.

In the first section of this paper the currency clause as a type of protective clause is defined. The most frequent types of currency clauses and reasons for their use are explained in the second section. Likewise, examples of the stipulation of currency clauses in loan agreements are shown. The third section reveals interdependence of euroization and currency clauses in the Republic of Croatia and offers suggesions for mitigating the consequences of the application of currency clauses. At the end of the paper, in the fourth section, the conclusion is given.

Currency Clauses as Type of Protective Clauses

In the Republic of Croatia the principle of monetary nominalism is applied. According to this principle, the borrower has to discharge the obligation by paying a number of monetary units specified in the obligation regardless of changes in the value of money[1]. However, the application of the principle of monetary nominalism, in a situation of changing the purchasing power of money can harm lenders. Therefore, the parties are allowed to apply the clauses that exclude or substantially reduce the effect of this principle. Such clauses, that protect parties from the effect of the aforementioned principle, i.e. ensure the value of monetary obligation in the sense of purchasing power of money, are referred to as protective clauses. By using protective clauses, monetary obligation denominated in some currency is dependent on the

[1] Adapted from: Zakon o obveznim odnosima, *Narodne novine* No. 35/1995, Zagreb, 1995, art. 21.

value of some other currency, on some goods or on the value of gold at the moment of discharge. Thus, the amount of monetary obligation is not determined at the moment of entering into the agreement but will be determined in the future, according to the agreed legal stipulation.

From protective clauses, it is needed to distinguish foreign money obligations that can be applied when parties do not have confidence in the stability of domestic currency. In this type of obligation, monetary obligation is denominated in some foreign currency and the discharging is requested in this same foreign currency. In addition, monetary obligation is precisely determined at the moment of entering into the agreement. Regarding the fact that the amount of obligation is known in advance, specifying the foreign money obligations does not protect parties from the effect of the principle of monetary nominalism, i.e. does not ensure the value of monetary obligation in the sense of purchasing power of money. Because of this, such type of stipulations in loan agreements is not considered as protective clauses and will not be an object of research in this paper[2].

Protective clauses can be classified as follows[3]:

1) currency clauses,
2) index clauses and sliding scale clauses,
3) gold value clauses;

By applying currency clauses, monetary obligations denominated in one currency is fixed to the value of some other currency. Regarding currency clauses is the topic of this paper it will be thoroughly explained in next section.

Index clauses and sliding scale clauses link monetary obligation with the moving of various price indices. Index clauses are most frequently based on general indices e.g. consumer price index, production price index, labor price index, etc. Unlike index clauses, sliding scale clauses are oriented to a particular work so they use price indices of factors needed to complete this work. Such indicies can be: natural gas price index, gasoline price index, price index of certain building materials etc.

A gold value clause is a type of protective clause by which money obligation denominated in domestic currency is dependent on the value of gold at the moment of discharging[4].

Types and Uses of Currency Clauses

In loan agreements entered into by parties in the Republic of Croatia[5], currency clauses are most frequently applied in one of the following ways:

[2] For details on foreign money obligations, see: Rosenberg, Lj., (1972, p. 89-94).
[3] Adapted from: Rosenberg, Lj., (1972, p. 61-76).
[4] Except the gold value clause, it is interesting to mention two other clauses that were used throughout history, namely gold coin clause and gold bullion clause. Gold coin clause defines gold money as a currency of payment, and gold bullion clause specifies gold bullions as a currency of payment. These clauses, however, cannot be considered as protective clauses. For details, see: Rosenberg, Lj., (1972, p. 61).
[5] Because of more developed business practices, in international loan agreements the ways of applications of currency clauses are more diverse. See: Vukmir, B., (1999, p. 8)

1. monetary obligation is denominated in foreign currency (currency of account), and currency of payment is domestic currency,
2. monetary obligation is denominated in domestic currency and currency of payment is domestic currency. In addition, the foreign currency exchange rate is expressly stated.

Furthermore, each of the aforementioned currency clauses can be stipulated in a way that both parties or just one party can receive nominal financial benefits from them. If the currency clause brings nominal financial benefits to both parties it is referred to as a symmetric or bidirectional currency clause, and if it brings such benefits to just one party, it is referred to as an asymmetric or unidirectional currency clause.

A symmetric currency clause acts in both directions of the exchange rate movement – in the direction of depreciation and in the direction of appreciation. Therefore, it is useful to both parties, to the lender in case of depreciation and to the borrower in case of appreciation of domestic currency.

