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HEDGING PRACTICES OF LARGE ESTONIAN COMPANIES

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Abstract

The following paper aims to present an analysis of financial risk management practices of large Estonian companies. The main topic is the companies' reasoning behind hedging/not hedging financial risks – interest and exchange rate, as well as commodity risk. In addition, the paper touches on topics of financial competence and the coverage of financial risk management in financial policies, as well as the instruments which large Estonian companies use to hedge financial risks. The study is based on qualitative research and incorporates interviews with 15 large Estonian companies. In addition, after interviewing the sample companies the authors were able to identify various trends. The authors also interviewed four representatives of three banks operating in the region – Nordea, SEB and Swedbank. From these interviews the authors were able to find convergences/divergences of the opinions of the companies and the counterparties of the hedging process – the banks. The results of the study are company-specific and no generalizations can be made about the overall trends in Estonia. However, the authors found several common trends within the chosen sample, which have been brought out in the section focusing on the discussion of results.

Keywords: Hedging; large Estonian companies; financial risk management; financial risk policy; financial risk strategy;

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1. Introduction

Risk in general can be thought of as the probability for a potential loss. Most companies, unless they are non-profit organizations, sway between fear and greed, meaning that they would like to maximize their profits, while considering the risks that come with it. Starting from the mid 1990s, risk management has become an increasingly important topic among companies (Froot, Scharfstein, & Stein, 1993). The reasons behind this vary from economic turmoil to globalization as a whole. The process of risk management is when companies define, measure and manage the risks that they possess (Financial Times Lexicon, 2015). There are many sub-categories under risk management. This paper focuses on financial risk management, mainly market risks – interest rate, currency and commodity risks. The authors have chosen a qualitative method of analysis, in order to answer the research question and supporting hypotheses presented later in the paper.

Today's economic environment is rather volatile and hard to predict. Oil prices are almost at their record lows (Raval, 2015), interest rates are near zero, or even negative (Wolf, 2015). In addition, the euro has depreciated close to parity with the United States dollar and the Russian ruble has taken a steep downturn due to geopolitical events. All these factors remind companies how exposed they really are to various risks and make shareholders, creditors and even employees learn about underestimating exposures the hard way.

Hedging, by definition, is the strategy of minimizing or eliminating risk, mostly using financial instruments (Financial Times Lexicon, 2015). The topic itself is wide due to a large amount of different financial risks as well as the fact that there are numerous potential approaches to the issue.

Considering Estonia's history and previous membership of the former USSR, hedging of financial risk is a relatively new opportunity that financial managers need to take into account. Given Estonia's status as an emerging market (Kohli, 2014), earlier studies on this topic and region are virtually non-existent. It should be noted that when it comes to financial risk hedging, there is a considerable difference between emerging and developed economies (Bartram, Brown and Fehle, 2009).

Since the authors have decided to research the financial risk management of large Estonian companies, they provide numerous contributions to the academic field of the respective topic in Estonia. Firstly, the authors will explore how the companies in the sample are hedging

their financial risk. Secondly, the paper provides an explanation of the decisions companies make when hedging their risk exposures. Lastly, the paper will investigate what role a company's financial policy plays in financial risk management.

All together, the study will fill the research gap of the determinants affecting financial risk management decisions in this emerging economy. Thus, the research question is formulated as such:

What are the reasons behind using/not using financial instruments to hedge financial risk among large Estonian companies?

The paper is structured in the following way: the first section gives the reader an overview of previously published papers on relevant topics; the second section presents the research question, as well as assisting hypotheses, which are constructed with the help of the findings of previous studies; thirdly, the readers are introduced to the sample of companies of the study, the reasoning behind it, as well as the structure of the analysis to follow; after that, the authors present overviews of conducted interviews in a mini-case format; this is followed by an analysis of the correspondence of the key findings with the visions of bank representatives.

2. Literature Review

The upcoming list and explanations of previous literature should raise awareness of the topic and in the end give the reader an idea about the value this paper will provide when combined with previously published works.

In order to bind the research paper and form assisting hypotheses next to the research question, the authors selectively grasp necessary findings from previous papers. The theoretical background behind financial risk management is not clear-cut. There are many theories due to the wide range of research done. These have been proven in academic papers, but they all stand separately, which means that there is no certain theory that would fit to all papers concerning financial risk management. Due to the variance of applicable theories used by previous papers on this topic, the authors have decided to construct a theoretical framework, which is a combination of existing literature. The authors acknowledge, that the results from studies based on various countries, such as Thailand, cannot be directly applied to Estonia.

2.1. *Determinants of hedging*

There are many previous academic papers, which have thoroughly investigated the determinants regarding financial risk hedging. Under the determinants it is mostly meant which companies tend to hedge more and which less. Intuitively, companies that are large in size are more prone to include hedging in their financial policy. The argument here is that large companies are more exposed to the outside risks, because they are large in scope, their exposures can also be nominally larger. Also, tax benefits that firms gain by hedging constitute a large portion of their tax costs. It is not the case in Estonia, but in other parts of the world where companies face a progressive corporate tax system, they are more incentivized to hedge. What is more, times of extreme economic turmoil can result in companies going bankrupt, be it a recession in the overall economy, their sector or an independent financial decision. This has made companies more ready to hedge, in order to protect themselves from such events. The previously mentioned hedging determinants are covered in different amounts of detail by Nance, Smith and Smithson (1993), Smith and Stulz (1985), Hagelin (2003), Dionne and Triki (2012), Ameer (2010) and Ramlall (2009).

