

Exchange rate risk management of foreign trade enterprises

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Abstract. Global economic integration is expanding worldwide, and each country's potential and extent of exchange rate volatility will become more significant with changing national policies. As a result of engaging in import and export business, foreign trade enterprises have a large volume of foreign currency transactions and holdings. Foreign trade enterprises in every country need to raise their awareness of exchange rate risk management. Import and export enterprises must avoid exchange rate risks in various ways to ensure minimum losses and maximum profits. This article examines how foreign trade enterprises can manage exchange rate risk in a way that enables them to avoid exchange rate risk and thus ensure stable business returns. Following a logical relationship and structure, it uses the literature research method to introduce how companies need to respond to changes in exchange rates internally. It also introduces how companies can control exchange rate risk through financial instruments.

Keywords: Foreign trade enterprise; Risk management; Exchange rate; Currency; Hedging.

1. Introduction

International trade contributes to the economic growth of the entire world. The exchange of resources can be achieved directly between two countries through marketing. Each country can obtain scarce products at the domestic level through multinational enterprises and promote products that are produced in larger quantities within the country to overseas markets [1]. For foreign trade enterprises, there is bound to be a connection with foreign currencies when doing business with foreigners.

When an enterprise does import business, it needs to pay for goods in foreign currency when purchasing foreign goods. At the same time, enterprises doing export business are likely to receive payments in foreign currencies. Thus, two countries with different currencies must be involved in the issue of currency exchange rates. The exchange rate is a decisive factor in a transaction, and foreign trade companies must use it to estimate the profitability of a transaction. Besides, every business takes time from the signing of a contract to the delivery of goods. Exchange rates can bring uncertainty over time. Therefore, managing risks arising from exchange rate volatility is crucial for foreign trade companies.

2. Organization of the Text

2.1 Foreign trade companies and exchange rate

A foreign trade company is qualified to operate in foreign trade, importing goods from foreign countries and exporting goods from its own country [2]. Its business dealings focus on foreign countries, as the internal market research department of the company needs to examine foreign companies and then import foreign goods to sell in its own country. Or it can acquire domestic goods to sell abroad and earn the price difference. Import and export trade has a positive, encouraging effect on domestic companies' productivity and competitiveness [2]. Otherwise, importing foreign products can make domestic companies work harder to improve the quality of their products. Foreign trade will also stimulate domestic companies in the same industry to innovate and explore new technologies and products. Meanwhile, exporting domestic products will allow domestic companies to increase their earnings as the target market becomes more productive. Thus, there is a strong likelihood that the demand for goods will become more outstanding. Moreover, while the company is widely known

for its exported goods, domestic companies will have more options and find favorable raw materials suppliers.

Different currencies between two countries make it necessary for import and export trading companies to encounter exchange rates when trading. The exchange rate is the ratio between two currencies and reflects the value of one country's currency to another [3]. The existence of an exchange rate allows a foreign trade company to exchange its currency for another country's money to buy the goods it wants. Hence the exchange rate reflects the actual price a government is willing to pay for a commodity in another country [3]. Since the demand for goods or materials from two countries is always changing, the exchange rate is constantly changing. If a foreign trade enterprise fails to control the exchange rate before trading, there is a high risk that it will be exposed to exchange rate risk. Enterprises are unable to grasp the direction of exchange rate fluctuations. If a foreign company settles or sells foreign exchange according to the market price in real-time, the gains and losses of the company will be determined entirely randomly by the fluctuation of the market [4]. Therefore, failure to manage exchange rate risk will primarily increase a company's business risk. The exchange rate risk management is about ensuring that companies will not lose profits due to fluctuations in the market exchange rate [4]. Exchange rate risk management is like the handrail on both sides of the stairs, which cannot be used, but every foreign trade enterprise must have a management method to prevent market change.

2.2 Exchange rate risk

Exchange rate risk is when a country borrows a debt from another country and must eventually repay it in its currency by converting it into foreign currency. Or the trading company repays the debt with foreign exchange transactions received from the exported products [4]. Therefore, foreign trade companies are exposed to exchange rate risk, which is the possibility that the value of goods or liabilities denominated in a foreign currency will rise or fall during the transaction time due to fluctuations in the exchange rate [4]. The greater the likelihood of an increase or decrease in the exchange rate, the greater the risk to the foreign trade company. A country's economic growth rate is the most fundamental factor influencing exchange rate volatility [5]. Variables such as GDP, the level of bank interest rates, and the inflation rate are factors that contribute to exchange rate fluctuations [5]. However, these are beyond the control of an import/export trading company, and the rate and efficiency of economic growth is a performance of a country in general. Since exchange rate fluctuations are not at the discretion of the foreign trade company, the foreign trade company can only reduce the possibility of loss by understanding and preventing exchange rate risks.