An asymmetric currency clause acts in only one direction of the exchange rate movement, the direction of domestic currency depreciation and because of this it is beneficial solely to lenders. Thus, by applying this clause, the lender can protect the value of monetary obligation both in the sense of purchasing power of money and of nominal financial benefit.

Examples of the aforementioned currency clauses are explained in the next section.

Examples of Currency Clauses

A symmetric currency clause, by which the monetary obligation is denominated in foreign currency (currency of account) and currency of payment is domestic currency, can be stipulated as follows:

The loan is granted in kuna equivalent value of 30,000.00 euros at the euro exchange rate on the date of entering into the agreement. The loan is to be repaid in kunas at the euro exchange rate on the payment date.

This clause is most frequently applied in the Republic of Croatia. It provides that the lender always gets back kuna equivalent value of foreign currency independently of the changes of this currency exchange rate[6].

For example, if the euro exchange rate, on the date of entering into the agreement, is 1 EUR = 7,0 HRK, the lender grants a loan in the amount of 210,000.00 kunas. If the euro exchange rate on the payment date is 1 EUR = 7.7 HRK , i.e. if it increases 10%, the lender will be paid back 231,000,00 kunas, but if the euro exchange rate decreases 10%, to 1 EUR = 6.3 HRK, the lender will get 189,000.00 kunas. In both cases the lender gets kuna equivalent value of 30,000.00. Of course, if the euro exchange rate stays unchanged, the lender will get 210,000.00 kunas.

An asymmetric version of this clause can be set in the following way:

[6] Regarding the purpose of this paper, the issue of the type of exchange rate that is applied in currency clauses (buying, middle, selling, at a commercial bank, at the Croatian National Bank etc.) is irrelevant. On this issue, see: Giunio, M., (2006, p. 46.).

The loan is granted in kuna equivalent value of 30,000.00 euros at the euro exchange rate on the date of entering into the agreement. The loan is to be repaid in kunas at the euro exchange rate on the date of entering into the agreement. If the euro exchange rate increases, i.e. if the kuna depreciates, the loan is to be repaid in kunas at the euro exchange rate on the payment date.

Regarding exchange rates from previous example, the lender gets kuna equivalent value of 30,000.00 euros, i.e 210,000.00 kunas back. However, if the kuna depreciates 10%, he will get 231,000.00 kunas back, while in case of kuna appreciation, he will not get back less but the same amount of 231,000.00 kunas. In this way, he has protected himself from kuna appreciation, as well.

A symmetric currency clause at which monetary obligation is denominated in domestic currency, the currency of payment is domestic currency as well, and the foreign currency exchange rate is expressly stated, can be specified as follows:

The loan is granted in the amount of 210,000.00 kunas based on the euro exchange rate which, on the date of entering into the agreement, was 1 EUR = 7.0 HRK. If, after the date of entering into the agreement, the euro exchange rate decreases or increases, the amount of the loan will decrease or increase at the same percentage.

For example, if the lender has claim to 210,000.00 kunas, this claim denominated in euros amounts to 30,000.00 euros. If the euro exchange rate increases 10%, i.e. if it is 1 EUR = 7,7 HRK on the payment date, the lender will get 231,000.00 kunas back, but if it decreases 10%, to 1 EUR = 6,3 HRK, 189,000.00 kunas will be repaid to the lender. In this clause, of course, the lender always gets back kuna equivalent value of 30,000.00 euros.

This clause can have its asymmetric version, as well:

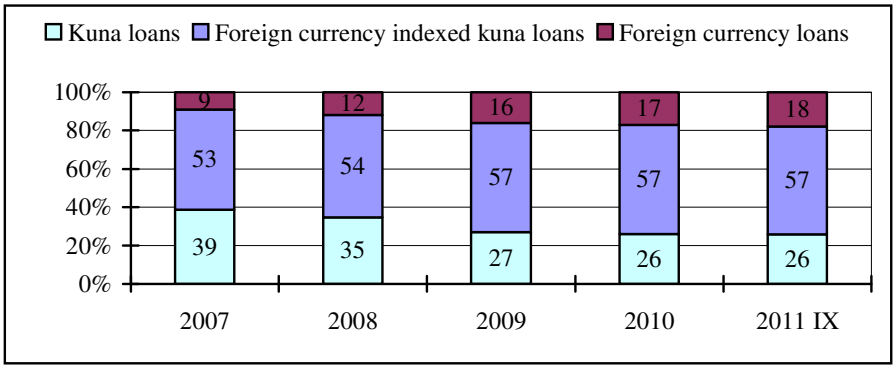
The loan is granted in the amount of 210,000.00 kunas based on the euro exchange rate which, on the date of entering into the agreement, was 1 EUR = 7.0 HRK. If, after the date of entering into the agreement, the euro exchange rate increases, i.e. if the kuna depreciates, the amount of the loan will increase at the same percentage.

