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MANAGEMENT OF FINANCIAL RISKS IN INTERNATIONAL TRADE FINANCING

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Abstract: *Sale of products with delayed payment, i.e. credit supported sale is a major force in international trade and an imperative in today's business world. In the contemporary international commerce market positions and negotiation power have changed mainly in favor of buyers, who on the other hand, regularly request credit – based purchasing. Faced with competition on the global market, sellers intending to sell their goods and services on the market are enforced to offer favorable conditions, which is in fact sale with delayed payment. Presence on the global market offers possibilities for profit-making, but at the same time export-oriented businesses are surrounded by potential risks. The major problem in fact is the re-payment of the receivables, which is a result of the time interval from the moment when the foreign buyer will receive the delivered goods to the moment when he will pay the agreed amount.*

Risk management and exposure management or hedging exposure, are applied frequently by financial managers, managing the funds of a company, in order to enable exposure cover and reduce the potential instability for the company. The exposure management in case of foreign currency or exchange exposure represents an integral part of the financial function of the company, which acts globally, primarily multinational companies. International trade transactions are administered in far more complex conditions than those on the local/national market. Therefore, the stress should be on the crucial importance of the economic and financial risk management in the domain of international trade finance.

Key words: *financial risks, risk management, financial transactions, foreign currency payment, international trade.*

JEL: F23, F24, G32

INTRODUCTION

Despite the price and quality of goods, the request for delayed payment by importers is often a requirement for the realization of the exporter sales. Advance payment and documentary credit are no longer competitive methods of payment

in international trade, and foreign buyers mostly buy through open accounts which include delayed payment without additional security. [Beard & Thomas, 2006] Exporters are aware that the offered favorable payment conditions result in increased turnover, but they also increase the credit risks in international trade.

Credit risks can occur in international trade financing, i.e. during the export credit period. Exporter receivables arising from the export of goods, provision of services, construction of facilities, or carrying out work overseas on credit are all exposed to credit risks, and if realized exporters will not be able to collect their partial or full receivables. Credit risk is an extraordinary event which causes the creditor-seller to lose the opportunity to collect his receivables from the debtor-buyer.[Tomasic, 1978] Credit risks can be divided into two groups, commercial and non-commercial risks including political and catastrophic risks. These three types of credit risks differ, but the occurrence of any of them can have the same effect, that is the inability to collect receivables from the sale on credit, or receivables based on realized goods and services. Economic risks are a separate group of credit risks which include: [Nikolovski, Petrusheva, 2011]

- the risk of increasing the value of goods to be delivered due to an increased cost of materials and labor, if the possibility of increasing the price is not given according to the signed contract, and
- the risk of changes in the exchange rate during the credit period. Due to changes in exchange rates, when the borrower repayments are converted into the currency of the seller, there is a possibility that the amount of the real debt will not be covered.

International trade transactions are carried out in far more complex conditions than those present on the local market, and therefore, managing the economic risks in international trade financing is considered an important tool to protect the exporters, who are exposed to numerous credit risks when operating overseas.

MANAGEMENT OF FINANCIAL RISKS IN INTERNATIONAL TRADE FINANCING

Risk management and exposure management or hedging exposure are applied frequently by financial managers, managing the funds of the company, in order to enable exposure cover and reduce the potential instability for the company, i.e. to reduce oscillations in the value of the company.[Buckley, 2004] The exposure management in case of foreign currency or foreign exchange exposure presents

an integral part of the financial function of the company, which acts globally, primarily multinational companies and international business groups. There are three main types of foreign exchange exposure: transaction exposure, economic exposure, and translational exposure.

Transaction exposure is a risk related to the agreed payment in foreign currency. For example, a US company exports its products to the EU, and in turn will receive payment in Euros, but the company is exposed to the risk of changes in the exchange rates USD/EUR from the moment the contract is signed until the full payment of the export. Companies included in the international market are exposed transactionally if receivables from debtors are denominated in foreign currency.

Economic exposure or operating exposure is a risk that future, unexpected changes in exchange rates will affect negatively the long-term asset flows of the company. The economic exposure exists when the company has a limited ability to predict cash flows or foreign exchange rates in the medium and long term. All companies, meaning not only those that are actively involved in international trade, face the risk of economic exposure, directly or indirectly.

Translation exposure is a risk resulting from accounting and financial regulations that require companies to consolidate financial statements (balance sheet and profit and loss report) annually from their international activities. Thus, every company that has business operations outside the country of its headquarters is exposed translationally, as its activities are valued in foreign currency. In contrast to translational exposure which is a risk imposed by accounting rules, transaction and economic exposure are real risks in financial terms, and as such they represent a potential threat to the value of cash flows in the future.