According to the academic research, exchange rate risk can be divided into three types: transactional risk, translation risk, and economic risk [5].

2.2.1 Transactional risk

Transactional exchange rate risk is present in every international trade. It usually takes months or even a year or more for a firm to reach an agreement and settle a debt during a trade transaction [5, 6]. Suppose the exchange rate of the currency of the denomination changes during the trading period, and one of the parties to the transaction is bound to suffer losses [6]. A simple explanation is that when a foreign trade company signs an export deal at a higher exchange rate than when it receives payment on the expiry date of the contract, the foreign trade company's real revenue from this contract will be less than originally anticipated.

2.2.2 Translation risk

Translation exchange rate risk is when a trading company has operations both at home and abroad or even has a subsidiary in another country, and the company's financial statements are recorded at the exchange rate at a point when they are consolidated [4, 6]. This means that the company's financial department will restate the amounts reflected in the accounting entries and statements of account in one currency to another. Since exchange rates change regularly, there is a possibility that the company will make a loss on its consolidated statement. Under IFRS [7], when a company converts the

monetary units of assets and liabilities in the financial statements of a foreign operation to the monetary units of the entity's functional currency, it is necessary to use the real-time exchange rate on the balance sheet closing date. This can result in assets and liabilities of foreign operations being overstated or understated due to changes in exchange rates. Therefore, the book value of the company's operations may be incorrect due to changes in exchange rates.

2.2.3 Economic risk

Economic exchange rate risk is the change in a multinational company's analysis of the company's future cash flows that are subject to unanticipated changes in exchange rates [6]. Inaccurate forecasting of future cash flows can lead to the company making incorrect business decisions. Managers and investors can be affected by errors caused by economic exchange rate risk that can affect a company's value in the marketplace and can have negative consequences for the company if the change in exchange rates has a significant impact on the sales volume and cost of the products the company will be exporting [6]. The company's projections of future cash flows are subjective. If the company experiences unpredictable exchange rates, there is a high risk of making the wrong decision because it has incorrectly estimated its future cash flows.

3. Exchange rate risk management

3.1 Exchange rate decrease

The prevention of losses caused by changes in exchange rates should be considered at both the import and export levels [8]. When the exchange rate decreases, the foreign currency appreciates, and the national currency depreciates. Foreign trade firms should reduce their import business [8]. Because of the devaluation of the currency and the drop in the exchange rate, products that could have been bought with a million dollars of the national currency will cost more to buy after the domestic currency has been devalued. When the national currency is weakened, importing companies should improve their internal management systems [8]. Managers should always stay aware of changes in exchange rate fluctuations. If a company needs to import raw materials for its import business, it can determine if there are suitable alternatives in the country. If the national currency depreciates and the company can find substitutes for domestic manufacturers, the foreign trade company will likely be able to transform and reduce production costs and transport costs. However, companies could develop their export business when the national currency depreciates [9]. Foreign multinationals will be more willing to buy domestic products when the national currency is devalued. This is because a devaluation of the national currency is a cost reduction for foreign companies. Domestic foreign trade enterprises should seize the opportunity to develop their export business to ensure product quality and improve production efficiency [9]. Companies can also take advantage of short-term currency devaluation to expand their foreign markets and make foreign companies aware of the quality of their export goods.

3.2 Exchange rate increase

When the exchange rate rises, foreign currencies depreciate, and national currencies appreciate, the import business of foreign trade companies develops [8]. Because of the appreciation of the national currency, which means it becomes more valuable in the foreign exchange market [9]. Foreign trade enterprises can develop their import business and thus buy high-quality foreign products at high exchange rates. The expansion of the import business will also allow the national market to become more diversified [9]. For example, if the currency appreciates and the exchange rate increases, the demand of the domestic population will be higher, and the incentive to spend will be greater. Consumers who used to spend 100 national currencies on foreign products may only need 90 national currencies because of the lower cost of imports. The greater willingness of consumers to buy goods equates to a greater demand in the market, allowing importers to import more goods to match the supply. The economy of the country will improve in a short period.

Meanwhile, the export business becomes less competitive, but companies can work to change from a form of production to a form of technology [9]. When the currency appreciates and the exchange rate rises, companies can do more research on the technology of the product concerned. In 1985, the United States and Japan, the Federal Republic of Germany, France, and the United Kingdom signed the Plaza Accord in New York [10]. The Plaza Accord is summarised as an agreement between five governments to intervene in the foreign exchange market. After the Plaza Accord, the five countries agreed to sell the dollar to devalue it, thereby increasing the amount of American export business and easing the imbalance in the economy of the United States [10]. As a result of this agreement, the dollar depreciated, and both the Japanese yen and the German mark experienced an appreciation in value [11].

