JÖNKÖPING INTERNATIONAL BUSINESS SCHOOL
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Foreign Exchange Risk Management Practices

A Study of Swedish Medium- and Large-sized Companies

Bachelor Thesis in Business Administration

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Bachelor Thesis within Business Administration

Title: Foreign Exchange Risk Management Practices

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Date: December 2009

Key words: Exchange risk, Hedging, Leading, Lagging, Swaps, Invoice Currency

Abstract

Purpose: The purpose of the thesis is to describe which foreign exchange risk techniques that are used by medium- and large-sized Swedish companies within the Jönköping region, and how they as well as a bank evaluate the techniques in the current recession.

Background: The reason why companies decide to expand their operations abroad is to take advantage from imperfections in other national markets. The fluctuations in currencies and exchange rates can have a huge effect on a company's cash flows when doing business abroad. Therefore, when companies manage their foreign exchange risk, they have to be familiar with all the methods and tools available in order to pick the ones that best suit their needs.

Method: We sent out a questionnaire and got it answered by eight companies within the Jönköping region regarding their strategy when managing foreign exchange risk. We have also interviewed a financial adviser, working at Handelsbanken, regarding the techniques offered to companies. A "foreign currency table" located in Linköping, was also contacted. They are in charge of creating recommendations and products sold by Handelsbanken.

Conclusion: Hedging is the most frequently used tool by the companies in our study. Leading and lagging strategies are used quite often, while swaps and invoice currency is used less frequently by them. Exposure netting and cash pooling does not seem to be used at all. We believe that companies generally should seek more information on new techniques introduced in the market and be open to new possibilities and solutions for managing currency risk. Most of the companies in our sample, according to us, are too comfortable in their choice of techniques.

Kandidatuppsats inom Företagsekonomi

Titel: Hantering av Valutarisker i Praktiken

Författare: Catrin Jakobsson, Ola Henriksson, och Daniel Edvardsen

Handledare: Urban Österlund

Datum: December 2009

Nyckelord: Valutarisk, Hedging, Leading, Lagging, Swaps, Invoice Currency

Sammanfattning

Syfte: Syftet med denna uppsats är att beskriva vilka valutarisk tekniker som används av medelstora och stora företag inom Jönköpings området, samt hur dessa företag och en bank utvärderar teknikerna i den rådande lågkonjunkturen.

Bakgrund: Anledningen till varför företag väljer att expandera utomlands är för att ta nytta av fördelar som uppstår i andra marknader. Fluktuationer i valutor och valutakurser kan ha stor effekt på företagens kassaflöden när handel utomlands utförs. När företag hanterar sin valutarisk måste de vara familjära med de olika metoder som finns tillgängliga, för att få reda på vilka av dessa som bäst tillgodoser deras behov.

Metod: Åtta företag inom Jönköpings regionen, svarade på ett formulär, angående deras strategi när det kommer till hantering av valutarisk. Vi har även intervjuat en företags rådgivare på Handelsbanken, angående teknikerna som de erbjuder företagen. Valutabordet i Linköping har också blivit kontaktat. De har till uppgift att ta fram rekommendationer och produkter som säljs av Handelsbanken.

Slutsats: Hedging är den teknik som används mest av företagen i vår undersökning. Leading och lagging används rätt så ofta, medan swaps och invoice currency används mer sällan av dem. Exposure netting och cash pooling tycks inte användas alls. Vi anser att företag generellt ska eftersöka mer information om nya tekniker som introduceras på marknaden samt vara öppna för nya möjligheter och lösningar till att hantera valutarisk. De flesta av de undersökta företagen anser vi i dagsläget är för bekväma i sina val av tekniker.

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Terminology of thesis

Hedging:	To offset one position by taking another.
Leading and Lagging:	Timing of cash flows in currencies between two different companies, or between a parent company and its subsidiaries.
Swaps:	Arrangement between parties to exchange future cash flow payments with each other.
Invoice currency:	The currency in which products are traded.
Exposure netting:	Offsets exposures in one currency with exposures in the same or another currency.
Cash pooling:	Involves transferring a subsidiary company's excess cash into a centrally managed bank account of the parent company.
Foreign exchange risk:	Fluctuations in exchange rates and interest rates in foreign markets.
Foreign Currency Table:	A department of analysts working with foreign exchange techniques specifically.
SEK:	The currency of Sweden, Krona.
USD:	The currency of the United States, Dollar.
GBP:	The currency of Great Britain, Pound.
YEN:	The currency of Japan, Yen.

1 Introduction

This chapter will introduce the reader with a broad overview, by presenting a background section and specify the encountered problem. Thereafter, the purpose of this thesis is stated, followed by the delimitations and the outline of the thesis so that the reader can understand and follow the content throughout the paper. Finally, a section of how the theory was collected will be presented.

1.1 Background

The decision regarding a floating exchange rate in Sweden came 1992 and has changed the condition for monetary policy. It had been 60 years since the SEK was a floating exchange rate, which in 1992 increased the need of more information and new thinking (www.riksbanken.se, *Penningpolitiken under rörlig växelkurs*).

With a floating exchange rate in Sweden, there were no limitations for how much the domestic currency could fluctuate and create insecurities in future cash flows for companies (www.riksbanken.se, *Från fast till rörlig växelkurs*). Both exporting and importing companies became more exposed, on a different level with the exchange rate differentiation, than what they had been during the previous system with an inflexible exchange rate. The SEK depreciated against foreign currencies after the introduction of the floating exchange rate. This favoured the exporting companies when their goods and services, in relative terms, became cheaper for their foreign partners (Jonung & Fregert, 2008).

Deregulations as well as currency partnerships in combination with a large expansion within the financial market has, according to Bennet (1996), evolved to increased volatility which in turn has made it more difficult for companies to predict future profits. The uncertainty regarding exchange rates will exist as long as we do not have a common world currency.

During 2008, exchange rates have fluctuated more rapidly than ever before due to the financial crisis and the recession it has led to. There is a huge uncertainty when it comes to countries' economies and interest rates which, to a great extent, affect the exchange rate of currencies. For an illustration, the USD depreciated with almost 55 percent compared to the SEK from bottom quotation in 2008 until the top quotation in 2009 (www.riksbanken.se, USD/SEK). The fluctuations in currencies and exchange rates can have a huge effect on a company's cash flows when doing business abroad.

The reason why companies decide to expand their operations abroad is to take advantage from imperfections in other national markets. These imperfections give the company an expanded opportunity set, such as for products, factors of production, and financial assets. With this expansion comes a variety of associated risks for the international financial management to deal with. One of these risks is the foreign exchange risk. Because of distortions in the integrated global capital market and changes in exchange- and interest rates, there is a constant need for risk management (Y. Ghulam, personal communication, 2009-09-14).

Operations abroad result in huge risks when converting domestic currency into international currencies. The company has to make wise decisions regarding both international trade and investments in order to maintain economically efficient and competitive. The management also needs to be flexible and creative in terms of coming up with different decision processes. When the conditions of the market change and other unexpected situations occur, the management must have an already thought-through solution (Y. Ghulam, personal communication, 2009-09-14).

When companies handle their foreign exchange risk, they tend to become risk averse according to Belk & Glaum (1990). Risk aversion is present when a company or an investor is trying to avoid any risk from a potential investment, even if a risky investment might have a greater return (www.investerwords.com, *Risk averse)*. In fact, companies try to reduce all the risk that is not associated to the company and this can be seen as a corporate policy. Thus, there can be some differences to companies whose core business is to work with foreign exchange (Hodge, 2004). In order for companies to become more aware of potential exchange risks, they can turn to financial institutes such as banks. One of the most active banks on the Swedish stock market is Handelsbanken and they offer products and tools for their costumers to handle foreign exchange risk. Handelsbanken can also help companies in managing policies regarding foreign exchange risk.

An investigation done in Finland shows that policies regarding foreign exchange risk management is approved by the highest level in the company and actively used in 72 out of 84 companies. However, only 22 companies had a detailed description of how the management should be tackled. The policy constituted guidelines in 47 of the companies, and in the remaining ones it was case-specific. The statistic of the occurrence of detailed foreign transaction risk policies goes in line with investigations executed in the U.K. It proves that roughly a third of the companies in these countries use a policy that is detailed (Hakkarainen, Kasanen & Puttonen, 1997).

1.2 Specification of Problem

In order to manage foreign exchange risk and volatility, different tools are available and can be used, such as hedging, leading- and lagging strategies, swaps, choice of invoice currency, exposure netting, and cash pooling. These tools come with different positive and negative aspects and bring diverse solutions in handling the risk. We find it interesting to explore how these techniques are evaluated in theory, as well as by companies and a bank.

For this study, it is rewarding for us to study which techniques medium- and large-sized companies within the Jönköping region decide to use. The Jönköping region is one of the most company populated regions in Sweden, which gives us the benefit of finding companies that are willing to help us explore our topic. The reason why we do not study foreign exchange risks in multinational firms is mainly because of their restriction in giving out information.

Our belief is that companies, in some way or another, have a dialogue with a financial institute, such as a bank, when handling their foreign exchange risk. That is why we will contact at bank as well to get a deeper understanding of how foreign exchange risks are handled. To be able to diminish the focus on the banks perspective, we find it sufficient for our paper to only contact one bank in Sweden, in this case; Handelsbanken.

Research questions:

- What tools do companies use to manage foreign exchange risk and what are the positive and negative aspects associated with the tools according to them?
- What is a bank's perception regarding different tools available to manage foreign exchange risk?
- Is there a difference in opinions gathered from the companies, compared to a financial adviser at a bank working within the area of exchange risk?

1.3 Purpose

The purpose of the thesis is to describe which foreign exchange risk techniques that are used by medium- and large-sized[1] Swedish companies within the Jönköping region, and how they as well as a bank evaluate the techniques in the current recession.

1.4 Delimitations

This thesis is restricted in that only companies within the region of Jönköping are chosen. Also, the selection of the companies is made out of only medium- and large-sized firms, with the criteria for the size explained in the section 3.1. The reason why neither bigger nor smaller companies were chosen is; for large multinational firms due to practical reasons to get contact with the appropriate person, and for smaller firms due to the less likelihood of export and import trade in a great scale and thereby the less usage of foreign exchange risk tools.

1.5 Outline of thesis

The purpose of this thesis will be fulfilled after exploring the following objectives;

- Illustrate positive and negative aspects about tools used to manage foreign exchange risk.
- Collect information from companies within the Jönköping region of which techniques they use to manage the risk. The companies are presented in section 3.3.
- Analyze the information collected from the companies.
- Arrange an interview with a financial adviser on the subject, where we will discuss the techniques they offer to companies.
- Draw parallels between theory and empirical findings. The discussion of their opinions can be found in the analysis section.

[1] The number of employees in a medium-sized company ranges from 50 to 250, and in a large-sized company the number of employees exceeds 250.