The most common finding from previous academic papers regarding the determinants is that hedging increases firm value. Boulter and Wongchan (2013) showed how hedging lowers a

company's financial risk. This, in turn, leads to a higher return on assets, thus increasing company value. The same goes for looking at the foreign exchange exposure of a company. Hagelin (2003) investigated foreign exchange (forex) exposure in his paper and found that firms can increase their value when they hedge forex exposure. International or multinational companies often have revenues in more than one currency, therefore, locking in the price or hedging it with some other instrument increases firm value, as it decreases the risk exposure. Mayers and Smith (1982) tackle this issue from a different perspective, but end up with the same conclusion. When companies use hedging then the volatility of cash flows is reduced, thus leaving them with lower transaction costs of distress (Mayers and Smith, 1982). Considering that, a clear connection between hedging and firm value can be drawn. Modigliani and Miller (1958) showed that financial distress has no impact on company value. This, however, is only true when you take into account other assumptions, such as identical borrowing costs and no transaction costs etc., which do not necessarily apply in the real world. Therefore, hedging financial risk and reducing financial bankruptcy costs will lead to a higher value of the company.

There is, however, a controversy in the underlying theoretical background of corporate financial hedging. Hentschel and Kothari (2001) have stated in their article that there is actually no benefit from derivatives; there is no economic or statistical effect from derivatives on firm risk. This has brought up a question about the seriousness of corporate hedging policy and whether it simply decreases shareholders' value through expenses. The authors consider this finding interesting and attempt to test its validity in the case of Estonian companies.

2.2. Agency costs

To continue, agency costs are important in large companies and can reach high levels if there is not enough attention paid to them. Agency costs arise between management, shareholders, and bondholders. In various settings, each group wants to be better off at the expense of the other group. Large companies are using both internal and external financing. The latter refers to both equity and bond issuance. Since shareholders and bondholders both bear risk, it does not mean that it is the same for both groups. In fact, shareholders may be eager to engage in projects that have a high volatility of cash flows. The reason being that while bondholders' return is fixed by the interest rate they receive, shareholders' upside potential is unlimited. In addition, bondholders are usually prioritized in the case of insolvency, meaning that even though the risk of losing the entire investment exists, they are

still more likely to recover a part of their claim, opposite to the shareholders. Now linking this to the previous point of reducing cash flow volatility, if a company uses hedging instruments to bring down the volatility of cash flows, then it also reduces agency costs, in return also reducing the company's cost of capital (DeMarzo and Duffie, 1995). An example of agency costs in the case of this paper is the managers' financial competence, i.e. if the manager does not have the competence in making financial decisions then the additional costs associated with it are agency costs.

One problem that coincides with agency cost, but is solved using derivatives as hedging instruments is underinvestment. It has been proven that there is a positive relationship between a firm's derivative use and its growth opportunities (Gay and Nam, 1998). Underinvestment in essence is when there are many low return investment opportunities, but shareholders decline to put money in those projects since they do not receive anything from that. It would, however, be beneficial for bondholders, because this is a good way for them to earn interest on their investment that comes with a low risk. It comes out of Gay and Nam's (1998) paper that non-financial corporations with low cash balances tend to use more derivatives for leverage because they need external financing. Therefore, hedging can be beneficial as it offers companies financing opportunities to still engage in projects.

There can be a situation when hedging is costly and it can only then pay off if the income exceeds the cost of hedging (Smith and Stulz, 1985). Yet managers often engage in costly hedging instruments when they should actually act in favour of shareholders. This usually happens because managers are trying to increase their expected utility. They gain motivation from the fact that their employment takes place over a relatively short time period, in which they need to show growth of a company but at the same time keep their reputation. In this sense hedging destroys value and shareholders should create a compensation plan for managers so that it discourages managers using excessive resources on hedging risks that do not satisfy the criteria (Smith and Stulz, 1985).

As previously mentioned, using derivatives can reduce agency costs, however, there is a negative side to it as well. Hedging has been found to decrease shareholder wealth. Tufano (1998) stated that hedging could be an incentive for managers to take on pet projects. Pet projects are known to have smaller returns, thus decreasing shareholders' wealth.

2.3. Hedging possibilities

When it comes to hedging financial risk, there is no one-and-only approach. Reducing financial risk does not necessarily have to be connected with hedging instruments such as options, swaps, futures/forwards etc. Brown, Crabb and Haushalter (2006) talk about selective hedging in their paper. What they mean is that companies can also attempt time market prices and by doing so, they try to decrease risks and increase the potential gain. They prove, however, that selective hedging has not showed any proof of giving abnormal gains in economic nor operating performances. Hagelin (2003) has brought out a different perspective of alternative hedging. He has explained that it is possible to structure a company's balance so that assets meet liabilities (Nance, Smith, & Smithson, 1993). In addition to that, it is possible to play with the debt-equity ratio - increase the equity portion and lower the debt portion, hence lower interest-bearing liabilities. This may not actually be the best solution, since debt provides a company with tax shields, and decreasing debt would result in the company losing its value and incur more costs. Lastly, companies can use convertible debt to turn debt holders into shareholders when things are about to get worse.

Boulter and Wongchan (2013) stated in their paper that matching cash flows is one popular way to reduce costs and risk. For this type of approach, companies need to correctly match both cash inflow and outflow.

2.4. Hedging instruments

The previous paragraph concentrated on various hedging possibilities, which do not require use of a specific instrument. The authors, however, have decided to concentrate a part of their work on instruments that large Estonian companies use in order to hedge their financial risk. For this matter, the authors have listed some papers, which have tried to grasp information about these instruments.

The main hedging instruments that this paper focuses on will be described in a later paragraph. Literature on this topic is concentrated on 4 hedging instruments that are most commonly used by firms – options, futures, forwards and swaps. There is not much written about these instruments, rather they pass by in most articles related to hedging. For example, Bessembinder (1991), Cisar and Dufala (2010) and Nicula and Bucur (2012) have covered at least one, if not all, of these instruments in their paper. Boulter and Wongchan (2013) have written that forwards are most commonly used for managing transaction exposure, at least in

a Thailand example. Also, previously mentioned forward/future rate agreement (FRA) by Nicula and Bucur (2012) can be considered as one of the alternatives for financial instruments for hedging financial risk.