However, some Japanese and German foreign trade companies, such as Toyota and Siemens, were not negatively affected by the reduction in export business. The Plaza Accord and the oil shocks from 1973 to 1980 did not cause major difficulties for Japanese and German foreign trade companies [12]. In particular, Toyota in Japan changed from a production orientation to a technology orientation in the face of a lower exchange rate and a lower export business due to the appreciation of the yen. The Toyota production system (TPS) was also favored by international consumers back at that time [12]. This was because Toyota's TPS technology produced very fuel-efficient cars. This is why foreign trade companies with a lot of export business are in a good position to improve their unique technology in terms of products when the national currency is appreciating, and the exchange rate is falling. Foreign trade companies with little export business should invest in technology departments to improve the uniqueness and patenting of their product technology. When the product is unique worldwide, the losses caused by exchange rate fluctuations will be minimal. Moreover, the company will have the initiative to agree on the currency of the transaction. If foreign trade companies use their currency and its exchange rate in their transactions, they will largely reduce the risk of foreign exchange fluctuations.

3.3 Effective tools for avoiding exchange rate risk

The depreciation or appreciation of a country's currency and the rise or fall of the exchange rate need to be assessed by professional analysts at every moment [13]. And once the risk has been assessed, companies must adjust their business strategy in time to avoid the risks associated with exchange rate fluctuations. If a deal has been negotiated, but the exchange rate reverses unexpectedly, companies will not be able to adjust the volume of their import and export operations [13]. The method of constantly paying attention to exchange rate movements is effective, but it takes time and human resources for companies to wait for the exchange rate to turn. This is not suitable for all foreign trade enterprises to implement. Large foreign trade companies may have departments dedicated to detecting exchange rate risks and currency movements, but small and medium-sized enterprises may be unable to make timely judgments. Foreign trade enterprises can also use financial derivatives to manage the risks caused by exchange rate volatility [13].

3.3.1 Derivative financial instruments

Foreign trade enterprises can effectively transfer risk using financial derivatives to operate in financial markets. The use or purchase of financial derivatives can reduce the economic losses that may exist in the enterprise.

First of all, future foreign exchange settlement can be applied, which refers to an agreement between an enterprise and a bank in the present to settle or sell foreign exchange in the future [14]. The bank and the enterprise will agree on the currency, amount, exchange rate, and date of the foreign exchange. The company will visit the bank at the expiry of the agreement to settle or sell the foreign exchange as agreed in the contract. Foreign trade enterprises that have settled or sold foreign exchange can quote their customers based on the forward settlement rate [14]. For example, a Chinese foreign trade enterprise, BX, has an import business and expects to pay a US company in one year for a US dollar shipment. Reducing the risk of exchange rate fluctuations, BX company can enter into a forward exchange settlement contract with the bank in advance. Besides, in one year, no matter how

the exchange rate of RMB changes against the US dollar, BX company can use the exchange rate agreed in advance with the bank to buy US dollars from the bank at the rate agreed in the contract. This reduces the exchange rate for one year. This reduces the exchange rate risk for one year.

Moreover, foreign trade enterprises can use foreign exchange swaps to reduce the risks associated with exchange rate volatility [14]. A foreign exchange swap is an agreement between a company and a bank to exchange its national currency for a foreign currency at the current exchange rate [14]. Later, on a specified date in the future, the foreign currency can be exchanged for the national currency at the exchange rate specified in the previous contract. For example, a Chinese company, BX, has to buy foreign raw materials from a rubber factory in the US. It will take three months before BX can export its tires to a US car company to recover the US dollars. At this point, BX can enter into a foreign exchange swap contract with a bank in RMB. The company can exchange RMB for US dollars at the current exchange rate. After three months, the bank will exchange the US dollars it has received for the Renminbi for BX. Since the foreign exchange swap contract has been entered, the bank needs to convert the RMB to Company BX at the rate negotiated three months ago. If the RMB appreciates and the exchange rate rises compared to 3 months ago, BX will avoid losses due to exchange rate fluctuations due to the foreign exchange swap business. This method helps foreign trade companies to lock in an acceptable exchange rate for financial swaps and thus avoid exchange rate risk for some time.

Furthermore, when a foreign trade company is more confident in its prediction of whether the exchange rate will rise or fall in the future [15]. Foreign trade companies can increase their profitability by purchasing foreign exchange futures to ensure they avoid the risk of change in the exchange rate. A foreign exchange futures contract locks in an agreed rate of exchange for future purchases or sales of foreign currency [15]. However, only companies with a certain level of credit with the country's banks can use the purchase of foreign exchange futures to reduce their exchange rate risk. This is because foreign exchange futures are traded in the open market. For example, suppose BX, a Chinese company, has an import deal with a raw material plant in the US BX's economic analysts expect the exchange rate to fall in the future and the RMB to depreciate. The company can then go to the foreign exchange futures market and enter into a futures contract, first buying US dollar futures at a satisfactory rate. Then three months later, when the futures contract expires, BX can collect all of its accounts payable to the raw material factory in the USA. Buying foreign exchange futures allows foreign trade companies to get the specified foreign exchange at the exchange rate locked in when the futures expire [15].