- General suggestion for medium- and large-sized firms of what to think about when choosing how to manage foreign exchange risk.

1.6 Collection of theory

We began to explore the subject of foreign exchange risk by collecting data from theory. In order to get relevant secondary data we used the school library databases, to find books, journals, articles and previous investigations. Some of the most beneficial databases offered by the library were their own catalogue called JULIA, the search engine LIBRIS, which contains essays from approximately 20 Swedish Universities, and Google Scholars, where an enormous amount of literature can be found.

We decided to search for information about the six most common techniques of managing foreign exchange risk, namely; hedging, leading and lagging, swaps, invoice currency, exposure netting, and cash pooling. Thereafter, we chose to divide each presentation of the techniques into three parts. The first section is a comprehensive description of the technique, and the following two sections present advantages and disadvantages with the technique. This breakdown gives the thesis more structure and makes it easier to follow.

There was a lot of information available regarding the different techniques that can be used to manage foreign exchange risk. However, the information mainly contained descriptions of underlying functions of each technique. Hence, it was challenging to find reliable data regarding positive and negative aspects of each tool. No academic paper we found primarily tried to explore these aspects. Therefore, we had to search through lots of secondary data, which in the end ultimately resulted in a more reliable outline.

2 Theory

The theory begins by introducing different kinds of risks that companies are exposed to. The introduction is followed by an explanation of techniques available to manage foreign exchange risk; hedging, leading and lagging, swaps, invoice currency, exposure netting, and cash pooling. Each technique will have both an advantage- and a disadvantage part. The theory will provide the reader with knowledge of the tools discussed throughout the paper.

The most important goal for companies is to make a profit, because if that is not accomplished, the company will not be able to survive in the long run. To achieve positive cash flows, firms need to take action against all the risks involved in the daily management of the company. Some of the risks companies have to consider are; interest rate risk, inflation risk, and default risk (Kidwell, Blackwell, Whidbee & Peterson, 2008).

When a company grows larger and starts to trade with other countries another risk occurs that has to be managed, called exchange rate risk. Exchange rates fluctuate on a daily basis and these fluctuations can be rather extreme during periods of time. This was illustrated in the earlier example with the SEK and the USD. Therefore, it is essential for corporations to be aware of fluctuating exchange rates and have knowledge about the tools that are available to manage these fluctuations (Kidwell et al., 2008).

2.1 Hedging

2.1.1 Description of hedging

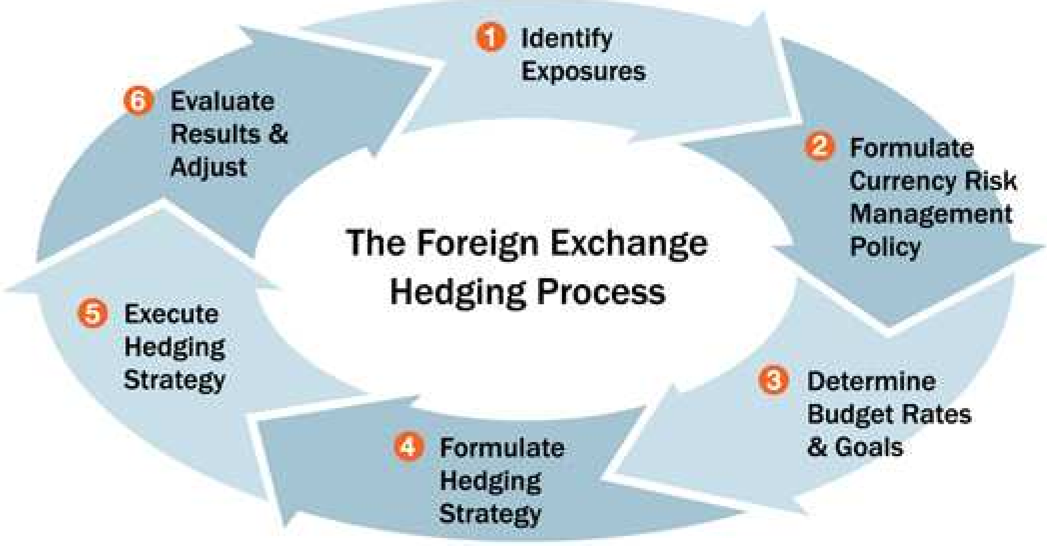
To reduce foreign exchange risk companies can use hedging. However, hedging is not only used to protect oneself against foreign exchange risk, it can be used in all investment situations (Sooran, 2009).

To get an understanding of how hedging works, companies have to be familiar with the basic facts of the technique and realize why companies tend to use it. A hedge can be seen as an insurance against future fluctuations in for example stocks, prices of commodities, and exchange rates. The technique is used to reduce a company's exposure to risk, although it is more complicated than just paying insurance (Sooran, 2009).

A company is able to hedge the foreign exchange risk attached to an investment by taking another offsetting position, and by doing so, protecting itself from a potential loss. The reason why companies hedge is not to make profits, but to insure the company from losing money, and the cost from the hedge cannot be avoided (Sooran, 2009).

Below you can see figure 1, done by Custom House (2009) at Western Union, which explains the steps a company should consider when trying to find the right set of hedges.

Figure 1. Procedure of picking the right set of hedges.



The list of different hedging techniques is long, and we will mainly focus on futures, forward contracts, and options. These techniques derive their value from an underlying asset and are therefore viewed as derivative contracts, though there are some differences of how they are composed (Damodaran, 2002).

The main difference between a future and an option is that an option holder has the *right* to buy the underlying asset while the future holder is *obligated* to fulfil the terms of the contract (Hurt & Wisner, 2002).

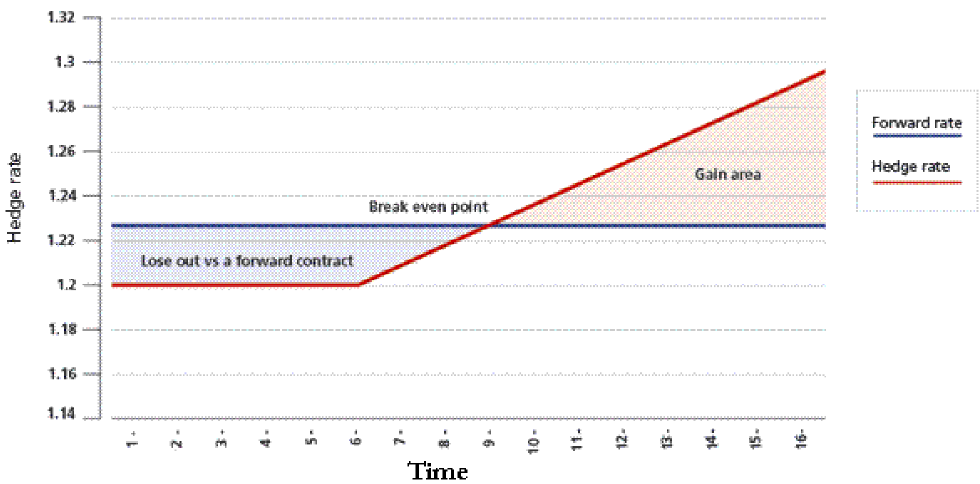
Hedging with forwards is the simplest technique among the financial hedging strategies. However, it is not said it is the best strategy to use in all situations (Dhanini, 2003). By using forwards a company can protect itself from differences and fluctuations in currencies.

A forward is all about the beliefs of future prices and works in a way as a tool to mitigate loss (Meera, 2006).

A hedge is shown in figure 2. This is an illustration of how a hedge is placed with forwards. Let us pretend that a Swedish company wants to buy a machine in Germany for one million EUR. The future spot price of EUR is 1.23, as shown by the blue line. The Swedish company wants to have a worst case rate, meaning that if there is a large fluctuation in EUR the company will not make a loss. In this scenario the worst case rate is 1.2. Let say, for illustrative reasons, that the company only invests 500 000 EUR in forwards.

Now, the two different scenarios that can happen to this investment is that the EUR will either rise or fall below the worst case rate. If the price of EUR at maturity are 1.15, the company is obligated to buy EUR for 500 000 at 1.2. Thus, if the EUR ends up at 1.4 the company is still obligated to buy 500 000 EUR at 1.2 but the other 500 000 at 1.4, giving the company an average rate of 1.3.

Figure 2. Illustration of a hedge.



2.1.2 Advantages of hedging

A positive aspect of the future contract is that an investment in the future can be hedged by another made today, which means that the investment in the future is hedged by an offsetting position. Futures can be very flexible in their timing and are very useful to use when the future date of cash transferral is uncertain (Readhead, 2001).

Forward hedges are made using an inter-bank or through an inter-dealer market. This facilitates the hedger's desire regarding the size and timing of the hedge. The advantage in terms of increased flexibility however can only be exploited by larger firms. The reason is because the intermediary has to take on the risk in a situation where the hedger is not able to go through with its payments (Walsh, 1995).

Hedging with the use of options brings the advantage of protecting the value of cash flows from potential losses if the exchange rate fluctuates in a non-desired direction, as well as giving the possibility to make use of desired fluctuations (Maurer & Valiani, 2007). However, this flexibility comes at a price. A premium has to be paid whether the option is exercised or not. The company has to determine if that cost is worth the additional flexibility. The complexity of this hedging technique combined with the fact that the hedger must pay a premium, often makes hedgers choose other simpler, cheaper, hedging techniques instead (Zigler, 2003).

2.1.3 Disadvantages of hedging

The negative aspect about hedging with futures is that they are not flexible in their size (Walsh, 1995). This means that hedgers will experience difficulties in finding futures with a certain desired size, thus resulting in unnecessary exposures versus extra costs if taking on a hedge that is smaller versus larger than required. This inflexibility of size is a result of the liquidity limitation. The hedger may encounter this complication when a large number of contracts are desired, or the hedge has a long maturity.

The advantage of forwards, of its flexibility for large firms, becomes a disadvantage for the smaller firms. For the same reason, smaller firms will not be able to take advantage of the flexibility regarding the expiry date of this hedging type which extends for approximately a year (Walsh, 1995). Maurer and Valiani (2007) argue that a forward hedge in most cases performs better than any put option. Attfield, Glod and James (2001) bring another view to the aspect. They argue that when the difference between future rate and spot rate is favourable one should always use forwards, but when it is not favourable one should exercise options. The fact that the company has to find this balance, of which tool to use, proves as a disadvantage for both techniques.

Research done by Khazeh and Winder (2006) shows that if one aggregates the world's major currencies in the market and does a comparison between specific time periods, money market hedges generally outperform option hedges in terms of payables. However, in terms of receivables, the comparison between the two results in an equal effectiveness. The conclusion made is that medium- and large-sized companies will benefit more if using money market hedges, compared to option hedges. Though a negative aspect about a money market hedge is that money are locked in, since the company needs to act and use the money right away. It results in that the company is unable to use that money during the time period between the deal and the transferral of the money.