2.5. Hedging disclosure & policy

Hedging itself can be considered one of the financial manager's crucial roles –to downsize the firm's exposure to financial risk. This, however, does require enough competence to record dealings with instruments they use for that matter. Consequently, hedging disclosure can become a big issue when dealing with financial instruments. Two ways have been used to deal with hedging activities – off balance sheet and on balance sheet. Smith and Bahrman (1997) write that there can be inappropriate use of derivatives by managers, therefore, internal management of hedging needs to be present in order to monitor hedging activities. This is an important risk management function that can help companies abstain from excessive risk and probability of losing profitability. Bonaci, Filip, Strouhal and Matis. (2012) state that there is a need for an adequate system of surveillance that could be a part of sound corporate governance policies. It is widely accepted, that managers should act on behalf of shareholders, therefore, in order for corporate governance to work soundly, all dealings and practices with hedging and financial instruments should be overviewed. A good example of a country, which does not have good disclosure requirements of hedging activity, is Thailand. Boulter and Wongchan (2013) present the paper about Thailand companies and one of the key insights is that companies there lack consistent hedging policies and disclosure systems.

2.6. Hedging around the world

In order to get a broader view of how companies manage their financial exposure in different parts of the world, the authors have discovered a relatively large number of articles that tackle this issue. Derivative usage around the world differs substantially when considering academic papers written about this topic. One of the most important risks that multinational companies face is foreign exchange risk. Berkman, Bradbury and Magan (1997) have brought out that companies in different economies do not have the same perception of the exposures they are facing with foreign exchange. He has used an example of companies in New Zealand and the United States. Alkeback and Hagelin (1999) have

proved the same fact, but instead they have taken Sweden as one of the countries that they compare with Berkman, Bradbury and Magan (1997) paper. In addition to the fact that companies in different countries do show different derivative instrument holdings and usage, they also show that one of the reasons why this difference is present is that managers have different knowledge about derivatives. Not having a know-how of derivatives might bring along a lot of trouble, because from the paper it can also be seen that large companies engage in more speculative activities than smaller companies. The latter can turn into the loss of shareholder value if derivatives are being misused. Bartram, Brown and Fehle (2009) made extensive international research to obtain evidence of derivative usage. They find that in developing countries where derivatives markets are less liquid, companies tend to hedge less. This finding has a lot of explaining power as they have taken 50 countries and 7319 companies into their sample selection.

One more interesting paper, Lievenbrück and Schmid (2014) that has been published recently, sheds light on cultural reasons, which might affect hedging reasons in different countries. They find that there is a negative relationship between long-term orientation and probability for hedging. In addition to that they discovered that countries where male dominance is present, the level of hedging with options is less outstanding. This study, however, excludes other country-specific metrics, so there is evidence of a strong impact of culture on hedging, but it is vital to understand the possible shortcomings of it.

In the table below the authors have summarized both positive and negative sides of financial hedging coming from the literature review.

Positive	Negative
Can protect from bankruptcy, soften affects from recession or independent financial decisions	Managers may want to increase their expected utility
Increases firm value	Decreases shareholder wealth
Decreases cash flow volatility	Requires competence and knowledge
Decreases bankruptcy costs	Hedging disclosure can be complicated
Decreases cost of capital	Policy or internal management should be in place
Solves underinvestment problem	Misuse can lead to high losses

Table 1: Summary of literature review. Made by the Authors.

2.7. Research question and hypotheses

Considering the previous research done about financial risk management and hedging, the authors have brought out all the necessary findings needed for the research. There is no single theory for the topic under research, therefore, the authors have decided to combine various theoretical findings, from both the literature review as well as external sources, such as textbooks etc. These link the motivations, practices, and various phenomena in the field of corporate financial hedging.

From the literature review it becomes clear that there is quite a lot written about financial risk management and hedging. However, to the authors' knowledge, there has not been any qualitative research done focusing on the reasoning behind the usage of financial instruments for hedging purposes in the Baltic region. The authors are not able to cover all the aspects of the gap, therefore leaving an opportunity for further research. It must be noted that that the results of this research are not to be used to make generalizations about risk management practices in Estonia or in the Baltics.

The authors formulate the following research question:

What are the reasons behind using/not using financial instruments to hedge financial risk among large Estonian companies?

In order to assist the process the authors have constructed various hypotheses that are derived from the literature review and/or other previously published research on the topic. These will help structure the analysis of interview responses, as well as form the theoretical aspect of the paper. To prove/disprove the hypotheses, the authors have constructed the questionnaire accordingly.

2.8. Hypotheses

H1: Financial managers are aware of the financial risks they are exposed to and know how to reduce these exposures.

The authors believe that financial competence plays a large role in the manager's decision to hedge. It has been found, that managers in different economies have different

perceptions of risk (Berkman, Bradbury and Magan, 1997). The authors assume that Estonian managers are financially competent at identifying risks and hedging possibilities.

H2: The more significant the exposure, the more likely the manager would hedge the financial risk.

As described in the theoretical framework, a hedging activity can only pay off if the additional income from the hedge exceeds the cost of it (Smith and Stulz, 1985). The authors expect that managers still only decide to hedge once the exposure exceeds a certain level from which the amount under risk is significant in the eyes of the manager.

H3: Large companies have a financial policy in place, that covers the treatment of specific financial risks.

In order for risk management to work soundly, the firm needs to treat its risks consistently. For example, Smith and Bahrman (1997) found that, without a consistent policy in place, there is risk of inappropriate use of derivatives by managers. Therefore the authors believe that such mismanagement can be avoided by a formal risk management policy.

H4: Financial managers are independent to make the decision to engage in hedging activities.

Previous studies have found a connection between financial management, agency cost and underinvestment. (DeMarzo and Duffie, 1995; Tufano, 1998). The authors also believe that this is the case in Estonia. The oversight of a manager's actions affects the chance of agency costs occurring i.e. if a manager has to report all decisions to a supervisor/board then he/she is less likely to make reckless decisions in order to enhance personal goals.