3.3.2 Hedging

When a company has already entered into a foreign exchange transaction using a financial derivative, it is necessary to prevent losses from being incurred if the judgment or forecast is contrary to reality. Hedging is balancing an existing foreign exchange transaction with a transaction in the opposite direction [16]. Exchange rate fluctuations in futures or spot prices in the foreign exchange market can lead to losses [16]. Companies can use foreign exchange futures trading to simultaneously sell or buy futures or spots, thus ensuring that the value of foreign currency assets or liabilities is not lost as much as possible due to changes in the exchange rate. There are two types of foreign exchange rate hedges, namely long hedging, and short hedging [15, 16].

Long hedging involves selling the spot currency A and buying a futures contract in currency A on the futures market simultaneously. The futures are sold simultaneously as the spot A currency is bought at a future date [15, 16]. For example, a Chinese foreign trade company, BX, has a branch in the USA. The US branch of BX has a surplus of \$1,000,000 available, and the head office of BX in China needs a short-term fund for the next six months. The best way to do this is to have the US subsidiary transfer the funds to the parent company in China. BX sells \$1 million in the spot market and then buys nearly \$1 million in the futures market simultaneously. At the end of six months, company BX buys \$1 million in the spot market to return to the parent company and sells all the US dollar futures at the same time. If the RMB rises against the US dollar, the spot market may lose money because the rise will require more RMB to exchange for the \$1 million. But the futures market

will make a profit because the exchange rate of the futures sold will be higher in 6 months than when they were originally bought. Profits and losses can make up for losses and thus balance out [16]. Since the futures market and the spot market are both affected by the same exchange rate concerning the same currency. If the exchange rate is to rise, both markets will rise together. If it is to fall, both will fall [16]. So hedging is the principle of equal and relative amounts to protect assets from unilateral effects.

Short hedging is the opposite of long hedging. A foreign trade company first buys spot foreign exchange in the spot market and then simultaneously sells futures in the futures market, taking a short position [16]. Then at some future time, sell the spot market foreign exchange and buy futures in the futures market to close the position [16]. This hedging method is short hedging. For example, BX, a Chinese foreign trade company, has a controlled company in the US. The branch company in America urgently needs a short-term expense. BX then remits \$700,000 from China. BX first buys \$700,000 from the spot market to avoid the risks associated with exchange rate fluctuations. Then it simultaneously sells almost \$700,000 in futures on the futures market. After the US subsidiary feels that the capital is working well, BX Company sells the spot and buys the futures to close the position. Although it sounds troublesome for foreign trade enterprises in international trade with foreign exchange payments of accounts receivable, foreign trade companies can successfully avoid losses from exchange rate volatility by using short hedging methods.

4. Conclusion

The economic situation has become complex, with unpredictable adverse economic effects like the COVID-19 pandemic. Foreign trade companies in every country must strengthen their exchange rate risk management to improve their performance in international markets steadily. Even if exchange rate risk management does not earn profits like a successful business, managing the risks arising from exchange rate fluctuations can effectively protect the interests of the business. It allows companies to grow steadily in a changing economic environment. Managing exchange rate risks in every country with foreign trade enterprises can enable the world economy to develop more efficiently and steadily when it is managed more effectively and efficiently.

Investors are aware of the need to use portfolios to reduce investment risk. International trade is no different and requires using several financial derivatives to reduce the likelihood of business losses. This article describes a small selection of companies' management methods to reduce their exchange rate risk. Foreign trade companies still need to choose the right way to reduce their exchange rate risk, in combination with the adequacy and liquidity of their capital. Although exchange rate risk management is an issue that companies need to focus on, the success and profitability of an import/export trading company should not only be related to the exchange rate.

Further, there are well-established formulae and technical models for hedging that are available to larger companies. Foreign trade companies also need to actively develop various sales channels if they want to be successful in the long and stable term. If a company does business with various countries, the exchange gains and losses in different currencies offset each other. As a result, it is important for the company to also have a strong market position and a variety of markets, making it a success. If a company is competitive and highly skilled, it has potentially diversified its exchange rate risk. Therefore, foreign trade companies can use various combinations to reduce exchange rate risk while simultaneously trying to improve the quality and performance of the company itself. Foreign trade companies can diversify and trade with more countries to reduce the exchange rate risk of a possible economic crisis.

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