2.2 Leading and Lagging Strategies

2.2.1 Description of leading and lagging strategies

One special kind of hedging activity is called leading and lagging. This method involves adjusting the timing of payments or collections to reflect future currency expectations (Madura & Roland, 2007).

Leading essentially means that a company attempts to collect foreign currency receivables as soon as possible when it expects the currency to depreciate in the near future. Accordingly, the company wants to disburse foreign currency payables prior to the due date if the currency is predicted to appreciate (Hill, 2001).

Lagging on the other hand is the complete opposite of leading. The company uses a lagging strategy in order to delay the collection of foreign receivables if it predicts that the currency will appreciate. Consequently, the company delays currency payables if that foreign currency is expected to depreciate (Hill, 2001).

Leading and lagging strategies are most often used by companies with subsidiaries in other countries than the parent company. Although, leading and lagging is most used in multinational organizations, medium- and large-sized companies have a tendency to use the same methods (Pike & Neale, 2003).

If the credit term is normally 90 days the corporation can then shift the credit term down to 30 days (leading) or up to 180 days (lagging). As mentioned before it depends on expectations of future exchange rates, but also on the borrowing - and lending rates in the two countries (Shapiro, 1999).

Below is an example that illustrates how a company can use leading and lagging strategies to reduce short term currency exchange risk.

A clothing company based in the US wants to purchase fabrics that are denominated in YEN, from a subsidiary in Japan. If the company expects that the USD will soon depreciate against the YEN, it may attempt to expedite the payment of the fabric since a lower amount of USD would be needed than if they would have paid it on the due date. In this case the company has used a leading strategy.

If the USD on the other hand is predicted to appreciate against the YEN then the firm would try to stall the payment and receive a better exchange rate. This activity is referred to as lagging (Pike & Neale, 2003).

2.2.2 Advantages of leading and lagging strategies

The biggest advantage with the leading and lagging strategies is that it is simple to execute (Mathur, 1985). An additional benefit is that the strategy is most often implemented within the organization and the company does not have to consider a third party.

Leading and lagging can also be used in group tax-planning as of shifting intra-company funds, and hence profitability (Parkinson & Walker, 1978).

If compared to direct intercompany loans, there is no need for a formal note of indebtedness with leading and lagging since the amount of credit is just adjusted up and down by shortening and lengthening the terms on the accounts (Shapiro, 1999). Thus, makes it much less time consuming and simpler to utilize.

2.2.3 Disadvantages of leading and lagging strategies

There are some disadvantages in using leading and lagging strategies. These strategies can first of all be difficult to implement. The company must be in the position to exercise some control over payment terms. Leading and lagging is a win-loose game, thus while one party benefits, the counterparty looses. Consequently, the benefit gained from taking advantage of exchange rate movements may be outweighed by the cost of losing business due to the zero-sum nature of this method (Hill, 2001). However, this is only true if the transaction is carried out between two different companies.

Another setback with leading and lagging is that the whole strategy is based on the anticipation of market changes and does not guarantee limited risk exposure (Mathur, 1985). If the anticipation is not fulfilled, the strategy may add costs, rather than reduce them.

Perhaps one of the most important disadvantages with this method is that it is not legal to use in some countries. Government control is often tight on intercompany credit terms, hence leading and lagging are subject to different degrees of government interpretation and sanctions around the globe (Shapiro, 1999).

2.3 Swaps

2.3.1 Description of swaps

Another main tool used to manage foreign exchange risk is through the use of swaps, which aims at reducing long-term risk (Madura & Fox, 2007).

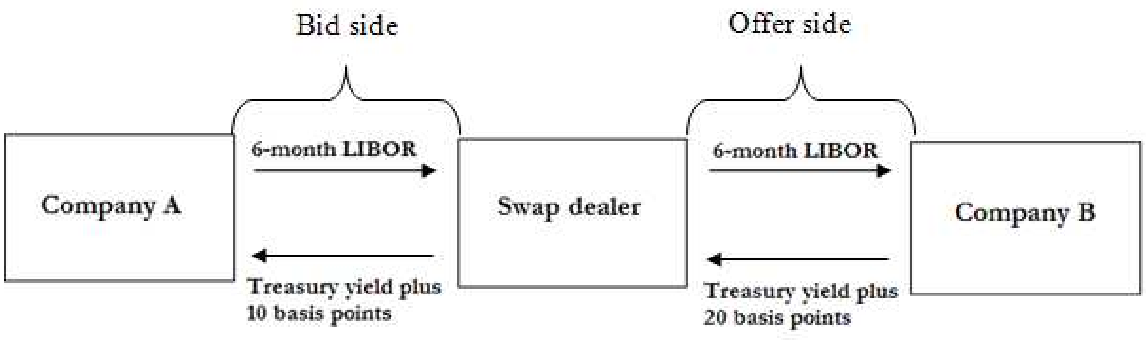
Swap transactions originate from the early 1980's, and were first introduced in the sector of banking dealing with interest rates (Johnson, 1999).

A swap is an agreement between two parties to switch cash flows with each other for a specified time period. The cash flows exchanged are most often currencies and interest rates (Chorafas, 2008). However, other types of payments involving commodities and securities are exchanged as well (Johnson, 1999). Even though the swap involves exchanges of different types of cash flows and thereby differs greatly in complexity, the principles underlying the transaction are the same (Corbett, Healy & Poudrier, 2007). A decision is made about the length of the period of payments, the underlying notional value, the frequency of cash flow exchanges, the size of the payments, as well as conditions in terms of default. These conditions are agreed upon considering both parties' needs and interests, and therefore the swap does not come in a typical shape. They can range from pretty simple structures to more complex ones (Chorafas, 2008).

Different kinds of swaps exist and each comes in many shapes. The medium- and large-sized companies should choose the one that best goes in line with its preferences, conditions, and environment (Beenhakker & Damanpour, 1995).

An interest rate swap transaction with an intermediary is presented in this following section and is illustrated by Sun, Sundaresan and Wang, (1993) in figure 3 below. Two companies, A and B, decide to change floating interest rate against fixed interest rate, and vice versa. Company A desires a fixed interest rate but currently has a floating interest rate on its loan. Company B currently has a fixed interest rate on its loan, but desires a floating rate. The reason why the companies have not issued loans with the preferred interest rate from the beginning is because they have chosen the rate which they had a comparative advantage in (Helliar, 2004). Assume that the period of payments exchanged is five years. The cash flows that are to be exchanged are influenced by the size of the determined underlying notional value. The companies take help from a swap dealer, with a credit rating of AAA, in order to arrange the transaction between them. The bid-offer spread is determined by the dealer and depends on his rating. The spread is greater for a dealer with a rating of AAA than for a dealer with a rating of A, meaning that the former dealer charges more for its service. There are two sides present in the swap transaction. The bid side represents the swap dealer paying out fixed rate and receiving floating rate, as in this case for company A. The offer side of the transaction is when the dealer pays floating rate and receives fixed rate, as in the case for company B. The swap dealer decides the bid rate to be, for example, 10 basis points above the five year treasury yield. The offer rate will be 20 basis points above the treasury yield in this case. This result in a bid-offer spread and a profit for the swap dealer of 10 basis points of the cash flows exchanged. Assume that the floating rate chosen in the transaction is the 6-month LIBOR rate (Sun et al., 1993).

Figure 3. Interest rate swap transaction with intermediary.



The result of the swap transaction is that all parties involved are satisfied with the outcome. Company A receives fixed rate as desired, and obtains it at a lower cost than what would have been possible to obtain outside the swap transaction. This is because of several conditions that make it more expensive for them to take a loan with fixed interest rate, such as their credit rating for example. The swap makes it possible for them to give company B a floating interest rate which they desire. As already mentioned, the swap dealer also benefits from the transaction since he charges the two companies with the bid-offer spread, constituting his profit (Y. Ghulam, personal communication, 2008-09-14).

2.3.2 Advantages of swaps

Since the interests of both parties are taken into account when designing the swap, the transaction will result in advantages for both of them (Chorafas, 2008).

Swaps have the advantage to its users of being fairly quickly executed once a counterparty is found, they do not require much administration, and they are not attached with large up-front costs (Beenhakker & Damanpour, 1995).

However, the main advantage attached to swaps is that companies are able to lower their costs and reduce fluctuation risks. The fluctuations are reduced since the companies take advantage of each other's relative comparative advantages through trade (Janabi, 2006). By using swaps the parties make sure they do not lose value from their exchanges due to fluctuations in currencies or interest rates (Beenhakker & Damanpour, 1995). The comparative advantage that enables trade in interest rate swaps arises when the parties have different credit ratings. They are offered different rates in the short- and long term credit market and thus quality spread differentials are present (Helliar, 2004). It is mainly the interest costs and transaction costs that differ (Loeys, 1985). The rate in which a party has a relative comparative advantage in can be switched to the preferred interest rate that another party has a relative comparative advantage in, whether it is floating or fixed, in order to get the most out of the trade. In this way it turns out to be a win-win situation for both parties (Helliar, 2004).

Another advantage of swaps is that companies are able to borrow money in whichever market they prefer, no matter which credit rating they have or absence of one. Furthermore, companies using swaps are able to restructure their existing debt in a simple and cheap manner. Instead of paying off an existing loan and then issue a new, which most likely comes with additional costs, the company can easily swap the current loan to another that has the qualities desired regarding length, type of interest rate and choice of currency (Helliar, 2004). Also, it is proved that swaps facilitate balancing assets and liabilities for the company by reducing mismatches in their maturity and types of rate of return (Loeys, 1985).

According to Geczy, Minton and Schrand (1997) currency swaps are the most cost-effective method that a company can use when it is facing debt risk in another country. They argue that since future payments are predictable, they go well in line with the conditions required in order to execute a currency swap.

It is argued by many that interest rate swaps is a better hedging technique than futures and options when it comes to hedging for a period longer than two or three years (Bicksler & Chen, 1986)(Helliar, 2004).

2.3.3 Disadvantages of swaps

It is difficult to create a perfect swap transaction. To find matching parties is not an easy task, since they have to agree on many criterions (Chorafas, 2008).

The cost if a party wants to end its part of the contract is greater than for example for a future (Loeys, 1985).

Since there is a double occurrence of cash flow exchanges, the parties involved are exposed to each others' credit- and market risk. This feature, in contrast to other tools, is specific to the swap transaction. Credit risk on the interest payments of each party depends on its financial statements. The risk is influenced by the width of the swap spread, which in turn is determined by the default risk of the parties as well as the mode of the financial market. The opinions on the size of the credit risk and its importance differ. Some argue that it may be of significant size, while others argue that the credit risk is small compared to the risk involved in taking an ordinary bank loan. The market risk constitutes the greatest risk involved in swap transactions. Fluctuations in interest rates cause the value of the swap to move, resulting in a need for dynamic hedging and in-depth knowledge in the subject of swaps (Chorafas, 2008).

