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THE OPPORTUNITIES OF IMPLEMENTING CURRENCY RISKS HEDGING AT UKRAINIAN AGRICULTURAL ENTERPRISES

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The article considers the problems of currency risks of exporters of agricultural products. Historically, agricultural enterprises around the world have been identified as using a number of internal operational approaches to manage currency risks and limit their impact, but such approaches often do not hedge all currency risks in their portfolios. Conventional hedging instruments available in developed capital markets, such as currency forward transactions, swaps and options, are limited and often too expensive in emerging markets. The author proposes a classification of the main currency risks of agricultural producers and concludes that devaluation is a major problem for participants in the agricultural value chain, including financiers, traders and dealers, processing enterprises and small farmers. Depending on the instability of the currencies in which loans are denominated, devaluation can lead to significant losses. Approaches to the formation of currency risk management system in the agricultural sector have been considered. Some methods of hedging currency risks that can be used by Ukrainian companies have been proposed.

МОЖЛИВОСТІ ЗАСТОСУВАННЯ ХЕДЖУВАННЯ ВАЛЮТНИХ РИЗИКІВ УКРАЇНСЬКИМИ ПІДПРИЄМСТВАМИ

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Ключові слова:
сільськогосподарське виробництво, валютні ризики, методи, управління, хеджування, застосування українськими підприємствами.

У статті розглядаються проблеми валютних ризиків експортерів сільськогосподарської продукції. Визначено, що історично сільськогосподарські підприємства використовували ряд внутрішніх операційних підходів для управління валютними ризиками та обмеження їх впливу, однак такі підходи часто не забезпечують хеджування всього ризику валют у своїх портфелях. Звичайні інструменти хеджування, наявні на розвинених ринках капіталу, такі як валютні форвардні угоди, свопи та опціони, є обмеженими та часто надто дорогими на ринках, що розвиваються. Запропоновано класифікацію основних валютних ризиків сільськогосподарських виробників та зроблено висновок, що девальвація є головною проблемою для учасників ланцюга створення сільськогосподарської вартості, включаючи фінансистів, торговців та дилерів, обробні підприємства, а також дрібних фермерів. Залежно від нестабільності валют, у яких деноміновані позики, девальвація може призвести до значних збитків. Розглянуто підходи до формування системи управління валютними ризиками в аграрній сфері. Запропоновано деякі методи хеджування валютних ризиків, які можуть застосовуватися українськими підприємствами.

Statement of the problem

Agricultural products appear on the market every year unevenly, seasonally, after the harvest period. The exact time of the harvest period is determined by unpredictable precipitation and weather conditions, and human intervention does not affect this. In addition to the unpredictable seasonal nature, the number of crops grown varies considerably from year to year.

High professional specialization, seasonal production of crops, the time shift between supply and demand have led to the development of a very specialized branch of trade - trade in agricultural products.

Of course, export requirements often compete with local requirements. This competition is characterized in particular by, for example, the purchase requirements of countries that are poor in grain (for example, the Middle East, some African countries, etc.), so they can significantly affect the trend of domestic grain prices.

Thus, the agricultural market – a special economic and market environment that has unique features – has unique risks. All these risks of balancing production, processing and sales are often experienced by agro-industrial companies. Thus, it is advisable to identify these risks one by one, identify their most important aspects and provide solutions for the proper management of these risks.

Analysis of recent studies and publications

Certain problems of currency risk management, and in particular hedging, were considered in their research by such authors as Z. M. Galetska [1], V. V. Ksendzuk [2], O. M. Sokhatska [3]. However, their use in the agro-industrial complex has not yet been properly reflected, this is due to the relevance of this study.

Objectives of the article

The objective of the work is to determine the possibilities of using means of hedging currency risks by Ukrainian agro-industrial enterprises engaged in export activities as a method of avoiding the corresponding risks.

The main material of the research

Much of Ukraine's GDP is based on agricultural activities. Due to the geographical and climatic conditions of the country, it is an excellent site for agricultural work, and much of its territory is suitable for cultivation. On the basis of products of the agricultural sector, a large trade network, processing industry and logistics chains, i.e. agro-industrial complex.

Growing and processing of crops are often directly related to each other through vertically integrated companies, groups of companies. One group of companies is engaged in agriculture, another - processing, and another - the sale of processed products. Characteristically, in addition to integrated companies, there are also companies that specialize only in certain types of agro-industrial activities, such as feed, livestock feed production, food production, etc. But in both cases, the production and commercial process must manage the uncertainties or risks associated with the expected yield of agricultural products, as well as supply and demand for it.

Due to the uncertainty and unique characteristics of trade in raw materials in the life of agricultural enterprises, there may be special risk factors of several different types.

Historically, agricultural enterprises around the world have used a number of internal operational approaches to manage currency risks and limit their impact, but such approaches often do not provide hedging of all currency risk in their portfolios. Conventional hedging instruments available in developed capital markets, such as currency forward transactions, swaps and options, are limited and often too expensive in emerging markets.