H5: The high cost of the hedging activity can cause the manager to decide against hedging the risk, despite the significance of the exposure.

Due to the small size of the Estonian market, the authors believe that the banks operating in the region offer hedging products at considerable mark-ups or spreads. In addition, the authors believe that due to the region's higher perceived risk and their smaller relative size, Estonian companies are not able to use the services offered by larger multinational banks.

3. Methodology

3.1. Data and description of a sample

To define the target group, the authors chose the largest companies in Estonia by revenue. The authors have chosen to interview only the largest companies for numerous reasons. Firstly, hedging activities often involve fixed costs, which means that companies with larger revenues and risks are more likely to use these products as they have nominally higher exposures (Smith and Stulz, 1985). In addition, the authors believe that as hedging activities require additional financial competence and input, larger companies are more likely to have such resources available. (Froot, Scharfstein and Stein, 1993).

The reasoning behind not choosing a specific sector/industry is the size of the Estonian market. As the Estonian market is relatively small, there are only a few large companies operating in each sector. The arising problem is that the sample would be very small. The latter also indicates that there is a considerable chance that not all companies will agree to the interview due to fearing that they may expose some of their competitive advantages to their competitors. Lastly, there is a chance that the managers do not have time or decline the interview for other reasons. With these reasons combined, the authors argue for the rationale of the choice of companies interviewed.

However, as the sample contains larger-than-average Estonian companies, the findings of this paper cannot be generally applied to the entire Estonian market. The reason being, that due to larger nominal revenues and overall resources, larger companies are more likely to have better financial competence in their management.

The authors will also conduct interviews with managers of banks, who are in charge of both corporate credit management and customer relationship management. The reasoning behind this is that banks have regular contact with a wide range of companies of different sectors, industries, sizes, debt levels and managements. The authors believe that the bank managers will be able to give feedback and comments on the results obtained from the interviews, as well as a general overview of the market and its tendencies. The authors, however, acknowledge that this is still only the opinion of a few professionals with expertise in the field.

The previously mentioned bank representatives interviewed are from SEB, Swedbank and Nordea bank. The representative from SEB bank is Ethel Soosalu, the head of Markets. The representative from Swedbank is Darius Gecevicus, the head of Markets. The representatives from Nordea Bank are Peter Treialt, the head of Corporate Banking and Gunnar Mäemets, head of Markets. While interviews with Peter Treialt and Ethel Soosalu were conducted face-to-face, Gunnar Mäemets and Darius Gecevicus responded to the interview questionnaire via email. The motivation for the chosen sample of bank representatives is the supervisor's recommendation as well as a lack of time and uncertainty of being able to confirm interviews with more banks.

Lastly, there is a reason why the authors have chosen Estonian companies to their sample. Akin and Kose (2008) found difference in hedging when it comes to emerging and developing markets. In addition to that Berkman, Bradbury, and Magan (1997) stated that companies in different economies perceive the risk differently. Due to time constraint and geographical difficulties, the authors have chosen only Estonian companies. The authors believe that the arguments presented give additional relevance of the chosen sample and research method.

In the table below, the authors have listed companies, which have already agreed to have an interview on this topic.

Company name	Main operating activity
Eesti Energia AS	Shale oil chemicals and electricity manufacturing
Elering AS	Electricity transmission system management
Tallinna Sadam AS	Port authority
Eesti Raudtee AS	Railway administration
Estonian Air AS	Air transport of passengers and goods
Viru Keemia Grupp AS	Shale oil and chemicals manufacturing
Alexela Group OÜ	Energy, metal works and property development
VOPAK E.O.S.	Operation of oil products terminals
Bominflot AS	Sales of fuel oil and bunkering of ships
Baltic Maritime Logistics Group AS	Maritime, rail and road transport
Liviko AS	Production of alcoholic beverages
M.V Wool AS	Fish production

Nordic Contractors AS	Construction and real estate development
Merko Ehitus AS	Construction and real estate development
U.S. Invest AS	Real estate investment and development

Table 2: List of companies interviewed. Made by the Authors.

3.2. Research design and method

The authors have decided to analyze companies by conducting mainly face-to-face interviews with financial managers or managers responsible for financial planning and management in the target companies, as well as bank managers. It must be noted that a few interviews were conducted via email. This drawback has been pointed out in the respective interviews. The interview process will consist of semi-structured questionnaires, which means that there will be specific questions regarding the firms' financial risk strategies and the motivations behind them as well as additional questions that come up during the interview. The questionnaire is based on both the research question, as well as the supporting hypotheses. The reasoning behind using a qualitative method of designing our research is the type of the research question and additional hypotheses. The authors aim to find out the reasoning behind the actions of companies' financial policy. As previously done literature indicates, most similar papers have used a survey method, where they are able to indicate the determinants of hedging and intuitively explain the reasoning behind them. The authors, however, are more interested in the reasoning side of the actions, not what instruments companies exactly use. Consequently, the authors will approach financial managers or managers responsible for financial planning, as the authors believe that they have the most competence in this area and would provide the most reliable information. The authors have decided to conduct face-to-face interviews because of the semi structured questionnaires, which imply that there is a considerable improvisation possibility when it comes to reasoning and getting all explanations for the actions regarding financial risk management. As it was previously mentioned that the questionnaire is semi-structured, it is also important to note that all questions there are open-ended. All interviews will be conducted in Estonia. This is because the authors believe that the answers provided by interviewees will have more quality when asked in their native language of Estonian, because not all interviewees can understand and/or express themselves fully in English.

There are also numerous shortcomings or biases that the authors are aware of and acknowledge when conducting interviews, and afterwards analyzing the results. First of all, one of the major problems with interviews is that there might be subjective experiences and opinions, therefore leaving authors with the interviewee's subjective view. In addition, there is a probability of fabrications, deceptions, exaggerations or distortions. The authors are planning to use a secondary source of data in the form of interviews with bank managers. Lastly, there may be a problem with mutual understanding of questions asked and answers given to these questions.