Another disadvantage with swaps is the probability and risk that any of the parties might default. If that happens, the other party will again be exposed to foreign exchange risk and has to find a new counterparty. It might be the case that the market has changed in an unfavorable way since the last swap contract was agreed upon, and the party does not obtain as good conditions as before (Loeys, 1985). The default risk can be avoided if the parties decide to have a third party that protects them from it, such as an investment- or a commercial bank. However, such an intermediary comes at a high cost, since it will take charge in the form of a bid-ask spread, and may also charge money up-front of the transaction (Sun, Sundaresan & Wang, 1993).

An apparent disadvantage with swaps is that opportunities arising due to movements in the market are to be missed during the period of the contract. Nonetheless, the foreign exchange risk caused by unfavorable movements is eliminated (Baecker, 2004).

Ho, Stapleton and Subrahmanyam (1998) argue that even though the method of swaps is straightforward, there exists a practical problem in discounting a great number of cash flows that will occur on many different future dates.

2.4 Invoice Currency

2.4.1 Description of invoice currency

The choice of invoice currency is a very important strategy, since it will be one of the main determinants of how much the company will be exposed to exchange rate fluctuations (Piercy, 1983).

The company faces three strategic choices when exporting its goods abroad and has to decide upon prices. It may decide to price the goods in its own domestic currency (Producer Currency Pricing), in the foreign currency of the country it is exporting to (Local Currency Pricing), or in a different currency called a vehicle currency (Vehicle Currency Pricing). Another option is to combine these three choices. Which alternative to choose is not easily decided by the company. Many factors have to be considered, such as the characteristics of the industry it operates in, as well as factors in the macro economy (Goldberg & Tille, 2008). However, no matter which invoice currency the company decides to choose, its profit will always be affected somehow by fluctuations in exchange rates. If the producer's currency is chosen for its exports, the demand of the products will change as the exchange rate fluctuates. Thus, once an order is placed, the exporting company knows for sure how much profit that is made on the deal. If on the other hand the exporter decides to set its prices in the importer's currency, the demand for its products will be constant. However, the profit made on placed orders will be uncertain as a consequence of fluctuating exchange rates. The third option of choosing a vehicle currency results in the demand of the exporter's products, as well as the certain amount of profit made on the deals to vary over time. Having this said, the exporting company is likely to set prices in the local currency of the importing company in situations where exchange rates fluctuates greatly (Wilander, 2006).

Models have been developed by some to ease the process of choosing currency (Goldberg & Tille, 2008). Table 1 below summarizes an endogenous decision approach reflecting that the choice of invoice currency is influenced by both fluctuating exchange rates as well as macroeconomic shocks. An explanation of point 1 in the table is necessary to make. It represents the scenario where the exporting company chooses between its own currency versus a vehicle currency. The company will choose the currency which has least variation in exchange rates when compared to the exchange rate of the importing company (Oi, Otani & Shirota, 2004).

Table 1. Factors that influence the choice of invoice currency.

	High/large	Low/small
(1) Ratio of $var(e)$ to $var(e^{o})$	Third country's currency	PCP
(2) Product differentiation	PCP	LCP
(3) Home country's share of the trading partner's market	PCP	LCP
(4) Size of the home country	PCP	LCP
(5) Ratio of the variance in the home country's money supply to the variance in the foreign country's money supply	LCP	PCP

Oi et al. (2004)

Companies in industries with low product differentiation are the group that should prioritize their choice of currency the most, since they are affected the greatest by it. The reason is because products that are easily substituted by consumers to those of competitors', causes great variations in traded quantities for the exporting company. This means that, when the exchange rates change relative to those of competitors' it causes differences in prices (Goldberg & Tille, 2008). The company should in this case choose a vehicle currency that the majority of its competitors use, in order to reduce movements in quantities demanded (Johnson & Pick, 1997).

It is proved by many that the relative size of a country highly influences its use as an invoice currency. If the importing company is industrialized and situated in a large country, it is preferable for the exporting company to choose the local currency of the importing country in its pricing. The reason is because it does not risk the firm's competitive advantage relative to that of domestic firms' (Wilander, 2006). This partly explains why the USD constitutes the vehicle currency that is most often used (Donnenfeld & Haug, 2003).

It is argued that the company should be guided in its choice of invoice currency between a local or producer one, by examining the shape of the exporter's profit function as well as with consideration to exchange rates (Wilander, 2006). Overall, when the company decides upon its invoicing currency it should take into consideration the gains, expenditures, and consequences on its competitive situation, that each alternative currency brings (Anckar & Samiee, 2000), as well as its expectations about future exchange rate fluctuations (Shin-ichi & Masanori, 2006).

Research exploring Swedish exporters' choice of currency shows that the currency of the customer is for the most part chosen. Besides that, the SEK and a vehicle currency share an equal part in the choice of currency. This selection holds for trade both between and within companies. The research also concludes that negotiations of the choice of invoice currency between parties have proven important for Swedish exporters (Friberg & Wilander, 2008).

2.4.2 Advantages of invoice currency

By analyzing the industry and picking the right currency, the company can create a more competitive position in the market and maximize expected profits (Oi et al., 2004).

When exchange rates fluctuate and create differentials, the exporting company may offer the importing party the opportunity to choose among a set of appropriate currencies. It proves to be a good move if, on the hand, the exporting party is able to offer such a set at a low or no cost. The reason is because the parties are likely to have different opinions of how the exchange rate will fluctuate in the future. Also, business deals and transactions with other parties may give them different preferable currencies. The result of this move in an ultimate situation is that the importing company will experience reduced costs which in turn will increase its demand for the products. The competitive advantage will thereby improve for the exporting company and thus increase its profits (Ahtiala & Orgler, 1999).

2.4.3 Disadvantages of invoice currency

The negative aspect about this operational hedging strategy is that the decision process includes considering many factors of the market and the company, and therefore turns out to be very complex. Examples of factors are; channel- and market power, risk aversion, and costs involved (Piercy, 1983). It is also suggested to analyze the invoice currency choices made by competitors. However, the proposed recommendations by the various analyses may conflict with each other, and thereby makes it hard for the company to come up with an optimal solution (Bowe & Saltvedt, 2004).

2.5 Exposure netting

2.5.1 Description of exposure netting

Another method companies can use to manage foreign exchange risk exposure is called exposure netting. It involves offsetting exposures in one currency with exposures in the same or another currency. When exchange rates are expected to shift, losses on the first exposed position are offset by gains on the second currency. The underlying assumption of exposure netting is that the net gains or losses on the entire foreign exchange risk exposure in the corporation is what matters, rather than the gain or loss on any individual monetary division (Shapiro, 1999).

Shapiro (1999) states that exposure netting involves one of three possibilities:

1. A company can counterbalance a long position in one currency with a short position in the same currency.
2. If the exchange rate variability of two currencies has a positive correlation, then the company can offset a long position in one currency with a short position in the other.
3. If the currency movements have a negative correlation, then a short or long position can be used to counterbalance each other.

Below is an example that illustrates how exposure netting is used:

A Swedish firm is about to receive a payment in the GBP in the future. The company will hedge its exposure by creating a GBP payable for the same amount and maturity. This essentially means purchasing something in the United Kingdom for the amount of its receivable on an equal credit term (Bacha, 2004).

2.5.2 Advantages of exposure netting

Exposure netting is, as mentioned, a process of offsetting intergroup transactions and thus reduce transfer costs (Riahi-Belkaoui, 2002). Therefore, it is only the balance that is exposed to risk and hence in need of hedging (Pike & Neale, 2003).

These offsetting effects of exposures across the business reduce the total company risk. The consideration should be net corporate exposures when assessing hedging needs. Centralizing risk assessment and management reduces unnecessary cost due to excessive hedging (Miller & Waller, 2003).

2.5.3 Disadvantages of exposure netting

Exposure netting is not as easy as it may sound. In many cases there is not anything suitable that a firm can purchase in the foreign country in order to create the liability. Even worse, other risks are often created in the process (Bacha, 2004).

This technique of managing exchange risk exposure is used most effectively by multinational corporations (Javaid, 1985).

2.6 Cash pooling

2.6.1 Description of cash pooling

Cash pooling is a method that centralizes cash management, and in general involves transferring a subsidiary company's excess cash into a centrally managed account, or cash pool. Most companies that use cash pooling have implemented a special corporate entity that collects and disburses funds through a single bank account (Shapiro, 1999).

The main objective of cash pooling for firms is to bring together debit and credit balances of all subsidiaries (Ramirez & Tadesse, 2007).

If, for instance, a corporation has five bank accounts with 10,000 USD each. Then all the cash is pooled into another account, which thereafter has a balance of 50,000 USD. Consequently, all the other accounts are now left with zero balances (Graham & Coyle, 2000).

Pooling can be arranged in two ways, either automatically where a company's bank transfers the surpluses on specified accounts to a central account by the end of each day, or be administered by the firm's own management who instructs the bank to make the required transfers between the accounts (Graham & Coyle, 2000).

2.6.2 Advantages of cash pooling

As mentioned above, each subsidiary company only needs to manage their required cash balance and transfer the excess capital to the parent company. All the excess funds are then held by the parent company and transferred into the pool. If various units demand capital and if they are reasonably independent of each other, the cash management that is centralized at the headquarters can provide an equivalent level of protection with a lower amount of cash reserves (Shapiro, 1999).

Another advantage of cash pooling is that the parent company through the usage of the shared subsidiary account, in bad times does not need to borrow money so often since money is more available due to the constant flow into the pool. Also, in times when the parent company has excess money, the corporation as a whole is able to invest the money that comes into the pool. As a result, either interest expenses are decreased or investment income is increased. Furthermore, a larger pool of funds makes it become more worthwhile for companies to invest in cash management expertise. In addition, pooling permits foreign currency cash balances to be centrally managed, which reduces the firms overall risk exposure (Shapiro, 1999).

2.6.3 Disadvantages of cash pooling

There are also disadvantages involved when using cash pooling. Taking control over a subsidiary company's excess cash can create motivational problems for local managers. They might not feel the incentive to work as hard as they used to, if as soon as they receive excess funds then have to transfer it to the parent company and not being trusted to manage the capital themselves. The downside is that it provides no motivation for local managers to take advantage of opportunities on the local market of which only they may be aware (Shapiro, 1999).

3 Method

This section will start by explaining how the empirical data was collected. It will present the design of the questionnaire, and give the reader information about the interviews with the financial adviser at Handelsbanken, and the "foreign currency table". Furthermore, we will explain how the data of this thesis was analyzed. The final section will present the companies that participated in our research.

3.1 Collection of empirical data

When the theory was collected we needed primary data. Therefore, we decided to formulate a questionnaire with a mixture of short and open-ended questions. Our intention was to send the questionnaire to three multinational companies, because we believed that they had the greatest knowledge in the area of foreign exchange risk management. However, we realized that contacting the appropriate person in a large multinational corporation would probably be very difficult so we decided to contact smaller companies in the Jönköping region instead. We also recognized that contacting only three companies might not be sufficient. Thus, we made a decision to contact an additional number of companies to get a more reliable result.