Similar to previous asymmetric version of the currency clause, the lender gets at least 210,000.00 kunas back, because he protected himself from both depreciation and appreciation of the kuna.

Euroization and currency clauses in the Republic of Croatia

In the Republic of Croatia, currency clauses based on the euro exchange rate are applied in most loans that contain the clauses. Currency clauses based on the Swiss franc exchange rate are used to a less extent. Also, loans are partly granted in foreign currency. The currency structure of loans in the Republic of Croatia in the period from 2007 to 2011 is shown in Figure 1.

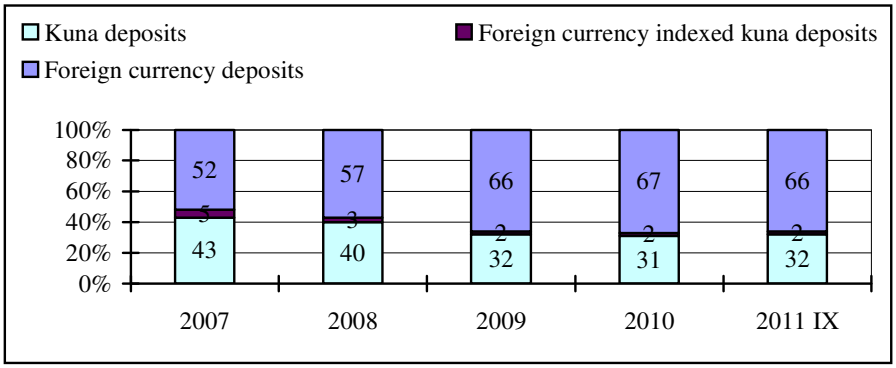
Figure 1: Currency structure of loans



Source: Croatian National Bank, (2012b, p. 41).

Figure 1 illustrates a high share of foreign currency indexed kuna loans, i.e. loans with currency clauses, in overall loans. It is a consequence of high euroization in the Croatian financial system, that is, a high share of foreign currency deposits in overall commercial banks' deposits. The currency structure of banks' deposits is represented in Figure 2.

Figure 2: Currency structure of deposits

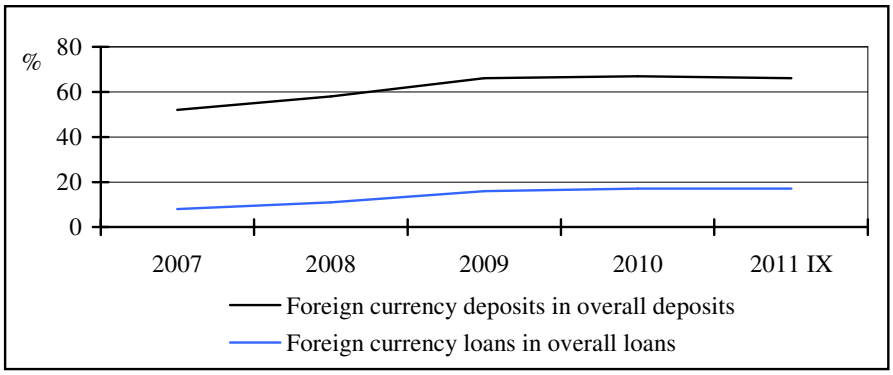


Source: Croatian National Bank, (2012b, p. 40).

From Figure 2 it is noticeable that a big share of commercial banks' deposits is denominated either in foreign currency or in domestic currency indexed to the value of foreign currency, i.e. domestic currency with currency clauses. In order to reduce the exposure to exchange rate risk which stems from such currency structure of deposits, commercial banks adjust the currency structure of deposits to that of loans. The banks do this by imposing currency clauses in loans denominated in domestic currency or by granting loans denominated in foreign currency.

Figure 3 shows, *ceteris paribus*, how the currency structure of both deposits and loans would have looked like if the currency clause had not applied in the past period.

Figure 3: Currency structure of deposits and loans in case of not applying currency clauses



Source: Author's drawing based on the data from Tables 1 and 2.

