

# THE FINANCIAL INSTRUMENTS FOR RISK MANAGEMENT ON THE INTERNATIONAL FINANCIAL MARKETS

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**Abstract:** *The international financial market is extremely volatile because of the influence of a numerous objective and subjective factors. Because of these, in their fight for maximizing the profit, the credit institutes confronts permanently with all sort of risks.*

*It is important to know that the risk is generated by a numerous operations and procedures. From these cause, at least in the financial field, the risk must be considered as a complex of risks, in the sense that they can have common causes, and producing a risk can generate a chain reaction, and producing other risks. As a consequence, these operations and procedures can permanently generate an exposure to the risk.*

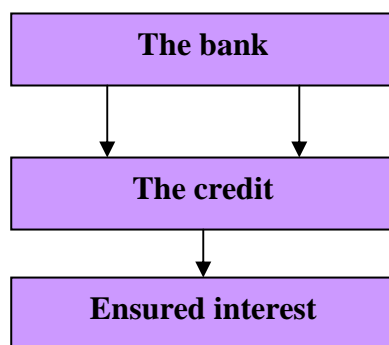
*The risk management is the key function of the financial institution, which act on the international financial market. For doing this, it must be used some important instruments that can conduce to avoiding risks or dimensioning them.*

The dimensioning and the financial risks effects necessitate realizing some financial operations to assure the diminishing of the negative effects or the covering of the possible losses.

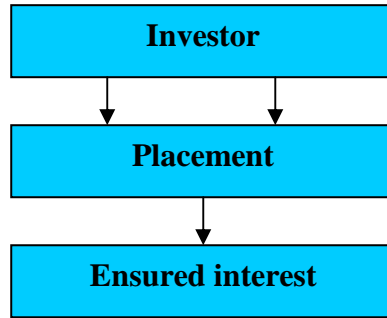
The main instruments for risk management on the international financial markets are:

a) Forward – Forward – is considered to be an operation based on a contract through which an operator buys a future rate of interest to a credit or to a banking placement. Forward – Forward in quality of interest risk management financial operation, allows to an entity which wants to contract a loan or to realize a placement to a further date (determined period of time) to evaluate the loan cost or the placement output.

*Forward – Forward of contracting a loan* it differs by the fact that a bank commits itself to grant a credit to a big enterprise or to a debtor in a certain size, period of time and to an interest rate prior fixed.



In the frame of a *Forward – Forward placement*, the investor commits to effectuate a placement to a bank or to another credit institution, of a certain size on a period of time and to an interest rate prior fixed.

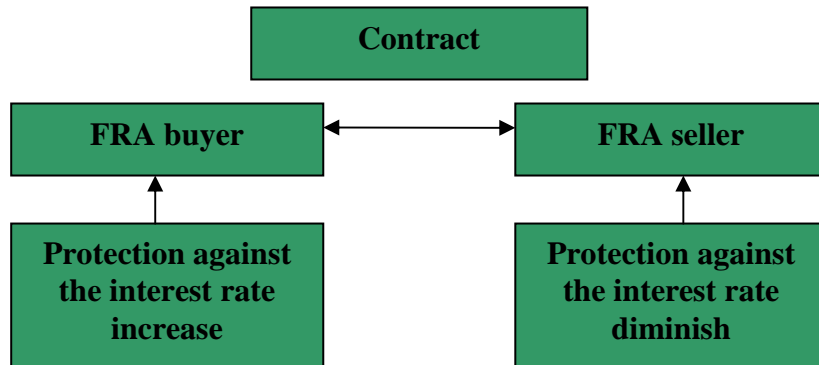


The rate to the Forward – Forward operation ( $R_f$ ) depends on the loan interest ( $L_i$ ), on the loan duration ( $L_d$ ), placement interest ( $P_i$ ), placement duration ( $P_d$ ) and the operation duration ( $O_d$ ).

$$R_f = \frac{(L_i \times L_d) - (P_i \times P_d)}{O_d \times \left(1 + \frac{P_i + P_d}{360 \times 100}\right)}$$

b) Forward Rate Agreement (FRA) represents a financial technique through which the two sides of a contract follow to protect itself against interest rate variation.

The Forward Rate Agreement buyer follows to protect itself against the interest rate increases, and the seller follows its protection against the interest rate diminish.



The interest difference at a certain financial technique ( $D$ ) depends on the operation nominal value ( $C$ ), on the ensured interest rate ( $r_g$ ), on the market interest rate ( $r_p$ ) and on the number of days ( $T$ ).

$$D = \frac{C \times (r_g - r_p) \times T}{r_m \times T + 360 \times 100}$$

In the case of a covering risk operation through Forward Rate Agreement it is fixed the interest rate for a future credit or placement.

In quality of financial instrument, Forward Rate Agreement is used for reducing the loan cost or to improve the output of a money placement for a certain period of time.