The simplest way to manage transaction exposure is through natural hedging, which includes a policy of the company to arrange its cash flows (inflows and outflows) in specific currencies, so that they would be realized at approximately the same time, according to the needs of the company. Natural hedging does not use any specific financial instruments or transactions; it is simply a way of planned harmonization of incoming and outgoing cash flows in a particular currency. For example, a Canadian company with a significant amount of sales in the US, and a need for additional funds to operate can get a credit in US dollars. This means that the inflow of US dollars that the Canadian company will receive from its exports to the US will be used to service its debt in respect to the loan.

In other words, the US dollars which are necessary to service the debt will be provided by the exports to the US, no matter the current situation in the exchange rate USD, while the payment of the export can be structured in a way so that it is consistent with the repayments of the loan. Multinational companies that have large amounts of cross-border trade, foreign debt, and cash flows have turned their financial sectors into separate companies known as reinvoicing vehicles or netting vehicles or multicurrency management centers, and the overall intercompany trade is invoiced via this central company.[Madura, 2003] In that way, a group of companies invoices its exports in its own currency to another group of companies – importers of goods, via the reinvoicing center. Then, the reinvoicing center issues an invoice to the company – importer of goods in its local currency. In this way neither the importer nor the exporter bear the risk of changes in exchange rate, but the reinvoicing center, which takes all necessary measures for risk coverage. Exports outside the group are invoiced in the currency of the exporting company, and if the importer requires the invoice to be in a currency different than the one in his country, the exporting company issues an invoice in its own currency to the reinvoicing center which then issues another invoice to the importer in a currency that has been agreed, undertaking the entire risk of any change in the exchange rate. The technique of concentrating the total currency exposure into a reinvoicing center is an ideal way for controlling and monitoring the total currency risk exposure of the business group. The reinvoicing center acts as “a bank of the group”, managing the cash (cash management), as well as any debt of the group. Some multinational companies use these centers to reduce tax expenditures, and for internal pricing guided by the principle in cost-plus pricing.[Kapor, 2006]

There are two types of techniques for management of foreign exchange risk: internal and external. Internal techniques used by multinational companies are:

- netting,
- matching,
- leading и lagging,
- pricing policies,
- assets/liability management.

External techniques for management of foreign exchange risk are:

- forward transactions,
- foreign exchange options,
- short-term debt,
- discounting of foreign exchange receivable,

- factoring and forfeiting, and
- state guarantees for risk of change in exchange rates.

Netting is applied to associated companies that exchange goods, where mutual receivables and obligations are carried out using the net principle (with or without the intermediation of the center on a group level) that can be implemented on a bilateral or multilateral basis (normally mediated by the center). Netting is usually realized monthly, on a particular day, based on the reported mutual receivables and debts.

The process of harmonization in a multilateral company is realized so that the company adjusts its inflow in foreign currency with its outflow in foreign currency within the business group in terms of the amount and the time of the inflow/outflow. The cash inflow in a particular currency is used to initiate payments in that currency, and the foreign exchange market provides only the net amount of foreign currency that could not be harmonized. This is realized in the same way as multilateral net invoicing, as it involves the financial department that monitors centrally inflows and outflows of the companies within the business group, and the business group with other companies.

Acceleration of payment in respect of the agreed terms of payment (leading) and deceleration of payment (lagging) are the most frequently used techniques among companies when a change in exchange rates is expected, with the intention of using the expected effects of devaluation and revaluation.

The pricing policy of the company, which is used as protection against the risk of exchange rates, has two aspects. The first aspect is when prices are adjusted upwards, since it is necessary for the risk of change in exchange rates to be included, and the second aspect is choosing the right currency for the invoicing process. Normally, the seller prefers to carry out the process of invoicing into the currency of their country (provided it is convertible), or into a foreign currency that has a steady course with regard to its domestic currency, or into the currency that has the biggest expenditures, in order to eliminate the risk exposure from changes in exchange rates. However, buyer preferences may differ from those of the seller, and purchased goods can be invoiced into the currency of the importer, especially if the importer has a stronger negotiating position, but when it comes to stock products, choosing the currency depends neither upon the seller, nor the buyer. In other words, the choice of the currency in which the sold goods will be invoiced largely depends on the market position of the seller and buyer,

the regular practice for certain products globally, as well as the foreign exchange regulations of the buyer's and seller's country.