3.3. Case study description

Considering the topic of research, the authors believe that a case study format is necessary for describing and comparing various companies and their financial policy regarding hedging practices. For this purpose, the authors will use a case study method in order to structure the analysis of the results obtained from the interviews. The information obtained from each company will be presented in individual sections. Afterwards, the authors will analyze and present distinctive trends and practices among the sample, as well as feedback and comments from bank interviews. However, the analysis will be based on and confined to the sample and cannot be derived as general practices or trends in Estonia. In the section of data and description of the sample, the authors will cover the choice of companies and other data sources. In addition, it can be stated here that authors will use an embedded and multi case design of case study. The authors are using many companies in the sample and studying only a small part of each company, therefore, the choice of the case study design is such. A case study itself requires multiple sources of information; the authors fulfill this requirement in this paper. It must be noted that the final "mini-case studies" are based only on qualitative information.

The idea of having a case study strategy in the paper came from De Castro, Khavul and Bruton (2014). Their paper is not related to the topic but the idea of doing mini case studies can be applied to this paper as well. Furthermore, the authors gained more confidence in using case study as a strategy, as this method has been proven to be widely common and effective (Perren and Ram, 2004)

In order to use case study as a strategic tool for this paper's analysis part, the authors are constructing a case study protocol. The purpose of it is to clearly state the sequence of actions taken in order to conduct the research. Case study protocol also provides reliability of the

study, as it allows others to replicate it.

3.4. Financial Risks

Financial risk is the uncertainty caused by the means in which a company finances its operations or receives its revenues. In this paper the authors will focus on three types of financial risk, which can be subcategorized as market risks – interest rate risk, foreign exchange risk and commodity price risk (Dun & Bradstreet, 2015). The authors believe that these are the most common and widespread types of financial risk that can be relatively easily hedged.

A firm becomes exposed to foreign exchange risk when engaging in import or export operations in more than one currency that is not fixed in terms of the domestic currency. Thus there is the risk that one of the currencies can move in detriment for the company. This leads to the company either receiving less money for their exports or having to pay more of imported goods, in terms of their domestic currency.

The second risk that this paper examines, is interest rate risk. Interest rate risk can only affect a company that has taken on debt obligations. Interest rates are a key part of governments' monetary policy and are used to stimulate the economy in times of economic downturn by decreasing interest rates and to prevent the economy from overheating by increasing them (Reilly and Brown, 2010). A company is exposed to interest rate risk when it holds a loan with a floating interest rate on its balance sheet. In addition, the authors believe that the decision to hedge interest rates should not depend on the managers' opinion of current and future interest rate levels. This means that companies should not attempt to time the market for profit, but should instead hedge their risk exposure and operate in their main business segment.

The third and last financial risk that this paper will focus on is commodity risk. Commodities are raw materials that can be bought or sold without liquidity issues. If a firm's end product or raw materials are widely traded commodities, then they are exposed to the risk of the materials' price volatility. For example, a corn farmer's income depends hugely on the market price of corn during harvest season. In large markets companies are able to hedge this risk by locking in specific prices and quantities for a point in time in the future.

3.5. Financial hedging instruments

The two most basic types of derivatives are options and forwards. Options give the buyer a right, not obligation, to buy/sell a specific good for a specified price at a specified time. On the other hand a forward contract obligates the buyer to buy a specific amount of a specific good at a specific point in time for a specified price. The third commonly used derivative is a future, which is in essence a forward; the main difference is that futures are traded on secondary markets and involve standardized expiration dates, quantities and prices. Forwards, on the other hand, are tailor-made and traded over-the-counter (Reilly and Brown 2010). Derivatives are mainly used for hedging foreign exchange and commodity risk.

An interest rate swap is the most common way of hedging interest rate risk. It involves two parties switching future cash flows, resulting in one side switching from paying a fixed rate to paying a floating leg and vice versa. (Reilly and Brown 2010) In the case of Estonian loan obligations, the floating leg is the 6 or 12-month EURIBOR. In addition, the interest rate swap costs a fixed margin for the buyer.

4. Results

4.1. Fully- and partially state-owned companies

4.1.1 Eesti Energia AS

Eesti Energia AS is an Estonian national producer of electricity and shale oil. Eesti Energia can, in some ways, be considered the largest company in Estonia. For example, their total assets are almost 3 billion euros. The company operates in the Baltics and in other parts of the world, such as USA and Jordan. The interview was conducted with Kadri Haldre who is in charge of financial risk and liquidity management.

Eesti Energia's main business is mining of oil shale and production of electricity and shale oil products from it. As their business is the sale of both electricity and oil products at world market prices, they are exposed to the price fluctuations of these commodities. This gives them a considerable motivation to hedge the exposures of their revenue streams.

The main reason behind their hedging is to ensure the stability of revenues and profits. This allows them to meet target ratios set by debtors and to keep their credit ratings. By meeting these goals they are able to gather financing in order to invest into the new projects. In order to meet such internal and external demands they have a strict financial policy, which has been approved by the board of trustees. For example, 90% of their electricity production in 2015 has already been hedged. In different proportions these hedges extend as far as 3 years in the future. In terms of the oil, they hedge more when margins are high and vice versa. The risk manager was not able to give any certain proportion that they hedge as it can vary year-to-year.

Eesti Energia has a special risk management department (energy trading department) whose main duties are to carry out hedging trades. In order to conduct these trades efficiently Eesti Energia is a member of Nasdaq, which enables them to conduct electricity hedges. Furthermore, they have contracts with 20 different banks for trading instruments related to the oil.

Due to Eesti Energia's capital intensity, they use significant amounts of debt financing in the form of bank loans, as well as bonds, which all have long maturities. They have currently hedged around 99% of their loan portfolio.

Eesti Energia uses large amounts of oil shale to produce electricity, so they are exposed to a rather specific financial risk. A key cost input for them are carbon emission quotas, the price of which can also carry volatility. The Company buys these quotas upfront in order to avoid having to purchase them at spot prices.