Businesses in other sectors have developed additional specialized tools for currency risk management, but factors unique to agriculture make it difficult to adopt such tools. The unpredictability and variability of a farmer's cash flows, which strongly depend on the variability of the necessary environmental factors, complicate the processes of forecasting production cycles and reliable hedging of their risks. In addition, many agro-industrial enterprises have limited experience in currency risk management or the use of such instruments.

Let’s consider the classification of major currency risks (Table 1).

Table 1 – Classification of currency risks

	Description
Devaluation	Discrepancies are created when an enterprise receives debt in hard currency, usually in US dollars, and then lends to its national currency. Fluctuations (devaluation) of the value of the national currency expose the borrower to losses.
Convertibility risk	Businesses with foreign exchange liabilities face repayment or default risk if the national government restricts the sale or purchase of foreign currency, in which case the firm will not be able to access sufficient currency to meet its obligations.
Risk transfer	Businesses with foreign exchange liabilities may face similar challenges to repay their liabilities or risk default if the national government bans or restricts the movement of foreign currency because they will not be able to emigrate capital to repay.
Interest rate risk	When hard currency loans are indexed to the base rate (LIBOR, EURIBOR), enterprises may be affected by changes in interest rates, which may affect their ability to repay.

Source: developed by the author

Of these currency risks, devaluation is a major challenge for participants in the agricultural value chain, including financiers, traders and dealers, processing enterprises, and small farmers. Depending on the instability of the currencies in which loans are denominated, devaluation can lead to significant losses.

The currency risk management system affects the availability and affordability of financial services for farmers in several ways:

High costs of financing in local currencies: financial institutions and other enterprises that lend to farmers in local currency transfer the costs of risk management to enterprises and organizations at very high interest rates.

Limited range of financial products: To avoid risks of local currency convertibility, agricultural enterprises focus on financial export transactions denominated in US dollars or euros. At the same time, such a narrow approach limits the possibilities of financing in local currency to support working capital or investment needs of agricultural enterprises. It also means that financing is usually more accessible to export crops. Problems of currency risk management in such conditions lead to the fact that companies limit their risk in certain currencies or completely curtail activities in some markets.

Adverse regulatory environments can combine complex risk management challenges inherent in different currencies. Depending on the country, agricultural exporters may face problems with local domicile, licensing, taxation, data access and confidentiality. In general, local domination can reduce currency exposure, as businesses can access capital in local currency. However, for foreign entities, this local domiciliation may lead to additional barriers in the form of regulatory oversight and reporting requirements or unfavourable tax regimes, so this is not always an easy solution.

Agricultural enterprises have a number of options, both internal and external, for their activities to reduce the impact of exchange rate fluctuations or currency risks. They apply these mechanisms according to their individual needs and depending on the country, and many use multinational programs.

As the most accessible risk management mechanisms, many agricultural enterprises use a combination of internal approaches to reduce currency risk. Such internal approaches include: investment strategies such as indexation, portfolio diversification and exposure limits, and operational strategies such as redistribution and cash reserves. Such approaches are effective in limiting the occurrence of currency risks, but at the expense of a certain restriction of access and exposure in a certain market. Yes, they allow you to control only the amount of exposure in foreign currency on the balance sheet of the enterprise, but do not allow hedging of positions from actual currency fluctuations. To further complicate currency risk, their introduction often leads to increased costs or limits on the amounts operating in certain markets. Other internal strategies that companies can apply also have undesirable consequences for them. For example, the binding of capital to reserves may have significant opportunity costs; and hard currency loan indexation may increase the risk of default.

The second course of action is to use hedging products from an external supplier. Agricultural enterprises can implement this strategy in parallel with the use of internal approaches.

In developed capital markets, large commercial banks, along with brokerage and financial intermediaries, offer a wide range of well-established derivative products (derivatives). These include futures or forward contracts, swaps and options.

Today at Ukrainian enterprises, the lack of practice of currency risk insurance as a component of the risk management system can lead to a significant deterioration of their financial performance in the event of unfavourable exchange rate dynamics.

As the current practice shows, currency risks are encountered by: exporting companies that receive income in foreign currency and sell foreign exchange earnings to finance expenditures denominated in hryvnia; enterprises that have income in hryvnias, but import goods and services in foreign currency as part of their production process; enterprises that have income and expenses in hryvnias and borrow in foreign currency to finance their business activities.

Currency risk hedging is applied to international stocks and transactions, and aims to reduce the impact of currency fluctuations on the value of investments and international sales - a technique to protect against exchange rate movements. Hedging is the neutralization of the risks of changes in the price of an asset in the future through certain financial transactions. Hedging allows companies that are exposed to currency risks: to avoid financial losses in the event of adverse exchange rate changes in the future; simplify the process of planning the main financial indicators of economic activity by being able to record the future value of the exchange rate [3, p. 74-76].

Let’s consider some methods of hedging currency risks that can be used by Ukrainian companies.

The forward / futures hedge allows you to buy / sell a currency forward or futures contract in foreign currency in the amount of accounts payable. The disadvantages of this method include significant losses if the selected position is incorrect. A forward currency contract is an agreement to buy or sell a certain amount of foreign currency at a certain point in time at the exchange rate set today. For example, if an exporter knows that he will receive $ 250,000 within three months, he can enter into a forward contract with a counterparty who agrees to buy that amount in three months at the forward exchange rate.