If the currency clause had not applied, commercial banks would have been exposed to exchange rate risk because most loans would have been denominated in domestic currency and the currency structure of deposits would have stayed almost unchanged. It is easy to assume that the same situation would arise if, in the future, the currency clause was forbidden, as some groups advocate in the Republic of Croatia. The occurrence of the currency shock, i.e domestic currency depreciation, in such circumstances, would result in balance sheet insolvency, as banks would not cover their liabilities with assets. On the macroeconomic level, financial system stability would be disrupted. In order to prevent this situation, banking stakeholders advocate an application of currency clauses in loan agreements. A solution to the currency clauses problem, argue banking stakeholders, is not abolishing currency clauses but decreasing the level of euroization in the Croatian economy, i.e. substitution of foreign currency deposits with domestic currency deposits. As a result of reduced euroization the need for an application of currency clauses would be less, because the banks would be less exposed to exchange rate risk.

However, the question now arises, why euroization is so high in the Republic of Croatia. There are at least two reasons for this.

The first reason is inflation. In the early 1990s, the Republic of Croatia was faced with a high inflation rate. Inflation meant a bigger foreign currency demand which resulted in the increase of this currency exchange rate, i.e. in domestic currency depreciation. In this time, the prices were mainly indexed to the foreign currency exchange rate (most frequently to German mark) and each domestic currency depreciation against foreign currency meant a general increase in prices, i.e. inflation. Thus, inflation caused domestic currency depreciation and domestic currency depreciation stimulated inflation. Because of the continuous fall of domestic currency purchasing power at the international as well as domestic level, the population held its savings in foreign currency. Today, the inflation rate in the Republic of Croatia is low[7], and it is not the main reason for euroization.

The second reason is imposing currency clauses in loan agreements. Based on imposed currency clauses, the borrowers conclude that commercial banks do not have confidence in domestic currency stability, so they ask themselves the following question: If commercial

[7] In 2011 the inflation rate in the Republic of Croatia was 2.3%. For details, see: Croatian National Bank (2012a, p. 7).

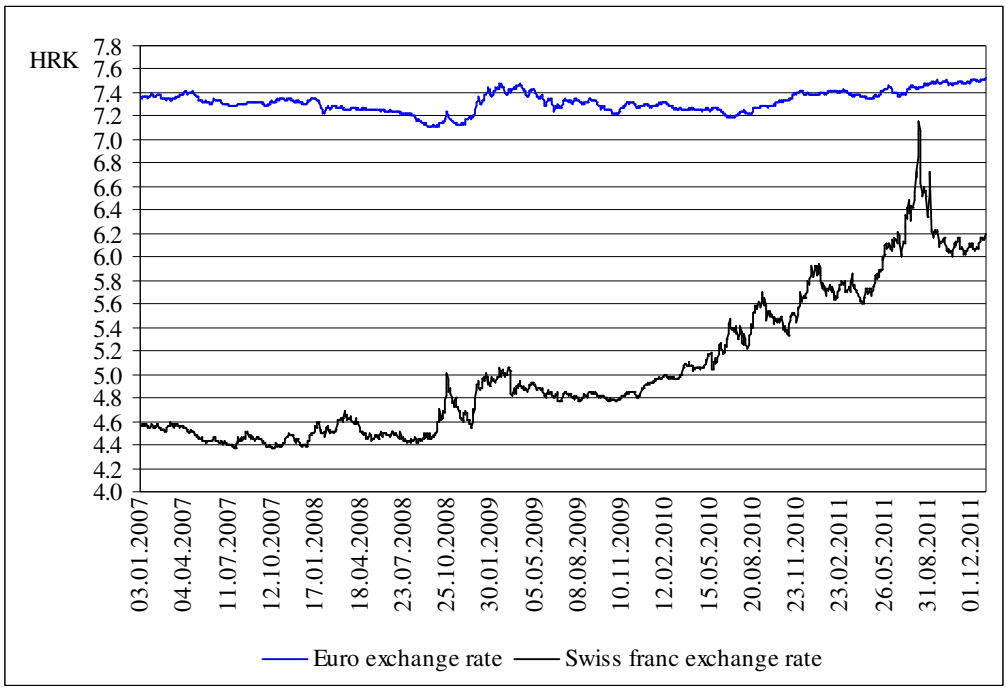
bankers, as financial professionals, do not have confidence in domestic currency stability, and much more information is available to them than to the nonprofessionals, why would the nonprofessionals have confidence in this currency stability? Because of this, when the borrowers see that the exchange rate risk is shifted to them, they will try to hedge this risk by adjusting the currency structure of their liabilities and assets just by saving in foreign currency. In this way the vicious circle of euroization occurs: the lenders impose currency clauses in loan agreements because the borrowers save in foreign currency, and the borrowers save in foreign currency as they have currency clauses imposed in their loan agreements. Nowadays, this is undoubtedly the main reason for high euroization in the Republic of Croatia.

