Evaluating transaction exposures and hedging solutions assignment

Business

General problem statement In an effort to meet the demand of the Vietnamese alluding materials market, Construction and Materials Trading Company is involved greatly in the international trade. Profit from materials trading makes up approximately 75 percent of CENT" s total profit. In CENT company, the imports of Steel such as Steel Beams, Steel Plate, Steel Sheet… Often create account payable in foreign currency (US dollar) with the suppliers. The sales of these commodities often create account receivables in home currency (VEND) with domestic buyers.

Therefore, the company suffers from transaction risks during its steel trading process from the beginning of the purchase made until the moment is settled. According to CENT" s management, the transaction exposure loss rarely happens, and is considered insignificant because the State Bank of Vietnam uses many mechanisms to support stability tot the VEND/USED exchange rate. Therefore, there were only minor transactions, which were hedged in the past The hedging strategy used is only limited with the price decisions tool.

However, it is a necessary task for the company to design a flexible hedging strata%' with different hedging tools. A proper hedging strategy can help the company to deal with the risk of exchange rate volatility in different stages of the economic cycle. Thus, the research would like to analyze other currency hedging tools which are possible to implement at CENT company, and design a suitable hedging strategy for the company for the long-term. There are two aspects of the research problem: I.

The influences Of Vietnam dong fluctuation against US dollar to the accounts payable of CENT over the last five years. 2. Determine which hedging tools are available for the company, and design a suitable hedging strategy for the company for the long-term. 2. Research objectives A company is subject to transaction exposure whenever there are achievable or payable in foreign currency denominations. The hedging concept in managing transaction exposure is to be able to reduce the risk from currency fluctuations.

In the end, the research will be performed as an input for further improvement at CENT. According to that, the research Objectives Of this thesis are: 1. Acknowledgement of how CENT handle transaction exposure derived from the foreign exchange rate fluctuations Of Vietnam dong against LIST dollar currency. 2. Study the hedging strategies available which CENT may possibly implement to reduce risks from the exchange rate fluctuations. 3. Provide alternative choices or CENT hedging strategies in managing transaction exposures. 3.

Scope of the thesis The thesis aims to identify the effect of foreign exchange fluctuation on the profit of some Steel import contracts of Construction and Material Trading company. The timeshare of the study is limited to the last five years, starting with year 2006 and ending with year 2010, depending on the availability, and reliability of the data. In this thesis, the author only has allowance to show certain parts of information that was given why the company because it is confidential. The data are collected trot the Import-Export sales department No. F CENT company, and focuses on Steel import contracts and relevant documents. The foreign exchange rate used in this

thesis is the rate offered by Vietnamese, not the foreign exchange rate in the black market, It is assumed that the company can approach the US Dollar source at banks. 4. Methodology The methodology used to accomplish the objective, is by doing a literature study, collecting primary and secondary data, processing the data, performing inductive and explanatory research, and analyzing the result. Literature study. o deepen knowledge about foreign exchange risk, and the overview of the Vietnamese foreign exchange market. Collecting data- From the reported data provided by the company, specialized reference books, information from newspapers, magazines, internet, and some research related to the topic. Processing the data- through these methods. Statistics by tables, charts, formula: statistics to find out common characteristics of analyzed factors, Comparison methods: compare the same kind of numbers to find the increasing and decreasing in each year, Methods of Experts: consult the experts.

S. The organization of the thesis The thesis would be divided into three chapters which consist of: CHAPTER 1: LITERATURE REVIEW This chapter explains theories Enid the analysis done in this thesis, the overview of the foreign exchange market, and the derivatives market in Vietnam. CHAPTER 2: RISK ANALYSIS OF TRANSACTION This chapter gives a brief overview regarding the company, detailed analysis of the transaction exposure in the last five years as well as the current hedging tool of the company.

CHAPTER 3 DESIGNING HEDGING STRATEGY This chapter includes some available hedging tools, and long-term hedging strategy for the company and recommendations for the State Bank Of Vietnam to manage the

derivatives market. CHAPTER 1- LITERATURE REVIEW 1. 1. Import 1. 1-1. Definition of importing Importing is the purchasing side of trade and takes place when one region acquires goods or services trot another region. Importing is linked with international trade and generally is distinguished from trade within a specific nation because importing involves government regulation. (Importing n. D. I The benefits and drawbacks of importing a, Benefits Many economists, businesses, and politicians continue to rely on the principle of comparative advantage and it still influences import theories and policies Consequently, countries continue to import products because they can obtain them less expensively abroad. In addition, given the technology, labor costs, government incentives, and subsidies of different countries, one country may be able to produce goods more efficiently than Other countries. Hence, Other countries Will seek to import these goods because of price and perhaps quality advantages.