In our thesis, the number of employees in each company has constituted our guideline of determining which appropriate firms to include in our research. We have used the definition from the European Union's web-portal and according to them; the number of employees in a medium-sized company ranges from 50 to 250. This means that a large-sized company has more employees than 250 employees (www.europa.eu, *Företagspolitik*).

To increase the response rate we selected firms from the list of the school's partner companies and made a phone call to all of the persons responsible of exchange risk management in the companies. We ended up with eight answered questionnaires, represented by an even distribution of four medium- and four large-sized companies. The companies are presented in section 3.3.

A meeting was arranged with Handelsbanken in Jönköping and we received a lot of information about the practices of managing currency risk. A financial adviser described the bank's position in the process when companies come and ask for advice, and gave information about the different techniques available.

The questionnaire, the interview, and the interview formula are explained in greater detail in the two following sections.

3.1.1 Questionnaire

The questionnaire consists of 15 questions designed in order to reveal which tools the companies currently use and other aspects regarding the overall management of their foreign exchange risk. The questions are divided into four major parts; management procedure, methods currently used to manage foreign exchange risk, restructuring plans, and general opinions. The questions under each category were chosen with the research questions and purpose of the thesis in mind. The questionnaire is presented in English and Swedish in the appendices 1 and 2.

3.1.2 Interview with financial adviser and "Foreign Currency Table"

The interview with the financial adviser at Handelsbanken in Jönköping took place in November 2009. The reason why we chose Handelsbanken was mainly because the bank had been our host company during our first years at Jönköping University. We felt that we already had established a good connection with the company and that this would make it easier for us to conduct the interview. Another reason why we chose Handelsbanken was because it received the award "Bank of the year 2009" by the business magazine Privata Affärer.

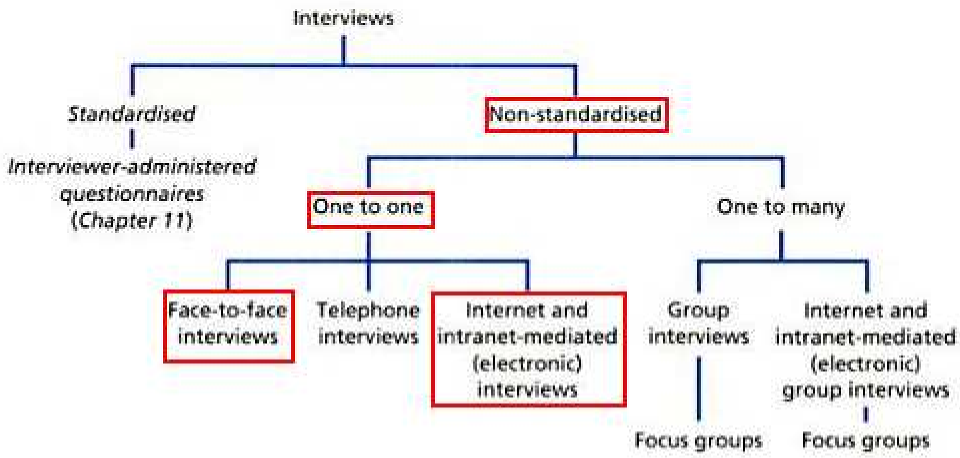
We interviewed Ola Arvidsson, working as a financial adviser for companies. He has been on this position for two years and is about to be relocated to another Handelsbanken office where he will be in the position as chief clerk.

At the interview with Mr. Arvidsson we discussed the questions, found in the appendices 3 and 4, and while he was telling us the answers we took notes. On some of the questions, Mr. Arvidsson did not know the answers. He gave us the advice to contact the "foreign currency table" in Linköping, and recommended us to talk to Olof Kostmann. We contacted him through e-mail, asking if he would like answer some of the questions that Mr. Arvidsson was unable to answer. This resulted in an electronic interview with Mr. Kostmann according to Saunders et al. (2007). The information we got from both Mr. Arvidsson and Mr. Kostmann is presented in our empirical study below.

Our interview with Mr. Arvidsson was, according to Saunders, Lewis, and Thornhill (2007), a one to one and face to face interview. This approach prevents any biased information since the interviewee can react on both the words being said and the body language being used.

As shown in figure 4 below, our interviews was conducted as non-standardised. According to Saunders et al. (2007), non-standardised interviews are used to collect data when doing a qualitative study. A non-standardised interview puts focus on revealing the "what" and "how", but it puts a lot of emphasis on exploring the "why". When doing non-standardised interviews there are a lot of advantages, for example the purpose of the research can be maintained during the interview. When having control of the purpose during the interview, the result should be that you are able to collect more rich and detailed information.

Figure 4. Different types of interviews.



Saunders et al. (2007)

3.2 Data analysis

The empirical data collected through the questionnaire and the interviews was analyzed using an abductive approach. The result was that the research questions became answered with the help of both primary - and secondary data.

By conducting a questionnaire for companies, as well as conducting two different interviews with employees of Handelsbanken, we believe that we have received a deeper understanding regarding the companies' management of the risk. Since the information collected from the three sources; the theory, questionnaire, and interview, contradicts on some levels, we were able to conduct a better analysis.

When we sent out the questionnaire and asked the companies to choose among the stated techniques that are currently used by them, they might have misinterpreted the underlying meaning of the techniques. We believe the reason is because the terms were stated in English, and the firms might only be familiar with the Swedish terms. Although, we did explain some of the terms, it might not have been sufficient for their understanding.

3.3 Choice of companies

The following companies have been contacted;

Munksjö:

Munksjö is a provider of high value paper products and holds a market leading position in a number of specific product areas. The company is among the leading producers in the world of décor paper and is also one of the leading producers of electro technical paper and interleaving paper for steel.

Munksjö's Group has approximately 1,200 employees and is located in Jönköping but has production plants in both Germany and Spain. For that reason it is important for them to manage currency fluctuations (www.munkjo.se).

Bodafors Trä AB:

Bodafors Trä AB is a family owned company that operates sawmills. The firm started in Malmbäck and Gothenburg in the 1960ies. The corporation has expanded greatly and now employs 77 people. The organization includes the subsidiary company Euro Holz GmbH in Germany, and an export company called Swedish Timber. Therefore a lot of transactions are carried out abroad (www.bodafors.se).

Carlfors Bruk:

Carlfors Bruk is a manufacturer of aluminium pigments and flakes. The firm has 53 employees and its headquarter is located outside Huskvarna. The company is a well known supplier abroad and 99 percent of their sales are exported worldwide. Therefore, managing exchange rate risk is one of the central parts of their operation (www.carlfors.se).

SCA Packing Sweden AB:

SCA Packing Sweden AB has about 740 employees and primarily develops market- and manufacture-corrugated cardboard packaging. The company is a part of the global consumer product- and paper corporation SCA, and thus in the need of foreign exchange risk management. The firms headquarter is positioned in Värnamo (www.scapackaging.se).

KABE:

KABE is a manufacturer of caravan trailers for the European market. Their headquarter is located in Värnamo and has approximately 430 employees. The company has subsidiary companies in both Sweden and other European countries. Since many of their products are sold abroad a central part of the operation is international financial risk management (www.kabe.se).

Familjen Dafgård AB:

Familjen Dafgård AB is Sweden's largest family owned company in the food industry. The plant is located outside Lidköping and with its 1,100 employees it produces, sells and distributes frozen groceries to restaurants and the consumer market. The firm exports 15 percent of its products and therefore needs to manage exchange rate movements (www.dafgard.se).

SEW Eurodrive:

SEW Eurodrive is world leading within the transmission industry regarding point drive systems. The Swedish headquarter is situated in Jönköping and has about 90 employees. Most of the company's operations are performed globally; hence international financial risk management is essential for the corporation (www.sew-eurodrive.se).

Gislaved Folie:

Gislaved Folie produces foil in different sizes and forms around the world. A few examples of products the approximately 200 employees produce are; instrument panels in vehicles, furniture, and inflatable mattresses within the health care industry. The company has sales offices in a number of countries in both Europe and Asia (www.gislavedfolie.se).

4 Empirical Study

This section will present the information gained from the interviewed companies of how they handle their foreign exchange exposure, as well as present their opinions of how the techniques are working for them. The two following sections will consist of information from a financial adviser working at Handelsbanken in Jönköping, and the "foreign currency table" in Linköping.

4.1 Information gained by companies

4.1.1 Management procedure

Do you have a written policy of how to handle the exposure of foreign exchange fluctuations as well as interest rates fluctuations?

Five out of eight companies claim they have such a policy. However, one of the companies that did not have a written policy was still restricted by their board concerning their choice of technique.

Do you in the company yourselves calculate risks and exposures, or do you take help from outside the company from e.g. banks or other institutions?

It was revealed from the questionnaire that six out of eight companies do their calculations of exposure themselves, whilst the remaining part take help from banks and other institutions to do the calculations. However, four out of eight companies are in touch with a bank on a constant basis to seek advice and to arrange methods dealing with exposures.

Who are responsible to manage the foreign exchange risk in your company? Is it managed internally within the company or externally?

The interviewed companies were asked which approach they use in their management of foreign exchange exposure. It was revealed that companies handle it both internally within the company and internally in addition with consultation with a bank. None of them used an entirely external approach. In many of the companies the matters of foreign exchange risk management are handled within the corporate group by the financial manager in relation to the CEO.

How frequently do you use and monitor the technique/techniques?

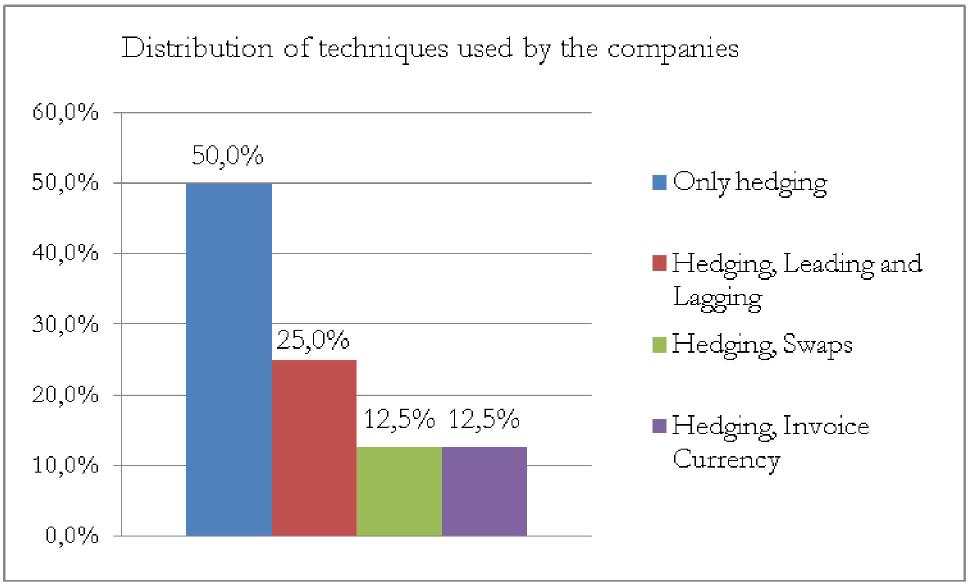
All of the interviewed companies monitor and use their techniques on a constant basis, mainly on a weekly basis. Though, some companies monitor their operations on a less frequent basis; once or twice a month. However, direct quotations are monitored every day by one company. One company uses their technique of hedging only once a year, and that is in the case when bigger investments are about to be made.