Consequences of applying currency clauses and suggestions for alleviating them

Unfortunately, to those borrowers who do not succeed in hedging against exchange rate risk, domestic currency depreciation will bring the loss.

Fluctuations of daily exchange rates for the euro and the Swiss franc in the period from 2007 to 2011 are depicted in Figure 4.

Figure 4: Daily nominal exchange rates for the euro and Swiss franc from 2007 to 2011



Source: Author's drawing based on data published on: http://www.rba.hr/my/bank/rates/rates_range.jsp?language=HR.

The chosen statistical indicators of exchange rates fluctuations for both currencies are reported in Table 1.

Table 1: The chosen statistical indicators of exchange rates fluctuations for the euro and the Swiss franc

Description	Euro exchange rate	Swiss franc exchange rate
Arithmetic mean	7.32395	5.04317
Standard deviation	0.08820	0.60516
Coefficient of variation	1.20424	11.99958
Maximum	7.53042	4.36268
Minimum	7.10674	7.16428
Difference between maximum and minimum (%)	5.96569	64.21741

Source: Author's calculations based on data published on: http://www.rba.hr/my/bank/rates/rates_range.jsp?language=HR.

From Table 1 it is evident that the euro exchange rate fluctuated approximately in a band of ±6% (from minimum to maximum), which is not surprising, as the Croatian National Bank mitigated excessive euro exchange rate fluctuations by intervening in the foreign exchange market. Because of relatively symmetric fluctuations, borrowers, which have currency clauses based on the euro exchange rate in their loan agreements, sometimes have to pay more and sometimes less of their obligation.

However, the problem happened with the Swiss franc exchange rate. In the observed period, the Swiss franc appreciated 64% (from minimum to maximum) so borrowers suffered a significant financial loss. Simultaneously, commercial banks were aware that they, by shifting the exchange rate risk on borrowers, exposed themselves to another type of financial risk – the currency-induced credit risk. The currency-induced credit risk is the possibility that borrowers because of domestic currency depreciation will not be able to pay the loan back at all. To alleviate the burden of paying back the loan , banks suggested several solutions that comprised mainly various types of debt restructuring, from decreasing interest rates to extending the loan maturity date. In this way, they took part of the loss caused by domestic currency depreciation.

In such a situation, when it is clear that if one party loses, the other party will lose as well, instead of the existing currency clause, it is possible to apply the risk-sharing currency clause. This clause will provide sharing the losses that stems from exchange rate changes. For example, if the kuna depreciates 10% the borrower will pay only 5% more, and the bank will get back 5% less. .Conversely, in case of kuna appreciation 10%, the borrower will pay 5% less, and the commercial bank will get 5% more. In loan agreements this clause could be stipulated as follows:

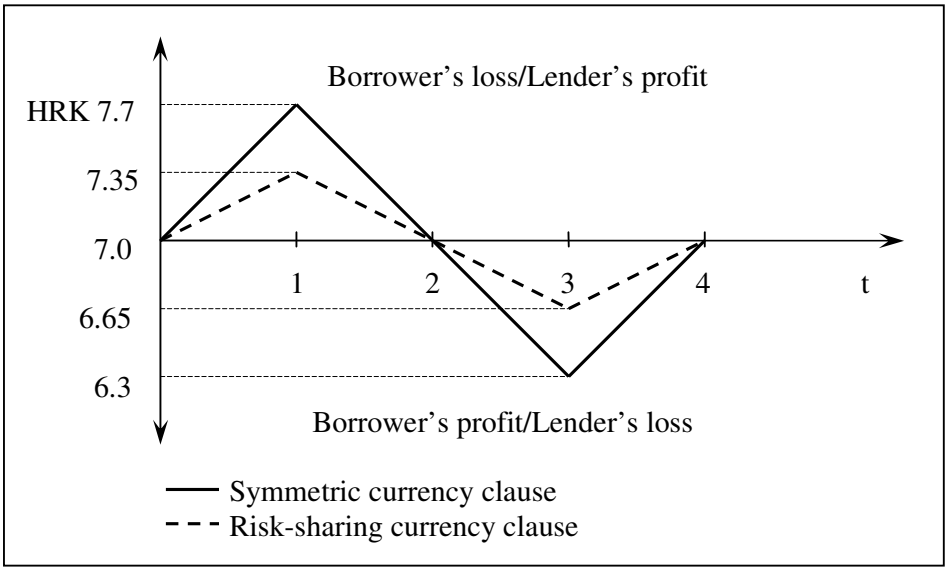
The loan is granted in kuna equivalent value of 30,000.00 euros at the euro exchange rate on the date of entering into the agreement. The loan is to be repaid in kunas at the euro exchange rate calculated as arithmetic mean between the euro exchange rates on the date of entering into the agreement and the payment date.