For example, Other countries import Robusta Coffee from Vietnam, While Vietnam imports Machinery from other countries such as Japan and China. Importing allows countries to achieve higher standards Of living by obtaining products and resources that cannot be obtained domestically. For example, in order or the Vietnam to maintain its standard of living, it must import petrol, since the country cannot produce a sufficient amount to satisfy consumer demand. B. Drawbacks Many economists and governments believe that importing goods can lead to the erosion of their national economies- especially when imports exceed exports.

Importing goods poses other problems such as the tacit acceptance of social values that conflict with domestic values, Importing goods from countries that pay low wages, for instance, can cripple domestic industries that cannot compete because they have a minimum wage, obligations to labor unions, and 50 forth, Furthermore, importing cheap goods, especially textiles, from countries that force employees- even children- to work in sweatshop conditions overlooks the type of treatment of employees that many countries condemn. 1. 2. Foreign exchange market An exchange rate is a price Of one currency against another currency.

The foreign exchange market is a market in which national currencies are bought and sold against one another. The foreign exchange market is an over the counter market because the market players are located in the major commercial banks around the world. The foreign exchange market comprises orientations among four groups of participants: dealers, brokers, customers and central banks (Morris Goldstein, 1993). Two fundamental types of the exchange rates (Gaur Agrarian, 2010) : D Spot exchange rate : This refers to the price of foreign exchange in terms of domestic money payable for the immediate delivery of particular foreign currency.

It is an existing or day-to-day exchange rate. Forward exchange rate : There are several future transactions whose delivery would be made sometime in the future. The rates at which these transactions are consummated are called as forward rate of exchange. It is the rate fulfilling the agreement between two parties based on future delivery of goods. I Exchange rate

determinants The exchange rate, just like commodities, determines its price responding to the forces of supply and demand.

Therefore, if for some reason people increase their demand for a specific currency, then the price will rise, provided the supply remains stable and vice versa, Some of the factors that influence currency supply and demand are inflation rates, interest rates, economic growth, and political and economic risks. Furthermore, international parity conditions describe the core financial theories rounding the determination of exchange rates. This economic theory links exchange rates, price levels and interest rates together. The international parity conditions encompassed: Purchasing Power Parity (POP) 1. 3. . 1. Absolute Purchasing Power Parity In it absolute version, purchasing power parity states that price levels should be equal worldwide when expressed in a common currency. However, absolute Purchasing Power Parity ignores the effects on free trade of transportation costs, tariffs, quotas and other restrictions and product differentiation (Alan Shapiro, 2009) 1. 3. 1. 2. Relative Purchasing Power parity The relative version of purchasing power parity states that the exchange rate between the home currency and any foreign currency will adjust to reflect changes in the price levels of the two countries. Alan C, Shapiro, 2009) Formally, if ii and if are the rates of inflation for the home country and the foreign country, respectively; e is the home currency value of one unit of foreign currency at the beginning of the period; and el is the spot exchange rate in period 1, then 13. 2. Interest Rate Parity theory (RIP) According to interest rate parity theory, the runners if the country with a lower interest rate should be at a

foamed premium in terms Of the currency Of the country With the higher rate.

More specifically, in an efficient market with no transaction cost, the interest differential should be (approximately) equal to the forward differential. Interest rate parity holds when there are no covered interest arbitrage opportunities. According to Alan C. Shapiro, (2009) this no-arbitrage condition can be stated as follows: re: represents the nominal rate of home currency RFC: represents the nominal rate Of foreign currency FL : the forward rate at time O for delivery Of one unit Of foreign runners at time 1. . 4. Foreign exchange risk and foreign exchange exposures 1-4. 1. Foreign exchange risk Maurice D. Levi defined foreign exchange risk as “ the variance of the domestic currency value of assets, liabilities, or operating incomes that is attributable to unanticipated changes in foreign exchange rates. ” By definition, foreign exchange risk depends on the exposure, as well as the variability of the unanticipated changes in the relevant exchange rate. Foreign exchange risk is related to the variability of domestic currency values of assets or liabilities due to unanticipated changes in exchange rate. (Maurice D. Levi, 2008, as cited in Thumbnail Caddish, 2009, up. 127) 1. 4. 2, Foreign exchange exposure Maurice D. Levi also define the meaning tot foreign exchange exposure. “ It is shown that exposure is a measure of the sensitivity of changes in domestic currency values of assets, liabilities or operating incomes to unanticipated changes in exchange rates” (Maurice D.