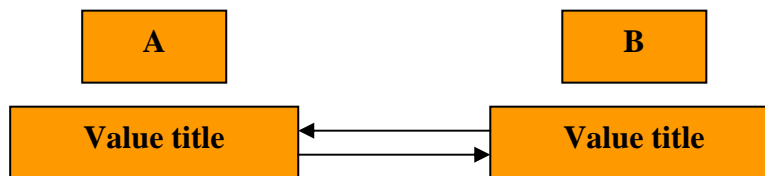
Forward Rate Agreement can be practiced between an enterprise and a bank, or between two banks.

c) The swap – is defined as the transaction toward which the two parts switch between them financial assets<sup>1</sup>. In general, the swap represents financial operations by which are changed claims, debts or elements which results from claims or debts.

The swap is defined as an operation by which a transaction on the term market is completed by a simultaneous transaction on the sight market.

The swap is represented a financial operation by which is realized the change of claims or debts between two parts, which can be represented by enterprises, banks, countries. In quality of financial operation, the swap can take different forms, in function of the nature of the assets that are changing, as well as of the parts implicated in realizing the operation of change of claims and debts.

*The swap of change* represents that financial operation by which a value title holder (A) gives it up to a third part (B) in change of another title, with the same value, through which the parts follow the title quality improvement or the capitalizing of the anticipated changes of title output on the international financial market.



*The swap of claims and debts* can have different forms:

- debt equity swap represents a financial operation by which is assured the conversion of some claims direct investments. Through this operation a part capitalizes its claims and the other part clears its debts;
- debt for debt swaps differs through the fact that a part which detains claims can convert them in bonds issued by the other part;
- a specialized organism redeems claims and changes them in certain conditions.

*The swap between banks* reflects the operations through which a central bank opens a credit line in its currency to other country central bank, and these opens in its turn opens to the first one country a credit line in its own currency.

*The currency swap* represents a foreign exchange agreement between two parties to exchange a given amount of one [currency](#) for another and, after a specified period of time, to give back the original amounts swapped. Currency swaps can be negotiated for a variety of [maturities](#) up to 30 years. Unlike a back-to-back loan, a currency swap is not considered to be a loan by [United States accounting](#) laws and thus it is not reflected on a company's [balance sheet](#). A swap is considered to be a foreign exchange transaction (short leg) plus an obligation to close the swap (far leg) being a [forward contract](#).

Unlike [interest rate swaps](#), currency swaps involve the exchange of the principal amount. Interest payments are not netted (as they are in interest rate swaps) because they are denominated in different currencies.

*The interest rate swap* is a [derivative](#) in which one party exchanges a stream of [interest](#) payments for another party's stream of cash flows. Interest rate swaps can be used by [hedgers](#) to manage their fixed or floating assets and liabilities. They can also be used by speculators to replicate unfunded bond exposures to profit from changes in interest rates. As such, interest rate swaps are very popular and highly liquid instruments.

In an interest rate swap, each [counterparty](#) agrees to pay either a fixed or floating rate denominated in a particular currency to the other counterparty. The fixed or floating rate is multiplied by a [notional principal amount](#). This notional amount is generally not exchanged between counterparties, but is used only for calculating the size of cashflows to be exchanged.

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<sup>1</sup> Claude Dufloux, *Financial markets*, Economic Publishing House, Bucharest, 2002, p. 286.

The most common interest rate swap is one where one counterparty A pays a fixed rate (the swap rate) to counterparty B, while receiving a floating rate.

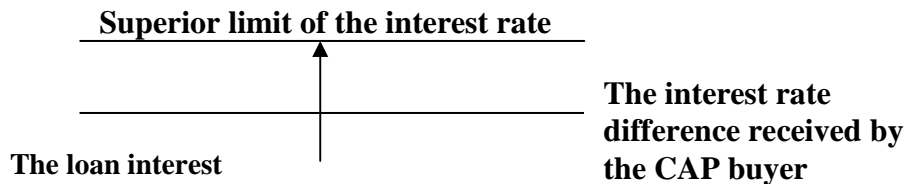
d) The hedging represents a financial operation through which is initiated on the financial and foreign currency market in uncertainty conditions of exchange rate or financial titles course.

The hedging is considered a financial technique of covering the risk of price fluctuations on the international financial markets. On another hand, the hedging represents a method of reducing the risk of loss caused by price fluctuation. It consists of the purchase or sale of equal quantities of the same or very similar commodities, approximately simultaneously, in two different markets with the expectation that a future change in price in one market will be offset by an opposite change in the other market.

e) The options on the interest rate

Cap, floor and collar represents contracts on the interest rate negotiated on the financial markets which assures gains from the relative anticipate of the interest rate evolution, as well as the assurance of a maximum interest to a new loan or to a minimum interest to a money placement on a certain period of time. The buyer of an interest rate option wants to protect itself from an interest rate increase on the international financial market to a certain moment.