Or:

The loan is granted in kuna equivalent value of 30,000.00 euros at the euro exchange rate on the date of entering into the agreement. If, after the date of entering into the agreement, the euro exchange rate decreases or increases in relation to the euro exchange rate on the date of entering into the agreement, the amount of the loan will decrease or increase by half percentage of decrease or increase of the euro exchange rate.

Risk-sharing currency clause effects on borrower's and lender's cash flows are illustrated in Figure 5.

Figure 5: Risk-sharing currency clause effects on borrower's and lender's cash flows



Source: Author's drawing.

As can be seen in Figure 5, if the kuna depreciates 10%, from 1 EUR = 7.0 HRK to 1 EUR = 7.7 HRK, the borrower will have to discharge obligation according to the euro exchange rate calculated as arithmetic mean of the euro exchange rates on the date of entering into the agreement and the payment date, i.e. 1 EUR = 7.35 HRK. In other words, the borrower will suffer only half of the loss that he would suffer by applying the symmetric currency clause. Reversely, if the kuna appreciates 10%, from 1 EUR = 7.0 HRK to 1 EUR = 6.3 HRK, the borrower will discharge obligation according to the euro exchange rate 1 EUR = 6.65 HRK. In this case, the lender will suffer only half of the loss in relation to the loss that would stem from the application of the symmetric currency clause. From the aforementioned it is possible to notice that the application of the risk-sharing currency clause reduced the fluctuation of cash flows of both parties.

Conclusion

In the Republic of Croatia, most loan agreements contain currency clauses. Furthermore, the symmetric currency clause based on the euro exchange rate is applied most frequently. The symmetric currency clause based on the Swiss franc exchange rate is used to a less extent.

In the period of the Swiss franc exchange rate appreciation, the borrowers, who had the currency clause based on this currency imposed on their loan agreements, had suffered significant financial losses. Due to this fact, they started to request abolition of the currency clauses. Banking stakeholders were against this request because, in case of currency shock, the abolition of currency clauses would have as a consequence the instability of the banking system. Moreover, they argued that the problem of currency clauses cannot be solved by abolition of the clauses but by reducing euroization in the system. The reducement would result in less need for the application of currency clauses as banks' exposure to exchange rate risk would be decreased. Simultaneously, they were aware of currency-induced credit risk that was raised by imposing a currency clause in loan agreements. Therefore, they offered several ways of debt restructuring.

In this paper the application of the risk-sharing currency clause is suggested and explained. This type of currency clause could help both lenders and borrowers reduce fluctuations of their cash flows by sharing exchange rate risk.

References

Bekaert,G.; Hodrick, R., (2012), *International Financial Management*, 2nd ed., Pearson Education, Inc., Upper Saddle River.

Connolly, M., (2001), *International Business Finance*, Routledge, New York.

Croatian National Bank, (2012a), *Bulletin*, no. 178, Zagreb

Croatian National Bank, (2012b), *Financial Stability*, no. 8, Zagreb

Giunio, M. (2006), Klauzule promjene cijene – valutna, indeksna i klauzula klizne skale, *Financije i porezi*, no. 5/2006, TEB, Zagreb, 43-51.

Hauser, E. R., (1958), The Use of Index Clauses in Private Loans: A Comparative Study, *The American Journal of Comparative Law*, Vol. 7, no. 3, 350-365.

http://www.rba.hr/my/bank/rates/rates_range.jsp?language=HR

Rosenberg, Lj., (1972), *Pravo međunarodnih plaćanja u poslovnim transakcijama*, Informator, Zagreb.

Shapiro, C. A., (2002), *Foundations of Multinational Financial Management*, 4th ed., John Wiley & Sons. Inc., New York.

Vukmir, B., (1999), Valutne zaštitne klauzule, *Pravo i porezi*, No. 7/1999, RRiF, Zagreb, 6-12.

Zakon o obveznim odnosima, *Narodne novine*, 35/1995, Zagreb, 1995.