4.1.2 Methods currently used to manage foreign exchange risk

Which technique/techniques do you currently use to manage foreign exchange risk?

The graph in figure 5 illustrates the distribution of the techniques currently used by the companies. All of the interviewed companies use hedging to manage their foreign exchange exposure. However, four out of the eight companies use other techniques as well. Two of these four companies use leading and lagging strategies as a complement. One firm use swaps as a complement to hedging. They explained that their main objective is to match their cash flows. The fourth company makes use of invoice currency. Also, one of these companies exercises loans as well, in order to match the risk occurring from the re-calculation. Another company has a clause in their customer contract that allows the company to credit the customer if the exchange rate fluctuates more than two percent. None of the companies claimed they used cash pooling or exposure netting.

Figure 5. Distribution of techniques



Why did you choose to use this technique/techniques?

One company explained that it was because of historical reasons. They had used hedging as a tool in this state of affair for a long period of time, and it has been working satisfactory for them. Two other companies explained their choices in that it helps them to minimize their risk and secure their calculation rate. The majority of the companies that use hedging said that it is a result of being the simplest method to use, that it in normal circumstances requires the least administration effort, as well as it is easiest to understand and explain. One company explained their usage of hedging because of a requirement made by the owners of the firm. The company that uses both swaps and hedges explains their choice, in that swaps are flexible and hedging is a safe approach. The reason why one of the companies has a special clause in their customer contract is because it was a wish made by the customers.

For how long period have you been using this technique/techniques?

The majority of the companies have used hedging as technique for about five years. However, many of them have used them for 10-20 years. Only a few had used hedging in less than five years. Swaps had only been used in one month and leading and lagging had been used in 10 years versus three years.

How do you believe the technique/techniques are working for you? Advantages/Disadvantages.

One of the companies brought forward the positive aspect of hedging. They believe it is a good technique since they know in advance which rate to use in each transaction, and they also thought the technique is easy to use. It was however revealed a few downsides of some of the chosen methods. Hedging, according to one company, has the disadvantage of losing its positive aspects for periods during great drops of the SEK. The firm cannot take advantage of upturn- and downturn fluctuations of exchange rates when using hedges. Another company has currently stopped using hedging, since it regards the method as being risky and speculative. Also, one firm stated their awareness that hedging does not constitute a long-term solution to foreign exchange fluctuations. It only works as an over bridge of a short fluctuation or a prolonged reaction time in order to suit the charging rate to changed circumstances. It was revealed that matching with leading and lagging techniques can create time-lags when customers do not pay at specified dates. The delay of payments also proved as a disadvantage to the hedging technique.

4.1.3 Restructuring plans

Have you ever wondered about changing technique/techniques in order to manage the foreign exchange risk in a smoother, faster and better way?

Five out of eight companies declare they are thinking about changing the way they currently handle their foreign exchange exposure.

One of the companies wants to rearrange their current hedging method to have shorter time horizons in the future. Another company claimed their wish to change a few aspects in order to increase the simplification of their exposure management. One company that currently uses hedging is not planning to use it in 2010, because they believe it is a speculative technique as already mentioned. The same company also uses leading and lagging strategies. It is currently lending EUR to its corporate group but plans to change it to loans dominated in SEK instead, in order to decrease the risk. One company expressed their wish to use options, if it would not be so expensive. They desire to use them since they are more flexible than hedging and matching strategies. The company currently using swaps expresses their desire to use it even more in order to handle the exposure in an easier and better way.

One of the three companies that do not have thought about changing its current approach explains it because they are restrained in choices of techniques. Its corporate group only allows hedges to be used.

Do you have plans of restructuring your current technique/techniques in any way or replacing them with other techniques?

Only two out of the five companies have extended their thoughts about changing their technique into actual plans to implement. It is the company that desires to use swaps even more, and the company that will restructure its current leading- and lagging strategies from lending in EUR to lending in SEK instead. The latter company will also stop its hedging in USD in 2010.

Are there any techniques you would like to use, but have appeared to be too complicated?

Companies representing three eighths of the sample express their desire to use other techniques. Two of the companies wish to use options and swaps. The third company desires to use other techniques, but has no current plans to choose them because they believe they are more complicated and require more administration efforts. Three companies have no desire to use other techniques instead of their current ones or as a complement. One of these firms reveals that their knowledge in the subject is not in-depth, which is mainly a result of their lack of exposure. The remaining two companies did not know if there is another technique they would like to use.

4.1.4 General opinions

Is there anything that hinders you from using another technique to manage your foreign exchange exposure?

Most of the firms claimed there is nothing that restrains them from using other techniques. However, some said they are restrained due to financial reasons or restrictions made by the corporate group. The restrictions may involve which counterparts that are allowed or which techniques that can be chosen.

Do you feel there is enough information available of how to manage risks with the help of different techniques?

Six out of eight firms believe there is enough information available. While some want to have access to more information, they do not think it is available at a reasonable cost. One of the companies is of the opinion that the available information is only circulating speculations. Two companies in the sample do not know if there is enough information available.

4.2 Interview with a financial adviser

When people from companies are coming to the bank to discuss financial dilemmas, it is usually people that are involved within the financial department. These people, according to Mr. Arvidsson, have a high level of competence and are generally informed of what product that they are in the need of. Companies that have a tendency to talk about exchange risk are companies that usually work with export- and import trade frequently. Mr. Arvidsson continues by saying that when companies seek him, the companies have already a set of beliefs and thoughts of which techniques they are looking for.

"When companies come and talk about hedging, they have a tendency to already have a good knowledge of what Handelsbanken offer. For instance, they know that they can get an avista spot-price the same day they arrive, and that the bank do not take any extra fee."

Companies turn to the bank for help when it is time for them to either export or import goods and need help regarding risk exposure for currencies. To make this process easier for companies, Handelsbanken offer "market online" where companies can act on their positions directly in a program which makes it easier for companies to use e.g. swaps. The program also eliminates the process of involving a financial adviser at the bank, which is very time consuming. Companies have a high confidence in the program, which besides for swaps; also can be used for smaller investments and exposures than products sold by the bank.

It is important to mention that the bank does not try to change the companies' currency policies. Primarily, the companies handle their business and trade and secondly they manage their currency exposure.

Handelsbanken tries to have a close relationship with the companies, since it makes it easier for the bank to conduct a proper analysis regarding their needs. Hedging is one of the most frequently used products, according to Mr. Arvidsson. Handelsbanken is always keen on trying to identify the needs for the companies to solve their problems and come up with products that will suite them. Mr. Arvidsson explains that the bank does not help the companies in order to make profits, but instead, tries to make the companies satisfied and pleased with the bank's services so that they will continue to seek guidance and help. Handelsbanken does not use any sale approach to attract companies to buy their products. Rather, they offer them complete business solutions to make them as satisfied as possible. Mr.

Arvidsson continues by saying that it is against the Handelsbanken ideology to use any sale approach to attract companies.

"Handelsbanken uses different types of products to provide and solve the foreign exchange risk for companies. There is a wide range of different types of products which solve different types of problems, which in turn makes it hard to inform of a specific method, besides hedging, that is generally used by companies."

Handelsbanken uses a "currency table" which is located in Linköping, Sweden. At this table, people with high insight of trends and currencies work to conduct new products to offer companies. The table takes a lot of aspects into consideration when conducting products. Forecasts are made with high frequency of update, with consideration of what is going on in the world, so that products and Handelsbanken's recommendations are as accurate as possible. Since Sweden is not part of the European monetary union, Swedish companies become more sensitive to currencies when doing business abroad, explains Mr. Arvidsson.

There is no trend in the solutions that Handelsbanken offer to companies, regarding their management of foreign exchange risk. Mr. Arvidsson explains that the bank does not recommend companies to speculate on their own. On the other hand the bank does not advice against it either.

"Companies that do not use the bank's products, try to match their cash flows on their own, with the same currencies to avoid risks."

The different tools that can be used, provided by the bank, has both positive and negative aspects. Although, it is hard for the bank to see the negative aspects since it is the companies' needs, which already have been identified, that have to be fulfilled.

According to Mr. Arvidsson, the positive aspect about swaps is that you can save money by using them. However, it is a bit more work attached with swaps than it is with other techniques. Furthermore, he informs that swaps are not often used by the companies of the Jönköping office.

The positive aspect about invoice currency is that it is currency neutral, which means that it tries to obtain a flow of cash in the same currency. The companies can easily implement this technique by opening an account at the bank that deals with foreign currencies, where the company can transfer money and pay other companies in different currencies.

"With Leading and Lagging, it is hard to find positive and negative aspects. If the company wants to use this kind of tool, the bank provides them with products of such kind. Again, it is all about finding the need for the company and help them finding a solution. For instance, Handelsbanken gives the companies the possibility to open an account for cash pooling in other currencies. This is most often exploited by small firms in the Jönköping region".

When companies come to Handelsbanken to discuss their possibility to reduce risk in foreign exchange transactions, the bank sometimes explore if several techniques can be used as a solution. To satisfy the companies' needs, the bank tries to have an open mind when trying to find suitable solutions for the company. Mr. Arvidsson explains that this is especially important for the bank in scenarios when companies are doing business with currencies they have never used before.

Mr. Arvidsson explains that a lot of new tools have been introduced lately, to such a great extent that it was hard to imagine a decade ago. Since so many new techniques are available, companies should be more flexible and open-minded to consider new techniques to use. However, he has not seen any patterns of companies changing their current methods.

When we, today, look back at times of insecurities, risks, and huge financial difficulties, one would expect a lot more companies being interested in minimizing their risks. Although, Mr. Arvidsson says that there are no huge differences if we compare the usage before and during the crisis regarding the extent to which companies manage foreign exchange risk. However, companies are generally more aware of their risks and more careful about their liquidity, which we have noticed by the increased amount of advices being asked for.