They mainly use standardized forward contracts as well as swap agreements. In the risk manager's opinion options are too expensive and therefore they avoid using them regularly. She emphasized that even though they have the know-how within their company to use complicated option strategies, their main line of business is production, not trading. Hedging activities as active as this gives considerable responsibility to the traders making the hedges, however, the Company's financial policy sets the traders specific limits that they have to follow. The traders regularly report their activities but as long as they follow the company's financial policy they have a certain amount of freedom.

As the price of oil is denominated in US Dollars, Eesti Energia is also exposed to the movement of this currency. To hedge this risk they use forward agreements for oil, which are denominated in euros.

In general, due to Eesti Energia's state-owned ownership they take a conservative approach to financial risk management. In their hedging practices they try to keep processes as simple as possible while still minimizing risks at the same time.

4.1.2. Elering

Elering is an Estonian state-owned independent electricity system operator. Its main activity is to supply electricity to the consumers with the highest quality at all times. Their business is of a local character, thus factors affecting their financial risks arise from internal actions. The interview was conducted with Peep Soone, who is the CFO and a member of the board.

During the interview it became evident that Elering is opened to interest rate risk, commodity risk and somewhat to foreign exchange risk. The interest rate risk is the biggest of all three. Elering has hedged 50% of the loan portfolio, leaving the other half floating. As the owners and operators of infrastructure, their business is capital intensive. Thus, their liabilities are mostly long-term. From one perspective, Elering tries to diversify their financing by taking and paying back loans. When a loan is amortized and they decide to take another one, then

through the interest cycle they are left with a composition of all the interest rate levels. Another interesting aspect Mr Soone mentioned in the interview was that Elering a calculated regulatory EBIT. This is being regulated every year according to the interest rate level in the market. The logic behind it is that when interest rates are high then Elering pays higher interest but at the same time they can ask higher tariffs as well. The reason here is that one component of the tariff is regulatory EBIT, which affects the tariff that Elering can ask from customers.

Regarding Elering's main activity, which is the operation and maintenance of the electricity infrastructure, they need to buy electricity to compensate for network losses. In their commodity risk area the same rule applies as with interest rate risks – a regulatory hedge. When the price of electricity is high then the costs for Elering are higher, too, however, they can ask a higher tariff from the customers. Mr Soone stated that Elering would not gain practically anything if they were to use derivative instruments, hence they have decided to hedge naturally.

Most of Elering's business is in euros. There are, from time to time, some transactions in US dollars, but overall its share is insignificant in their total business. This is also the reason why Elering has not hedged the currency risk so far.

Elering has a definite financial risk management policy, which is approved by the management. The policy bounds risk management to a certain extent, but leaves enough flexibility at the same time, so that Elering can easily adjust to the market situation. Everyday decisions are made by Mr Soone solely and he is quite free in this process.

Mr Soone stated in the interview that if they did not hedge a risk by using financial instruments then it did not necessarily mean that they were ignoring it. The key aspect of Elering's assessment of financial risks is the identification of natural hedges. This rationale is the backbone of Elering's financial risk management.

4.1.3. Tallinna Sadam AS

Port of Tallinn is the largest port authority in the Baltic Sea. Its main activity is to provide port services, such as cargo and passenger traffic both on and off the ships. The company is state-owned and has restructured its business from a service port into a port of landlord type. In addition to the port in Tallinn, the company incorporates five other harbors

in Estonia. The interview with the representative of Port of Tallinn was the only one in the sample, that took place in the form of email conversation and not a personal meeting. The interview was conducted with the treasurer of Port of Tallinn, Marju Zirel. In addition to that, the authors also collected some information which has been used in this thesis from the company's annual reports.

The Company has mentioned foreign exchange risk in their yearly report even though the exposure is not significant. Proportionally the accruals in foreign currencies constituted 0,01% of all accruals. Most of Port of Tallinn's contracts are denominated in euros in order to minimize foreign exchange risk.

The company is prone to interest rate risk due to its large portion of loans in the balance sheet. Interest rate risk derives mainly from long-term loans. Temporary deposits are conducted with a fixed interest, thus, do not impose any risk. A part of the company's loans are with a floating interest rate risk, thus making them vulnerable to the fluctuation of interest rates. The company's aim is to keep half of the loan portfolio fixed. This is implemented by using swap instruments.

Port of Tallinn conducts a sensitivity analyses in order to evaluate the interest rate risks. In other words, they analyse the effect of interest rate movement to the company's net profit. As at 31.12.2013, a 1% change in interest rates would effect Port of Tallinn's net profit by roughly 640,000 euros.

Since Port of Tallinn is a state-owned company the fundamental principles are rather conservative and accrue from optimizing risks. Consequently, the policy regarding risk management is strict and has definite limitations. The latter refers to the principle that 50% of the loan portfolio has to be fixed.

All matters concerning interest rate risks and hedging them with various instruments, has shown that Port of Tallinn is capable of taking care of risk management according to their needs. When asked whether they are competent enough in dealing with financial risks, the answer was that according to questionnaires conducted by banks, Port of Tallinn has been categorized as a competent client in terms of financial instruments.

4.1.4. Eesti Raudtee AS

Eesti Raudtee is the Estonian national railway infrastructure operator and developer. The company's main responsibilities are the maintenance and development of the railways in Estonia. The interview was conducted with the CFO, Toomas Virro.

The main foreign currencies that the company deals in are the Russian Rouble and US Dollar. However, the company avoids exposure to the fluctuations of these currencies by denominating the contractual amounts in Euros.