The management of assets and liabilities in terms of risk exposure from changes in exchange rates can be implemented in two ways: aggressive or defensive. The aggressive approach involves an active effort of the company to increase its cash flow (through collection of its receivables or reduction of debt) in a currency which is expected to strengthen, and to increase its outflows (increase borrowing or to get a commercial credit) in a currency whose value is expected to weaken. The defensive, passive approach includes the harmonization of inflow and outflow of cash in certain currencies, regardless of whether they are expected to strengthen or weaken.

Risk exposure from changes in exchange rate can be avoided by short-term borrowing in the respective currency (for example by overdraft loans), provided it is possible on the local credit market, and that interest rates from such loans do not exceed the benefit that would be achieved by changes in exchange rate. Another way to overcome the exposure to exchange risk is for the exporters to sell their foreign currency receivables at a discount, which can be realized as a classic discounting of the foreign exchange receivable, or by factoring and forfeiting. Furthermore, some of the Export Credit Agencies (such as ECGD, Hermes, COFACE) provide insurance against exchange rate changes. [Gianturco, 2001]

A further component for management of foreign exchange exposure of the company that operates internationally is the establishment of multicurrency management center which enables control of cash flows between affiliations and monitors the various currency transactions. [Kapor, 2006] These centers can be established as independent companies, companies within the multinational business groups, and are usually located on offshore destinations, which are known for having no foreign exchange control and a favorable tax treatment, which certainly facilitates the center's foreign exchange transactions. The favorable tax treatment decreases the total tax of the group through the center (located on an offshore destination). In this case, the best choice would be an offshore country that has signed agreements on avoiding double taxation with the countries where the affiliations operate.

Companies that work internationally are constantly exposed to transactional risks. If a company is interested in a long-term cooperation with a foreign supplier of certain goods in order to maintain a good business relationship, it is wrong

to have only one of the parties bearing the risk of exchange rate changes. In this case, a useful solution might be a mutual agreement for currency risk sharing. For example, if the US company Ford purchases automotive components from Toyota in Japan every month on a regular basis, any major change in exchange rates will be beneficial to one of the parties, and harmful to the other, which is certainly not a good sign for a long-term cooperation. One possible solution would be an agreement between Ford and Toyota that all payments should be made in yen until the spot rate at the time of payment is in a certain range, for example $1\text{USD}=120\text{-}130\text{JPY}$. If the exchange rate varies between these two limits at the time of payment, Ford shall accept any existing transaction exposure, since it pays in foreign currency, but if the rate is out of the agreed range, then both Ford and Toyota share the risk. If, for instance, the rate on the day of payment is $1\text{USD}=110\text{JPY}$, i.e. JPY appreciated compared to USD, causing an increase in expenditures for Ford, Toyota accepts the risk sharing of 10 JPY (with regard to the limit rate $1\text{USD}=120\text{JPY}$), so that Ford pays in yen based on the agreed rate $1\text{USD}=115\text{JPY}$. The management of foreign exchange exposure can be carried out by multinational companies through diversification of business operations in different countries with different currencies. For example, Hewlett Packard (HP) produces the same components both in the US and its affiliations abroad. If the value of USD is increasing, the company's production in the US will be expensive and uncompetitive, and in that case HP will shift production to a relatively cheap currency area (e.g. Asia), supplying the whole market from there. Although companies rarely diversify production locations only because of the currency diversification, this can certainly be an additional benefit from the global expansion.

HEDGING FOR FINANCIAL DERIVATES

Financial derivatives are derived transferable securities, which are created on the basis of other financial assets (instruments), and they include forward and liquid forward contracts (forwards and futures), options and swaps. In fact, the derivative as the name implies "derives" its value from the value of other financial instruments. They are used in financial operations to make profit, but also for protection against financial risks, especially the risk of changes in exchange rates and the risk of changes in interest rates through the so-called hedging.

The essence of financial hedging is a combination of two or more financial transactions whose results are divergent in case of a change in some of the critical factors on the financial market, that is, making a combination of transactions

with financial instruments that respond differently to changes in interest rates (interest rates hedging) and exchange rates (currency hedging). Unlike natural hedging, contractual hedging is when a company uses financial derivatives. Hedge is an asset or a position whose value ranges in the same amount, but in the opposite direction from the exposure. [Czinkota, Ronkainen & Moffett, 2003] This means that if the exposure makes a loss worth 100\$, the asset through which the hedge is carried out will profit 100\$. In this way, the total value of the position will not change, and this is called a perfect hedge. However, perfect hedge is often difficult to find, and many managers would not use it even if it is immediately available, because despite the risk, it eliminates the potential gain.