4.3 Interview with the "Foreign Currency Table"

When asking Mr. Kostmann if he can see any patterns in the distribution of different methods being used by companies he says that the most used tool for companies, in order to reduce exchange risks in currencies, is to use forwards. However, there is a tendency to use currency swaps as well. When using swaps, Mr. Kostmann explains that companies can either postpone or expedite their forward contracts. If a company has unsteady cash flows there is a tendency to use currency options instead. The "foreign currency table" offers a set of products which can be structured as well, but on all of their products there is an upper limit on the final price which, according to Mr. Kostmann, can lower the risk.

Mr. Kostmann agrees with Mr. Arvidsson that there is a tendency that companies seek advices more regularly during the financial crisis than before. Companies that are exposed to EUR have asked for new products and advices. Thus, companies exposed to the USD have already learned how to manage their risk in currencies since, historically, the USD/SEK has been more volatile than EUR/SEK.

We were interested in knowing how the "foreign currency table" makes its recommendation, and what different set of outside factors that can have an impact on them. Mr. Kostmann explains that there are a lot of different factors to take into consideration when doing a recommendation. For example, influencing factors may be the price of raw material such as gold and oil, but also the rates and inflation all around the world. Nevertheless, it is the exchange rates that should constitute the greatest influence fundamentally. Mr. Kostmann continues by telling us that the recommendations differ during different time periods. If the recommendation is aimed at a short time period, the advice is based on trends and any economical data that could have an impact on the exchange rate.

When we asked Mr. Kostmann about the positive and negative aspects about the different techniques we got the following answer. Hedging through forwards is a good way for the companies to lower their exchange risk. The positive aspect about it is that the companies can set their own price against their clients. Hedging through forwards gives the companies a more stable result over time even if the forward rate catches up to the exchange rate movements. The negative aspect about forwards is that it is hard to book keep. Most companies in Sweden want SEK as their invoice currency, but if they are having expenses abroad they are often forced to pay with the foreign currency. The positive aspect with invoice currency is that companies can match their flows in the same currency and thereby lowering their risk. Mr. Kostmann says that forwards share the same positive aspects as the invoice currency. Leading and lagging strategies makes Handelsbanken have a more frequent dialogue with its companies, which require more time being spent on this technique by the bank. The negative aspect for companies is that it even though they use leading and lagging, they are still exposed to the risk of fluctuations.

5 Analysis

Our analysis is structured so that each technique used by the companies can be analyzed and explained with our theory and research questions in mind. We have divided our analysis into three sections; methods being used by the companies, method not being used by the companies, and trends in the usage of written policies. This structure is chosen so that the reader more easily can follow our discussion throughout the analysis.

5.1 Analysis of methods being used by our sample

5.1.1 Hedging

Hedging is the most frequently used method amongst the companies we have asked; in fact all of the interviewed companies used hedging as a tool to manage their foreign exchange risk. The frequency was confirmed with Mr. Arvidsson working at Handelsbanken, where he said that hedging is the tool most companies are asking for. When hedging was discussed among the companies, the majority stated that forwards was the most proper tool for them. Mr. Kostmann, working at the "foreign currency table", gave us an explanation as to why. He argued that hedging through forwards is a good way for companies to lower their exchange risk. The advantage with a forward contract is that companies can set their own price against their clients which results in more stable cash flows.

Companies argued that hedging is a good technique to use since they already know in advance which rate that will be used in each transaction. They also argue that hedging is an easy tool to use. In fact, all of the companies say that it is the simplest method to use since it requires the least administration effort. According to our research, hedging is the easiest method to understand and explain.

Most companies are of the opinion that hedging is a safe approach. However, one company has a different attitude towards hedging. They have decided to stop using hedges, since they believe it is risky and speculative. Their interpretation of the technique contradicts to the interpretation made in theory. According to theory, hedging is one of the safest approaches to handle currency risk, since it helps to decrease the potential loss when currencies are fluctuating rapidly. Once a company decides on the price of the hedge, the speculation dilemma disappears. Furthermore, hedging with use of options is a very useful technique, since it protects the company from losses if the exchange rate tends to fluctuate in a non-desired direction as well as make use of desired fluctuations. One of the companies mentioned that they would prefer to use options as a method if it would be less expensive. Even if there is a high premium to pay, it reduces exchange risks completely and may result in greater cash flows values. If companies cherish the value of their cash flows to a great extent they should issue options.

There are downsides to hedging according to two of the companies in our research. One company claims that it cannot take advantage of the fluctuations in exchange rates when using hedging. This is obviously true, but that this works as a disadvantage for the method is an unexpected opinion. Theory claims that a company should use hedging primarily to prevent fluctuations in currencies and potential losses that these fluctuations can bring, and not to make a potential profit. Another company argues that the technique of hedging is risky. Therefore, they will not take any hedge positions in 2010, and have decided to not hedge the USD at all. The theory that has been viewed upon has not presented any information of that hedging constitutes a risky technique.

5.1.2 Leading and lagging strategies

Leading and lagging strategies are more speculative than regular hedging techniques since the adjustment of the timing and collection of payments are based on predictions about future exchange rates. Therefore, if the forecast is inaccurate and the exchange rate moves in the opposite direction, the company may end up with a worse exchange rate than before. Even though the transaction is usually made within an organization, it is not possible to eliminate all risks involved with currency exposure, when using leading and lagging strategies.

Despite the fact that the risk of inaccurate estimations remains, there are benefits involved with the method as well. Leading and lagging is a simple strategy to carry out, hence most corporations with affiliates abroad should at least examine the technique, since it does not take much time and effort.

Two of the companies we interviewed use leading and lagging as a complement to hedging. According to Mr. Kostmann this scenario is not unusual. He declares that most companies that utilize leading and lagging strategies primarily use them as a complement to forward contracts. The reason why the companies in our sample have chosen to use this technique as a complement is explained by the riskiness attached to the method when used on a sole basis, which arises due to its foundation of predictions.

5.1.3 Swaps

Swaps are not commonly used in our sample of companies, which might be a result of them being too small and thus, not having cash flow exchanges that are predictable in the future. Another explanation might be that they believe swap transactions are too complicated and therefore tries to find other techniques that are easier for them to understand.

Furthermore, swaps are not often arranged by Handelsbanken in Jönköping. Though, the usage of swaps seems to be greater utilized by the customers of Handelsbanken in the rest of the country, according to the "foreign currency table", at least when it comes to currency swaps. A possible reason for why currency swaps specifically have gained such a large share in usage was brought forward by the theory. It was argued that when a firm faces debt risk in another country, currency swaps constitutes the most cost-effective technique one can use.

In line with Mr. Kostmann's belief, about swaps, theory is of the opinion that once future cash flows are known it is a good choice to use swaps to manage foreign exchange risks.

The aspect of swaps being flexible is put forward by the company using swaps in their risk management, as well as in theory. Mr. Kostmann also refers to the flexibility of the swaps, as the firms are able to have a say in the timing of their payments.

Generally, since a swap can vary greatly in its design and by its content, it requires that effort is put into the arrangement in order for the swap to be successful and please all parties involved. In order for the company to be able to continue distributing time and energy on what they do best, it is a good idea that the company takes help from a swap dealer to arrange the transaction. This results in time and money being saved. The cost, that such an intermediary results in, should not constitute a huge part in the decision process of whether swaps should be used. A swap is arranged to offer a solution for a long period of time, and helps the firm to reduce costs, risks, and fluctuations of various kinds. Therefore, as one spreads the cost over the long run it will not turn out to be so great, as compared with the indirect cost of analyzing the market and the direct cost of paying for other techniques on a more frequent basis.

5.1.4 Invoice currency

Invoice currency was only used by one of the eight interviewed companies. The reason why only one company mentioned it is probably because the other companies do not realize that they are using invoice currency. It is easy to forget about it and not think about invoice currency as a tool to manage risk exposure, but in practice most corporations use it. Every company that exports goods abroad needs to decide which currency to use; whether it is the domestic currency, the foreign currency, or another vehicle currency.

Mr. Arvidsson argues that most companies in Sweden, which use invoice currency, prefer SEK as their invoice currency. This is probably true, because then the critical currency for the firms to track is the SEK, instead of needing to track multiple currencies on a daily basis, which could be very time consuming.

Goldberg and Tille (2008) described that companies in industries with low product differentiation are the group that should prioritize their choice of currency the most, since they are affected the greatest by it. No in-depth analysis of the market has been carried out in this thesis but most of the interviewed companies produce staple commodities and have several competitors. Thus, they have low product differentiation which means that other companies are producing similar products. As a result, it is important for the companies in our sample to increase their knowledge about invoice currency and prioritize their decision of which currency to use.

5.2 Analysis of methods not being used by our sample

5.2.1 Exposure netting

A possible explanation for why exposure netting is not used by our sample of companies is due to the difficulty of implementing it into their financial exposure management. Lack of knowledge of how to handle such a method could also be a reason why companies do not tend to use it. It might also be the case that the companies do not have cash flows that offset each other in the same currencies, thus exposure netting cannot be used. An example when this situation would prevail is when a firm imports goods in one currency, and exports goods in another one. A second situation would be if the company carries out only export transactions or import transactions in another currency, a currency which is different from the one of the producer'. Foreign exchange risk cannot be avoided in these cases, since the company has to make some currency exchanges in order for trading to be possible.

5.2.2 Cash pooling

The reason why cash pooling is not chosen as a method might be because the companies feel that the worsened exchange rate that results from opening an account for cash pooling, is not preferred against the foreign exchange risk in a situation when no such account is used. However, according to Mr. Arvidsson, it is very common that companies choose to use cash pool accounts, and especially smaller firms make that choice. This statement contradicts with our research of the companies in the region, since none of them specifically stated that they use an account for cash pooling. As declared in our empirical findings, four out of eight companies claimed they have a relation with a bank concerning their foreign exchange management. This means that at least some of these four companies should be using a cash pool account. A possible explanation for why none of them confirmed their usage of the technique is put forward. The questionnaire had an alternative answer option where the company could state methods used that were not covered by our list. It is likely that many of the companies that are in touch with a bank use an account for cash pooling, even though they did not specifically declared it in the questionnaire. Furthermore, it was through the alternative answer option that it was found out that the companies' main objective is to match cash flows, which is the overall goal for all the techniques mentioned in this thesis.

5.3 Trends in the usage of written policies

When looking at the previous findings in both Finland and the U.K., regarding policies of foreign exchange risk, only 26 percent had a written policy in Finland and roughly 34 percent of the companies in the U.K. Comparing this to our study, with 63 percent of the companies having a written policy, a huge difference is apparent. The variation between countries can depend on different levels of awareness when it comes to foreign exchange risk. This awareness has probably increased since the previous studies were made, and from our interviews with Mr. Arvidsson and Mr. Kostmann we learned that the awareness in companies has indeed increased. However, our set of companies might not be a large enough sample in order for us to draw any conclusion whether Swedish companies have a tendency to be more aware of the importance in policies regarding exchange risks.