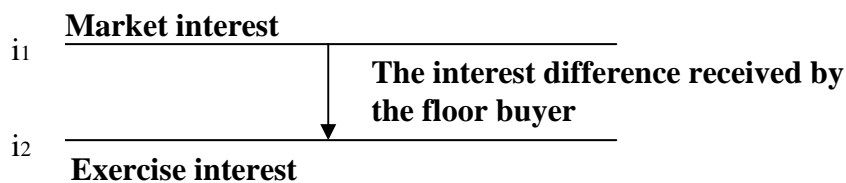
*CAP or Ceiling* represents a contract on the interest rate, which is practiced in the case in which is contracted a loan to a variable rate interest and there exist the risk of its increase. Through this operation it is limited the value of the interest that must be paid for obtaining that loan.



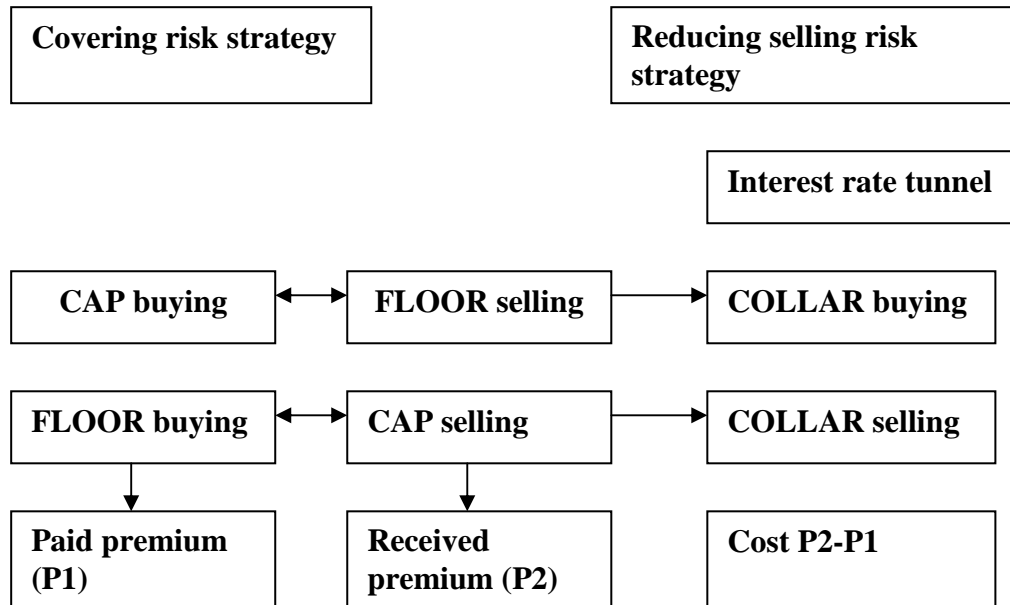
*Floor* represents a contract through which the buyer assures itself a minimum interest rate in the case of a money placement in change of paying a premium, to a size and a determined period.

In the case in which it is anticipated a diminishing of the interest rate, an operator that effectuated a money placement in bonds can cover itself by buying a floor to an exercise rate and with a premium.

If on the market, the interest ( $i_1$ ) descends under the exercise level, the floor buyer receives from the seller the difference between the exercise rate ( $i_e$ ) and the market rate.



*Collar* represents the operation through which a debtor follows to protect himself against the interest rate increase, by buying and selling simultaneous a CAP and a Floor, wanting that the premium received for selling to compensate partially or total the paid one for buying.



Buying a Collar represents the combination of buying a CAP and selling a Floor. Selling a Collar supposes a combination between a CAP selling and a Floor buying.

f) Complex strategies of speculative nature from the international financial markets

*STRADDLE* represents a complex strategy of intervention on the international financial markets, which realizes through options combination on the financial market.

Straddle buying (Long Straddle) expresses a strategy of intervention on the international financial markets that initiates itself in the moment in which is anticipated of the volatility of the support asset course through combining buying a CALL and a PUT option at the same exercise price. Practicing such an intervention strategy on the international financial markets generates a loss represented by the paid premiums and unlimited gain chances, depending on the support asset course evolution on the international financial markets.

Straddle selling (Short Straddle) in quality of intervention strategy on the international financial markets represents the combination of selling a CALL and a PUTT option of the same exercise price. Straddle selling assures for the one who practices it a limited gain and a probable loss, depending on the support asset evolution on the international market.

*STRANGLE* represents another strategy that is realized on the international markets that combines buying and selling CALL and PUT options, with identical due dates, but with a CALL exercise price higher than the PUT one.

Strangle buying (Long Strangle) represents a strategy which is practiced in the case of volatility increase of the support asset course, which supposes a combination between CALL and PUT options but at different exercise prices.

The protection against the volatility of the support asset course is realized in the following way:

- against the course increase it is bought a CALL option at the exercise price which wanted not to be overreached;
- against the course diminish it is bought a PUT option at the minimum exercise price.

The buying strategy of a Strangle supposes a minimum loss limited to the value of the premium and a gain unlimited depending on the variation of the title courses on the international financial market.

Strangle selling represents the combination between the selling of a CALL and PUT option with different exercise prices. The gain is limited to the premium, and the loss is unlimited.

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