As the company also owns the railway itself, they incorporate debt to finance the construction of the railroads. This makes them exposed to interest rate risk. However, Mr Virro admitted that the company's debt level is low (ca 45 mio of liabilities vs. ca 320mio of assets) and a proportion of the debt is due as a bullet payment next year. However, until the end of 2014 they had fixed 50% of their interest rate exposure. There is currently no certain decision regarding hedging or not hedging the risk. The CFO noted that the reason why they hedged their risk in the first place was not that the exposure was considerable but in order to secure future cash flows. He added that they were still in the process of deciding whether to hedge their remaining debt amounts or not, arguing that even though interest rates were low, interest rate swaps had become considerably more expensive.

As the company does not have a written official financial policy, the topic of risk management is discussed in the committee of risk and internal audit. This committee meets 8-10 times a year but financial risks are only discussed a few times per year due to the small exposures. In addition, the company has set definite limits regarding decision-making authority – amounts up to 400thousand euros can be decided by the executive board, larger amounts need the approval of the board of shareholders. Regarding the know-how of financial instruments the CFO said that the company is able to define its needs but consults the banks regarding the implementation.

The CFO stated that the company's financial risks are relatively simple which allows them to make rather straightforward hedging decisions.

4.1.5. Estonian Air AS

Estonian Air is an Estonian aviation company partially owned by the Estonian government and SAS Group. They provide passenger transport on regular international

flights, charter flights and cargo. Estonian Air fleet consists of 7 aircrafts. The interview was conducted with Indrek Randveer, the COO of Estonian Air.

The company is mainly exposed to two risks: insurance of aircrafts and passengers, and fuel. The latter constitutes a large part of their expenses – 30% of their total expenses are fuel. Today they have profited from the oil prices since Estonian Air had not taken any steps to hedge their fuel prices. This has been their strategy since the establishment of the company. In order to compensate the higher oil price Estonian Air raises its ticket prices when necessary.

By nature, Estonian Air is a service company and its key priority is the safety of their passengers. Therefore, they dedicate a considerable amount of effort and time to insure their aircrafts and passengers from potential risks. The reason being that when an airplane is not flying, they still need to cover its maintenance expenses as well as lease payments.

As it was mentioned earlier, Estonian Air has 7 aircrafts, which have all been leased. This makes Estonian Air exposed to the fluctuations of interest rates. However, they have decided not to hedge this risk.

There are many reasons that explain why Estonian Air does not hedge their exposures to interest rates and fuel prices. The manager said that as the movements of interest rates have not been large, the financial effects have not been considerable either. Furthermore, the manager admitted that they have chosen not to use financial instruments for risk management. He admitted that it also takes a lot of time and effort to manage financial risks. Especially when the Company does not currently have a full-time CFO present. Above all Estonian Air prioritizes the insurance of their airplanes and passengers.

The company regularly holds board meetings, but financial risk topics are not covered in every meeting. The decision process is usually quite fast and management is mostly responsible for financial risk decisions.

Due to their financial risk management Estonian Air enjoys optimal financial inputs of its operations. According to Mr Randveer, the company has just been lucky. He also mentioned that if there were a need for hedging in the future, then the primary reason behind it would be the volatility of the risks, rather than the significance of the loss.

4.2. Privately owned companies

4.2.1. Viru Keemia Grupp AS

Viru Keemia Grupp AS (VKG) is Estonia's largest manufacturer of shale oil and chemicals, with 2,4 million tons of oil shale and 365 tons of crude oil processing capacity. VKG's value chain starts from the extraction of oil shale to the sale of fine chemicals. VKG has a total of four shale oil production plants, two of which are newer and more efficient and one additional plant is under completion. All together they provide jobs to over 2300 people. The interview was conducted with Margus Kangro, a co-founder and active shareholder.

Most of VKG-s revenues come from the sales of shale oil products. As these products are denominated in US Dollars, they are exposed to the fluctuations of this currency. Furthermore, as the prices of shale oil products are highly sensitive to the world price of oil, VKG's revenues are exposed to this commodity's risk as well. As VKG operates in a highly capital intensive sector, they incorporate large amounts of debt financing into their operations. As a result of all these aspects VKG carries a significant interest rate risk.

VKG does not have an official financial or risk management policy and started actively focusing on risk management in 2002. The reason being this has been that when VKG started using more debt financing then it was a result of risk management covenants set by the banks. For example, VKG needs to have a certain part of their shale oil production hedged 15-months up front. However, they have a contractual right to hedge less if they have sufficient liquid assets to cover the margin requirement. Due to the fact that these covenants seem strict to the company, these covenants have become the benchmarks for their risk management. The interviewee stated that he would prefer not to hedge any commodity risk because a company should be able to sustainably operate at market prices at all times.

Historically the company has hedged their commodity risk by simultaneously buying put options and selling call options, however, as oil prices are so low they have opted for swaps. In addition to that, VKG differentiates its hedged amounts by factories. They have currently hedged the production of their newer, more efficient factories while increasing/decreasing production capacities depending on the current market prices. As a result of falling oil prices, VKG recently had to shut down both of their older, less efficient shale oil factories.

Due to the construction of three new production facilities, VKG has a significant amount of

long-term debt. They have decided not to hedge their interest rate risk, arguing that there is a natural hedge. Meaning that when interest rates are high, the oil prices are also high which allow them to service their debts. The manager noted that regarding debt, liquidity also plays an important role, as they have to repay 35mio euros in 2015 and 50mio euros in 2016.

Even though VKG has a CFO, the company also incorporates the interviewee into the hedging decisions as he has 11-years of work experience in the banking sector. Over time the decision process has been established so that Mr Kangro makes the final decision. Arguing that sometimes situations require fast reaction and cannot falter behind bureaucracy. He also claimed that their hedging decisions are sometimes of emotional and opportunistic character. Due to their relatively small size in terms of the world's oil producers, they are not able to open limits in worldwide banks. They are currently using the services of the locally operating Nordic banks and can see the significant margins and spreads being incorporated into their hedging instruments. In the long term, VKG would like to be able to have no obligations to hedge positions by ensuring low breakeven prices.