6 Conclusion

This section describes the foreign exchange risk techniques that are used by the companies in our research, as well as how they, Handelsbanken, and the authors evaluate these tools. It will go on by discussing the specific companies' knowledge in the subject, and finally give suggestions for further studies.

The popularity of hedging as a method among the companies in our research is evident. Hedging according to us, as well as the bank, the companies, and the theory, is the easiest tool to use, understand, explain, and it is the safest approach to handle currency risk, since any speculation dilemma disappears.

However, we also believe swaps are excellent techniques in the way they cope with foreign exchange exposure, even though they were not commonly used by the companies in the sample. Swaps are more flexible than other techniques we have come across in this thesis, since whatever qualities that are desired by the company, the transaction can be achieved. We find that the technique is not restrained as the other tools, since it does not offer a fixed set of choices.

Except from hedging, leading and lagging strategies were used most often by the companies in our research. Although, the usage proportion in the sample was still low if compared to the usage of hedging. However, we do not find this low ratio surprising, since we are dealing with quite small companies. If we had used a sample with larger multinational companies instead, the ratio of companies using leading and lagging would probably be larger. We consider leading and lagging as being a beneficial technique for multinational organizations to use, since a parent company most likely can control the timing of payments to their subsidiary companies, and thus pay when the exchange rate is beneficial to the whole corporation. But when companies are not that large there are no apparent advantages. Since leading and lagging is a zero-sum game one party will always loose, and that party is likely to be one of the companies in our sample due to their smaller sizes.

The remaining methods, apart from cash pooling and exposure netting, were used on a less frequent basis, and the usage proportion between them was equally low. Cash pooling and exposure netting however was not claimed to be used at all by the companies in our sample.

Generally, invoice currency is a method that all companies use when exporting their goods, but the companies in our sample seem to have stopped thinking about it as a technique to managing exchange exposure, since few claimed to use it in the questionnaire. We believe that they should evaluate their choice of invoice currency on a regular basis, and be prepared to change it if economic conditions change, since the exchange exposure then can be avoided to some extent.

During our study, we have concluded that some of the companies in our sample do not have enough understanding of the techniques they use. One company explains that hedging is a risky and speculative technique to use and therefore decides not to use it; our conclusion is that knowledge of the method is missing. Another answer from the questionnaire that can strengthen our belief, regarding knowledge, comes from a company that believes they can make profits out of hedging. It mentions that it cannot take advantage from fluctuations when it hedges; we interpret this as the company wants to make money from the hedge. As we learnt through-out the thesis, the hedging technique is used to protect companies against fluctuation, and especially in times of recession, companies should not try to make any money, but instead try to lose as little as possible. Although, the specific company explained to us that they do not possess deep knowledge of the technique. This, in turn, can be explained by their small size and thereby their lack of exposure.

A general suggestion for the companies in our research is that they should explore the different techniques that are available on the market to them in their specific situation. The companies in our research have a tendency to keep on using the techniques that they have used for several years because it has worked satisfying for them. However, they should not feel intimidated by new techniques and old ones that are perceived as complex, but instead increase their knowledge base and have an open mind regarding finding new solutions. After all, five out of eight companies stated that they had been thinking about changing their current techniques, but only two of them affirmed that they will actually implement their restructuring plans.

6.1 Further Studies

When conducting our analysis and conclusion, questions and ideas have been raised regarding further studies.

Since companies, as well as the bank, have a tendency to use hedging we believe that a study that only have a focus on hedging, as a method for preventing exchange risk, would be interesting.

We also think that the previous studies made in Finland and the U.K., whether companies have written policies or not, could be of interest if executed in Sweden since it has not been done before as we know of. Parallels could be drawn between countries.

In our thesis we had a good connection with Handelsbanken, which gave the idea to further explore how companies and their respective bank work together more in-depth. It would be interesting to see how much the two parties influence each other when taking decisions concerning exchange risk management.

Our thesis is based on how companies manage the foreign exchange risk in a recession. Hopefully, we will soon see an ending of this recession and have a flourishing economy. A similar study, as ours, can be made in order to explore if companies have changed their views of how to manage foreign exchange exposure after the recession.

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Appendices

Appendix 1 – Questionnaire in English

Management procedure

- Do you have a written policy of how to handle the exposure of foreign exchange fluctuations as well as interest rates fluctuations?
- Do you in the company yourselves calculate risks and exposure, or do you take help from outside the company from e.g. banks or other institutions?
- Who are responsible to manage the foreign exchange risk in your company? Is it managed internally within the company or externally?
- How frequently do you use and monitor the technique/techniques?

Methods currently used to manage foreign exchange risk

- Which technique/techniques do you currently use to manage foreign exchange risk?
- Why did you choose to use this technique/techniques?
- For how long period have you been using this technique/techniques?
- How do you believe the technique/techniques are working for you? Advantages/Disadvantages.

Restructuring plans

- Have you ever wondered about changing technique/techniques in order to manage the foreign exchange risk in a smoother, faster and better way?
- Do you have plans of restructuring your current technique/techniques in any way or replacing them with other techniques?
- If you plan to change your current technique/techniques, which alternative(s) would you prefer to use instead?
- What make you choose this alternative(s)?
- Are there any techniques you would like to use, but have appeared to be too complicated?

General opinions

- Is there anything that hinders you from using another technique to manage your foreign exchange exposure?
- Do you feel there is enough information available of how to manage risks with the help of different techniques?

Appendix 2 – Questionnaire in Swedish

Hantering av valutaexponering

- Har Ni en skriven policy för hur ni hanterar Er valutaexponering och risk?
- Är det Ni själva som räknar på exponeringen av risk eller använder ni Er av investerare som banker, valutaplacerare osv.
- Vem/vilka är ansvariga för att hantera valutarisken i ert företag? Sköts det internt i företaget eller externt?
- Hur frekvent under året använder ni och övervakar metoden/metoderna ni använder?

Metoder som används för att hantera valutaexponering

- Vad använder Ni för teknik/tekniker för tillfället när ni hanterar Er valutariskhantering?

Optioner / teckningsoptioner

Swaps

Leading
Lagging
} tajming av utbetalning/inbetalning beroende på förväntade framtida valutakurser

Invoice currency (val av valuta vid export- och importtransaktioner utomlands)

Hedging

Annat derivat____

- Varför valde Ni att använda er av denna teknik/dessa tekniker?
- Hur länge har Ni använt Er av samma teknik/tekniker?
- Hur tycker Ni att tekniken fungerar för Er? Fördelar/Nackdelar

Planer på omstrukturering

- Har Ni haft funderingar på att ändra teknik/tekniker för att hantera exponeringen lättare, snabbare eller bättre?
- Har Ni planer på att byta/ändra teknik/tekniker eller omstrukturera tillvägagångssätten på valutariskhantering?

- Om ni har planer på att ändra tillvägagångssätten, vilka alternativ skulle Ni hellre vilja använda Er av?
- Varför dessa alternativ?
- Finns det verktyg som ni skulle vilja använda, men som varit för komplicerade att använda att ni valt något annat istället.

Generella åsikter

- Är det någonting som hindrar Er från att använda er av någon annan teknik att hantera valutarisk med?
- Tycker Ni att det finns tillräckligt med information om hur man ska hantera risker med snabba valutaförändringar och investeringar?

Appendix 3 – Interview Formula in English

1. How well aware and informed are customers seeking your advice generally, when it comes to currency risk?

2. How great is the customers' knowledge about the different methods that are available to regulate exchange risk when they come to you?

3. Which method do you most frequently recommend?

4. Why do you choose this specific method?

5. What are your recommendations based on? How is the procedure?

6. How is the "currency table" in Linköping operating? How do you use it?

7. Is there any method you usually do not recommend?

8. (If so-) Why do you not think it is a good method?

9. Is there any method the customers are reluctant to use? (If so-) What is the reason?

10. Which method is most expensive/inexpensive to use?

11. How often are accounts for cash pooling used by companies?

12. What do you regard as positive/negative with the following methods?
    -Swaps
    -Invoice currency (choice of currency with export- and import transactions abroad)
    -Hedging
    -Leading and lagging (timing of disbursements/payments depending on expected future exchange rates)

13. How are you customers generally allocating the methods? Are several methods used at the same time or just a few?

14. During how long time frame do companies use the same method/mix of methods?

15. Are the companies generally satisfied with the outcome of their investments? Do they perceive less risk than before?

16. Do you perceive if there are any tendencies and trends in the choice of method to manage exchange risk?

17. Have you noticed an increase in the number of companies seeking advice about managing exchange risk since the financial crisis?

18. Do you know approximately, how many companies that are managing exchange rate risk internally resp. turn to the bank for help?

19. How often do you keep in touch with the companies and discuss foreign exchange risk management?

20. Who/which person(s) in the companies do you discuss currencies with?

21. Do you know if there is a difference in the choice of methods most preferred in Sweden resp. internationally?

Appendix 4 – Interview Formula in Swedish

1. Hur medvetna och insatta är kunder om valutarisker generellt när de kommer till er?

2. Hur stor är kundernas kunskap om vilka metoder det finns att använda sig av för att reglera valutarisk när de kommer till er?

3. Vilken metod brukar ni oftast rekommendera?

4. Varför väljer ni just denna metoden?

5. Vad grundar ni era rekommendationer på? Hur går proceduren till?

6. Hur fungerar ”valutabordet” i Linköping? Hur använder ni er av det?

7. Är det någon metod ni inte brukar rekommendera att använda?

8. (Om det finns någon-) Varför tycker ni inte den metoden är bra?

9. Finns det någon metod som kunderna brukar dra sig från att använda? Av vilket skäl isåfall?

10. Vilken metod är dyrast resp. billigast att använda?

11. Hur ofta används valutkonton av företag?

12. Vad anser ni är positivt resp. negativt med följande metoder?
- Swaps
- Invoice currency (val av valuta vid export- och importtransaktioner utomlands) Hedging (terminer)
- Leading o lagging (tajming av utbetalning/inbetalning beroende på förväntade framtida valutakurser)

13. Hur brukar fördelningen av olika metoder hos era kunder vara? Få metoder används eller flera samtidigt?

14. Under hur lång tidsperiod brukar företag använda sig av en som samma metod/mix av metoder?

15. Brukar företagen vara nöjda med utgången av deras placeringar? Upplever de mindre risk än tidigare?

16. Upplever ni att det finns tendenser och trender i valet av metod att hantera valutarisk?

17. Märker ni en ökning av företag som kommer och behöver hjälp att hantera valutarisk sedan finanskrisen?

18. Vet ni på ett ungefär, hur många företag som brukar ta hand om sin valutarisk på egen hand resp. går till banken för att få hjälp?

19. Hur ofta har ni kontakt med företagen och diskuterar valutasäkringar?

20. Vilken/vilka person(er) i företagen diskuterar ni valuta med?

21. Vet ni om det är någon skillnad på vilka metoder som man oftast använder i Sverige resp. utomlands?