This paper contains a brief explanation of the financial derivatives which include: forwards, futures, options, and swaps.

Forward is a derivative security, i.e. a purchase and sale agreement of certain assets at a predefined price, where the delivery of assets and the final payment will be made at a specific day in the future. These contracts are not standardized, i.e. the conditions for the realization of the transactions are negotiated individually between the buyer and seller, without a mediator (or clearing house) which distinguishes it from the futures. In this way, both parties are exposed to credit risk, because each of them may not fulfill the undertaken obligations. Forward usually relates to foreign exchange transactions, and based on them an obligation to buy or sell a certain foreign currency for another at a fixed rate is undertaken, provided that this transaction will be realized at a specific day in the future or at some future period. Forward premium is the difference between spot and forward value of the currency. Currency forward contracts are not transferable instruments and the leveling between the contracting parties is realized through actual transfer of currencies. Forward rate agreement-FRA is an arrangement under which both parties borrow or lend a certain amount of funds at an agreed interest rate. The agreement obliges both parties to pay or receive an amount equivalent to the difference between the agreed interest rate (FRA rate) and the market interest rate for loans or deposits with certain validity on a certain future date. With these transactions the principal is not transferred, and the difference between the interest rate guaranteed by the agreement and the market interest rate within the agreed period is calculated on the day of leveling. Forward interest rate is used to hedge the expenditures from future borrowings or income from future loans or deposits, but it is also used for speculative transactions with a profit objective.

Futures is a forward contract for the purchase of certain assets, under which delivery and payment will be made in the future. [Nevitt & Fabozzi, 1995] There are some similarities between futures and forwards, as well as significant differences. Futures are highly standardized contracts that are regularly traded with on a stock market. In the case of futures the delivery of assets (payment) is not made at an exact day, but during the month. Moreover, there is also a clearing house which signs special contracts with both the buyer and seller and to which they pay a prescribed initial margin, and often a maintenance margin, provided that the clearing house guarantees delivery and payment of futures. In fact, with these type of contracts does not usually come to actual delivery of the assets, but only the difference in prices is paid, that is, balance settlement is performed. There are many types of futures, however, the main division is as follows: short-term futures (up to one year) and long-term futures (over a year), as well as financial and commodity futures. Financial futures include futures of securities (shares, company bonds, state securities), currency futures where the world leading currencies act as basic assets, futures of market indices and interest rate futures. In business financing, interest rate futures are used as a security against the increase of financing costs, and current futures as a security against fluctuations in exchange rates.

Options give the holder the right, but not the obligation to buy or sell a particular financial asset at a predetermined price. Unlike futures, there is no obligation for executing the contract for both parties. The buyer of the options pays the seller or the option writer a certain commission called option price/premium, which is a compensation for the undertaken risk of change in asset price that is the basis of the option. The price at which the financial asset that is the basis of the option can be bought or sold, is called exercise/strike price, and the date after which the option ceases to be valid is called expiration/maturity date. Options have a major role when insuring against the risk of interest rate changes and foreign exchange changes, as well as changes in prices of other securities and market indices. Depending on the subject of the option, there are options on securities, currency options, interest rate options and options on market indices. [Soskic, 2000] Currency option is a type of unified contract that gives the holder (buyer) the right to buy (call) the option or sell (put) the option at a specified amount of foreign currency before the expiry of the option's period of validity, at a predetermined price. The main function of the currency option is protecting business entities against any kind of foreign currency risk, while generating the maximum possible income.

Swap means an "exchange" and this financial derivative includes different arrangements of replacing one asset with another. The main types of swaps are interest

rate swaps, currency swaps, commodity swaps and equity/index swaps.

Interest rate swaps are financial arrangements where contracting parties exchange interest rate flows (because there are two interest rate flows), however, the principal is not exchanged, but it only appears in the contract as the basis for calculating the interest rates. The main types of interest rate swaps are:

- swaps where the interest rate flows are calculated at a fixed interest rate, and are exchanged with interest rate flows calculated at a floating interest rate. If these swaps are in the same currency, they are called vanilla/coupon swaps.
- swaps where interest rate flows are calculated at one reference floating interest rate, and are exchanged with interest rate flows calculated at another reference floating interest rate (for example, an exchange of six-month LIBOR for three-month LIBOR or three-month LIBOR for three-month LIBOR plus a margin). If these swaps are in the same currency, they are called basis or index swaps.
- interest rate swaps in the same currency,
- interest rate swaps in different currencies, also known as cross-currency interest rate swaps which are arrangements to exchange the amount of the principal in two different currencies at a fixed conversion rate on an agreed day in the future, and during the contract duration period the parties exchange revenues based on the interest rate, according to a predetermined basis, calculated on the amount of the principal.