Levi, 2009, up. 283) Figure I Types Of Foreign Exchange Exposure Foreign Exchange Exposure Economic exposure Translation exposure Transaction

exposure Operating exposure Alan Shapiro (2005) categorized foreign exchange exposure onto economic exposure and translation exposure (see Figure 1. 1), 0 Economic exposure refers to potential changes in all future cash flows of a firm that result from unanticipated changes in exchange rates. Economic exposure may further be classified into transaction exposure and operating exposure.

Transaction exposure refers to potential changes in the value of contractual future cash flows, or monetary assets and liabilities, resulting from changes in the exchange rate. Operating exposure, on the other hand, represents the potential changes in the value of monetary or real assets and liabilities due to unanticipated hangs in exchange rates. Translation exposure is also knows as accounting exposure. It arises when items of financial statements that are stated in foreign currencies are restated in the home currency of an multinational corporation. Table 1. 1.

Comparison of translation, transaction and operating exposure Comparison of translation, transaction and operating exposure Translation Exposure Operating Exposure Changes in income statement items and Changes in the amount of future the book value of balance sheet assets operating cash flows caused by an and liabilities that are caused by an exchange gains or losses re determined exchange rate change, The resulting by changes in the firm" s future exchange gains and losses are competitive position and are real. The determined by accounting rules and are measurement of operating exposure is paper only.

The measurement tot prospective in nature as it is based on accounting exposure is retrospective in future activities. Nature as it is based on activities that occurred in the past Impact: Balance sheet assets and Impact: Revenues and costs associated liabilities and income statement items with future sales. That already exist. Exchange rate change occurs Impacts: Contracts already enter into, to be settled at a later date Transaction exposure Changes in the value of outstanding foreign-currency-denominated contracts (i. E, contracts that give rise to the future foreign currency cash flows) that are brought about by an exchange rate change.

The resulting exchange gains and losses are determined by the nature of the contracts already entered into and are real. The measurement petrifaction exposure mixes the retrospective and protective because it is based on activities that occur rest in the past but will be settles in the future. Contracts already on the balance sheet are part of accounting exposure, whereas contracts not yet on the balance sheet are part Of operating exposure. Source: Alan C. Shapiro (5th). (2005) Foundations of multinational financial management (up, 252) I Transaction exposures and managing transaction exposures 1. . 1. Transaction exposure According to Thumbnail Caddish (2009). Transaction exposure refers to potential changes in the value of contractual cash flows that arise due to unexpected changes in the foreign exchange rate. It is a measure of the sensitivity of the home currency value of assets and liabilities in foreign currency to unanticipated changes in exchange rates, According to Henry L _ Boneshaker (2002), transaction exposure arises from: 0 Borrowing or lending funds when repayment is to be made in a foreign currency.

II Purchasing or selling on credit goods or services whose prices are stated in foreign currencies. C Being a party to an unperformed foreign exchange forward contract. I] Acquiring assets or incurring liabilities denominated in foreign currencies. 1. 512. Managing transaction exposures I _5. 2. 1. Identify the degree Of exposures After identified the types Of risk Which a company is exposed to, the next crucial step in a company's risk management session is the risk measurement.

According to Southwestern Thomson Learning (2003), to measure the transaction exposure a company should project the net amount of inflows and outflows in each foreign currency and determine the overall risk of exposures to those currencies. (South,'Western Thomson Learning, 2003, as cited in Yakima Nor Anis , 2008, pop) . 1. 5. 2. 2. Make decision on hedging the exposures The decision whether to hedge or not required a depth analysis. The company needs to consider to what extend a company are willing to take the risk, whether the company has the risk adverse attitude or not.

The gains and losses should be compared with the existing exposure and the predetermined exchange rate budget, which has been agreed by the management. The company's level of certainty whether a specific event will occur or not also determine the risk management decision. A company can decide to do northing or to hedge its exposure. (Yakima Nor Anis , 2008, pop) I _5. 2, 3. Choose a hedging technique 10 According to Alan C. Shapiro (2005), there are many techniques by Which the firms can manage their

transaction exposure. These techniques can be broadly divided in to hedging techniques and operational techniques.