The forward contract in the above example can be reproduced by the following series of transactions: the exporter today borrows $ 250,000 at a rate of, for example, 6%, and exchanges them in euros at the current exchange rate of the current day. It places the euro at an interest rate in the eurozone of, let’s say, 4.5%. Within three months, having received $ 250,000 from its counterparty, the exporter pays its obligations in US dollars and collects the amount in euros that it has placed. Since both transactions are strictly equivalent, it can be ensured that the current forward rate reflects nothing but the rate of change of the exchange rate and the difference between different interest rates.

The hedge using money market instruments is to take a loan in UAH and convert it into the currency of accounts payable. Then invest the proceeds in a bank deposit until the closing of the transaction. Or take a loan in the currency of receivables and convert into hryvnia, then invest the funds received in a bank deposit, pay the loan received receivables. The disadvantages of this method include significant transaction costs for the operation.

The currency option allows you to buy a currency call option (call option) in currency and quantity, the size of the accounts payable or buy a currency put option (put option) in the currency and quantity, the size of the receivables. The main disadvantage is the loss of the premium in case of incorrectly chosen position.

Cross-currency swaps exchange cash flow in one currency for cash flow in another currency. If, say, a multinational wants to issue bonds to finance a subsidiary in a developing country, it can obtain the best financing terms by issuing bonds denominated in euros rather than the local currency of its subsidiary, and then use the exchange

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rate to convert interest payments, and the principle in the relevant local currency.

Thus, this option protects the exporter from adverse changes in the exchange rate, without limiting the ability to take advantage of favourable exchange rate movements. The seller of the option, however, faces losses if the option is used and does not make a profit, or if it is not used. To compensate for this risk, it will require a premium (rather than an insurance premium) for the option.

An option portfolio is a simultaneous purchase and sale of a set of call and put options. The disadvantages of this method include significant losses if the option portfolio is not formed correctly [2, p. 144-147].

We believe that the most effective method of hedging for agricultural enterprises in terms of the risk of possible losses and transaction costs of transactions is the purchase and sale of foreign currency calls and put options on foreign currency or futures contracts on foreign currency.

When hedging commodity and currency risks, it is important to determine the optimal time to start hedging - the time of entry into the market, i.e. the opening of a position or the time of purchase of option contracts. Hedging at unfavourable moments at the turning points of the market can lead to the loss of the premium paid for the option and failure to achieve the purpose of hedging.

In solving this problem, it is necessary to assume that in any financial and commodity market there can be three possible types of price movements - rising prices (bullish trend), falling prices (bearish trend) and price fluctuations at the level of achieved values (lateral trend).

Option contracts are known and sold for decades. Today, there are two general classifications of options: American warrant - an option that can be exercised on any trading day on or before the expiration date; European warrant - a warrant that can be used only after the expiration date.

Option valuation models depend on the following factors: the current market price of the underlying security; the exercise price of the option, especially in relation to the current market price of the underlying security; the cost of placing the position in the main security, including interest and dividends; time to expiration along with any restrictions on physical activity; an estimate of the future volatility of the underlying security price over the life of the option [1, p. 28-31].

As world practice shows, forward contracts are the most commonly used derivative. Most companies use them to hedge future cash flows that are clearly identified and have very probable transaction risks. The most common maturities of forward contracts are up to 12 months, with some maturing in 2-5 years, while maturities of more than 5 years are rare. Some firms cover the risks by using short-term derivatives.

Many companies use warrants on a periodic basis, in particular to hedge uncertain / expected future cash flows. The maturity is mainly concentrated in the segment up to 12 months.

Futures are mainly used to hedge long-term regular transactions, in many cases cash flows arising from debt financing, as well as long-term supply contracts, for example, in the energy sector. The maturity can be much longer than for other instruments.

Conclusions

Given the above problems and imperfect solutions available to farmers today, a currency risk management system requires a combination of short- and medium-term solutions that can mitigate these risks for businesses until long-term solutions address the root causes.

Challenges for currency risk management for enterprises in the agricultural sector have a significant negative impact on the growth of their profitability. Without proper currency risk management mechanisms, farmers often use internal strategies that lead to high costs. Existing hedging solutions are mostly not used in Ukraine.

We believe that Ukrainian companies can use both internal and external instruments, as well as real options for hedging macroeconomic risks. Internal hedging involves adjusting operational and financial plans to reduce risks, such as comparing internal and external flows of other national currency and including provisions on price adjustments in contracts. Another example of internal hedging is the presence of both liabilities and financial assets in the same currency name. Internal hedging of interest rate risks can be achieved by comparing the sensitivity of interest rates to the assets and liabilities of the firm, and then comparing this change in value with the change in the value of interest rates, which should increase to the same extent. This is called the duration of compliance.

The use of hedging instruments and methods eliminates or significantly limits currency risks, which are even secondary to enterprises in terms of their main (production or trade) activities, but quite significant in terms of financial results of these activities.

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