CONCLUSION

International trade transactions are realized in far more complex conditions than those present on the local market, and therefore, there is the need for an adequate protection of the financial transactions, which includes management of financial risks in international trade financing.

The importance and significance for management of financial risks in international trade financing are enormous, as competition in the global market is forcing businesses to offer more favorable conditions in terms of delayed payment and sale on credit, which inevitably increases the risk of timely fulfillment of obligations by the buyer-borrower, and there is also the risk of changes in exchange rates during the credit period. Thus, it is possible that the debtor's repayments when converted into the seller's currency would not cover the amount of the real debt.

Risk management and exposure management or hedging exposure, are applied frequently by financial managers, managing the funds of the company, in order

to enable exposure cover and reduce the potential instability for the company, i.e. to reduce oscillations in the value of the company. The exposure management in case of foreign currency or foreign exchange exposure presents an integral part of the financial function of the company, which acts globally, primarily multinational companies and international business groups. There are three main types of foreign exchange exposure: transaction exposure, economic exposure, and translational exposure.

Companies that work internationally are constantly exposed to transactional risks. If a company is interested in a long-term cooperation with a foreign supplier of certain goods in order to maintain a good business relationship, it is wrong to have only one of the parties bearing the risk of exchange rate changes. In this case, a useful solution might be a mutual agreement for currency risk sharing.

Financial managers in modern companies often use financial derivatives for protection against financial risks. Financial derivatives are derived transferable securities, which are created on the basis of other financial assets (instruments), and they include forward and liquid forward contracts (forwards and futures), options and swaps. They are used in financial operations to make profit, but also for protection against financial risks, especially the risk of changes in exchange rates and the risk of changes in interest rates through the so-called hedging.

The essence of financial hedging is a combination of two or more financial transactions whose results are divergent in case of a change in some of the critical factors on the financial market, that is, making a combination of transactions with financial instruments that respond differently to changes in interest rates (interest rates hedging) and exchange rates (currency hedging).

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UPRAVLJANJE FINANSIJSKIM RIZICIMA U MEĐUNARODNOM TRGOVSKOM FINANSIRANJU

Prof. Nada Petrusheva, PhD

Sažetak: *Prodaja sa odloženim plaćanjem, odnosno prodaja kreditom predstavlja osnovni pokretač međunarodne trgovine i imperativ u današnjem poslovnom svetu. U savremenoj međunarodnoj trgovini, tržišne pozicije i moć pregovaranja promenili su se uglavnom u korist kupaca, koji redovno traže da kupuju na kredit. Suočeni sa konkurencijom na svetskom tržištu, ukoliko prodavači žele da prodaju svoje proizvode i usluge, prinuđeni su da ponude povoljnije uslove, što zapravo znači odobravanje prodaje sa odloženim plaćanjem. Prisustvo na globalnom tržištu nudi mogućnost za velike dobitke, ali istovremeno postoje i rizici povezani sa izvoznim aktivnostima. Osnovni problem je zapravo u naplati potraživanja, koji proizlazi zbog vremenskog intervala koji se pojavljuje u trenutku kada će inostrani kupac primiti isporučenu robu do trenutka kada će platiti ugovoreni iznos.*

Upravljanje rizicima i upravljanje deviznim izloženostima ili hedging izloženosti, primjenjuju se često od strane finansijskih menadžera koji upravljaju sredstvima kompanije, kako bi se pokrila izloženost i smanjila nestabilnosti u odnosu na ostvarenom profita kompanije. Upravljanje deviznom izloženošću ili izloženošću rizika od promene deviznog kursa predstavlja sastavni deo finansijske funkcije kompanije koja djeluje na globalnom nivou, prvenstveno kod multinacionalnih kompanija. Međunarodne trgovinske transakcije ostvaruju se u daleko složenijim uslovima od onih na domaćem tržištu, pa zbog toga stoga postoji potreba za upravljanje sa ekonomskim i finansijskim rizicima u međunarodnom trgovskom finansiranju.

Ključne riječi: *finansijski rizici, upravljanje rizicima, finansijske transakcije, devizna potraživanja, međunarodna trgovina*

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