Hedging refers to taking an offsetting position in order to lock in the home currency value for the currency exposure, eliminating the risk arising from changes in the exchange rate. The important hedging techniques are forwards/futures. Money market hedges. Options and swaps. Operational techniques include exposure netting leading and lagging and currency of invoicing. Figure 1. 2- Hedging techniques to manage transaction exposure Managing transaction exposure Hedging techniques Operational techniques Netting and offsetting Currency of invoicing Leading and lagging Forwards and future Money market hedge

Swaps Options 1. 5. 2. 3. 1. Hedging techniques The Derivatives Market is meant as the market where exchange Of derivatives takes place. Derivatives are one type Of securities whose price is derived from the underlying assets. And value of these derivatives is determined by the fluctuations in the underlying assets. These underlying assets are most commonly stocks, bonds, currencies, interest rates, commodities and market indices. The Derivatives can be classified as Future Contracts, Foamed Contracts, Options, Swaps and Credit Derivatives. (Meaning Derivatives Market, n. D. . (i) Forward The forward market involves contracting today for the future purchase or sale of foreign exchange. Forward contact is a legally binding agreement between two parties calling for the sale of an asset or product in the future at a price agreed upon today. The forward contract cannot be traded in the stock exchange but they are traded among financial

institutions or between financial institutions and its clients. Forward contract is tailor made on its currency rate, delivery date and the amount involved which is negotiated by the party involved in the contract.

The forward contract value is equal zero but the future rate is changing and the livery price is fixed. Therefore, there is a possibility for gain or losses realized on the settlement date from the exchange rate fluctuation. Awkward contacts are the most common means of hedging transactions in foreign currencies because Of its simplicity. The trouble With forward contracts, however, is that they require future performance, and sometimes one party is unable to perform on the contract. When that happens, the hedges disappears, sometimes at great cost to the hedger. IIS Futures In contrast to foamed contract, a futures contract has standardized features on its contract size, delivery date, daily resettlement ND so forth. Futures are exchange trade which means traded on organized exchanges rather than over the counter. A client desiring a position in futures contracts contacts his broker, who transmits the order to the exchange floor where it is transferred to the trading floor. In the trading floor, the price for order is negotiated by open outer between floor brokers or traders. Futures recognized the gain and losses daily because its daily resettlement features.

Frequently, a futures exchange may have a daily price limit on the futures price, that is, a limit as to how much the settlement price can increase or decrease form he previous day’s settlement price. Nevertheless, futures only allow companies to hedge approximately because futuresB?? standardized instruments on its contract size, delivery date and so forth, In addition, due

to marking to market property, there are interim cash flows prior to the maturity date of the futures contract that may have to be invested at uncertain interest rates.

As result, exact hedging would be be difficult. (iii) Option An option contract is a type of contract agreement which give the owner the right, but not the obligation, to sell or buy underlying asset in a redeeming price during a certain period of time in the future, A person who buys an option contract pays a premium to the option's seller to compensate the ability of setting the floor or ceiling price decision. The option holder has the right not to exercise the contract it the market price moves outside the projected rate. There are two types of options, American and European.

American option can be exercised anytime during the contract validity. European option only can be exercised at the maturity date, Option does not have standardized features and made according to the company" s specific needs. Option also differentiated as: C Call Option, which is an option to buy an underlying asset, A company exercises the call option fifth spot rate is in the money position, in this case when the spot rate is bigger than the exercise price. Put Option, which is an option to sell an underlying asset. A company exercises the put option it the exercise price is bigger than the spot rate.

In hedging using options, options with its premium is considered more expensive because of its flexibility in the tailor made value. Options are particularly suited as a hedging tool for contingent scofflaws, for example in bidding processes. (iv) Hedging with swap contracts A swap is an agreement

between two parties to exchange a cash flow in one currency against a cash flow in another currency according to predetermined terms and conditions, to put it differently, a swap agreement requires periodic payments from one party to the other party in order to safeguard against unfavorable exchange rate movements.

A firm Which expects certain cash flows in a foreign currency in the future may enter into a swap contract in order to hedge those cash flows against foreign exchange rate fluctuation. Currency swap are generally seed to hedge long-term transaction exposures. (v) Money market Money market strategy for hedging involved the investing and borrowing in the currency market. The company can invest in the loan in the short term investment such as buying securities or deposit in a bank.

For example, a company hedges a receivable by locking in the value of a foreign currency transaction in the home currency and hedges a payable by locking in the value of a foreign currency transaction in the foreign currency. The implementation of money market hedge for payable is explained as below steps: C Define how much is the liabilities" size t the due rate. C] Define the present value Of the payable With the foreign currency deposit interest rate, and then covert it to the home currency. Loan the money in the home currency, covert it in the foreign currency, and invest in the foreign currency deposit. At the due date, the deposit will cover the exact amount of the payable in the foreign currency. CLC The cash outflow at the due date is exactly the same amount as the loan plus interest rate a company had. Therefore, the company can avoid the loss possibility for the exchange rate

fluctuation if the home currency depreciated against the foreign currency.

The sot attractive feature from money market hedge is its liquidity.