4.2.2. Alexela Group OÜ

Alexela Group OÜ is an Estonian industrial group with a wide range of activities. Starting from the production of car trailers, operation of both light- and dark oil terminals, mining and production of oil shale products and ending with real estate development. The interview was conducted with Andreas Laane, the CEO of Alexela Group AS.

In order to finance their expansion through acquisitions and investments Alexela currently has one outstanding syndicate loan with a long maturity. They have not hedged the interest risk of this loan because they plan on renegotiating and restructuring their loan agreements in 2 years. Furthermore, the manager pointed out that currently the price difference between the spot rate and the swap rate is enormous and admitted that he does not see interest rates rising in the medium term. In addition to that, the CEO believes that when interest rates rise then the economy will also be doing better, resulting in better business performance for the group. In other words, they see a natural hedge in their operations. However, if interests were higher then they would definitely hedge a certain proportion for security.

Although most of Alexela's dealings are in euros, to some extent they are exposed to the currency risk of the US Dollar as well as the Swedish Krona and Norwegian Krona. The most significant exposure among these is the US dollar, as Alexela sells oil products at world

market prices, which are quoted in US dollars. As another part of the group buys various gas components in US dollars, they have the opportunity to hedge the currency risk by matching cash flows, however, this is currently not the case. Alexela does not hedge their currency risk, having the argument that they have seen and still see a positive trend for the currency.

Due to the fact that a majority of Alexela's operations are conducted in the energy sector, they are exposed to several commodity price fluctuations. Currently Alexela has hedged around 60% of their oil production to ensure some stability in the extremely volatile market. They have made it with the help of forward agreements with banks. Furthermore, as these forward agreements are denominated in euros, they are simultaneously hedging parts of their currency risk as well. In addition to that, Alexela produces and sells electricity which they hedge to certain amounts. The main reason for this is that they offer a fixed price to their customers, so it makes sense for them to lock the prices of their inputs. Alexela also operates a chain of gas stations. However, they do not hedge their exposure to gasoline prices as the entire market is floating, making it riskier to hedge.

Alexela has a financial policy, which also covers risk management, however, it does not cover the specific management of financial risks. The executive board regularly meets and discusses the current situation regarding various topics, including financial risks. For example, they can set a target to hedge half of their shale oil production. Due to the loose financial risk management policy they are flexible to quickly adapt to new situations.

The CEO said that the main reason Alexela is hedging their exposures to some extent is pressure from the banks. If it were up to the management then they would hedge minimum amounts because according to their experience, hedging does not yield positive results. In terms of financial competence, the CEO of the group is the former head of Nordea Bank Estonia and the CFO has worked at the French bank Société Générale, dealing with forex and commodity risk. In his opinion hedging only pays off when prices are high, to ensure stable large profits. Furthermore, the CEO's vision is that hedging only pays off if you know all the inputs and outputs of the business. However, if you lock only one of the variables then you are limiting your own opportunities.

4.2.3. VOPAK E.O.S. AS

Vopak E.O.S. is the largest independent oil products terminal operator in the Baltics. The company operates four modern terminals, which provide a total storage capacity of over 1

million cubic meters. The interview was made with Aleksandr Snatkin, the CFO of Vopak E.O.S..

As Vopak EOS provides storage and handling service in the oil value chain, they are only directly exposed to the price of oil through their railway transportation segment, where it is used as fuel. However, the price of oil plays a large role in their revenues indirectly. Mr Snatkin identified two key aspects to this indirect exposure. Firstly, when oil prices are high then the market is more active and there are more customers. Secondly, when oil prices are suffering fast drops, Vopak's credit risk increases as customers may become insolvent. This, however, is a risk that cannot be hedged using financial instruments.

However, as a part of Vopak's revenues are in US dollars, they are exposed to its fluctuations relative to the euro. Vopak did not identify this as a significant risk, arguing that their cash inflows have always considerably exceeded outflows and that the potential gain from hedging the foreign exchange risk is miniscule. Furthermore, the company's liabilities and expenses are in Euros, meaning that matching foreign currency cash flows as a hedge is not possible.

Regarding liabilities, Vopak uses bank financing for larger projects, these usually involve long debt maturities. This leaves Vopak exposed to the interest rate risk. However, they claim that this risk constitutes such a small proportion of their total expenses that they do not consider the risk nor the potential gain from hedging significant. The representative also said that speculating with interest rates was not their main activity. Furthermore, Mr Snatkin said that hedging for the purpose of financial planning is not very beneficial either as the expense is insignificant in their eyes.

Vopak EOS has a formal financial policy, which is not a strict guideline but more of an overview of the risks that Vopak is exposed to and their significance. This policy has been created in cooperation with Price Waterhouse Coopers and is updated annually. In addition, the company conducts stress tests and other scenario type analyses when forecasting their financial results. The manager said that risk management is a topic which concerned the management and, if necessary, required the approval of the shareholders or executive board.

The manager stated that they had never used any complicated instruments, one of the reasons being that they did not have the know-how within the company and there was no direct need for it in their opinion. However, the company regularly consults with banks about various potential financial products regarding hedging and risk management.

4.2.4. Bominflot AS

Bominflot is a supplier of bunker fuels and lubricants. As a subsidiary of Bomin Bunker Holding GmbH, they are part of a worldwide group. Their aim is to purvey oil with the lowest cost possible. Due to the fact that in the sequence of transporting oil, Bominflot takes ownership of the product themselves, therefore, they take upon some risks. Bominflot does not speculate with the oil, simply sells its logistics. The interview was conducted with Aleksandr Golubev, the Chief Commercial Officer.

Bominflot's main business activity is in US dollars, however, their books are in euros. Due to the deals they have in US dollars, Bominflot is exposed to foreign exchange movements. When they buy in US dollars then they simultaneously hedge the risk by using forward contracts.

Since Bominflot is a subsidiary of the group then they have little, if at all, power, to take action in various areas. For example, the company has liabilities but these belong actually to the mother company. In addition, they do not hedge interest rate risk, because in their words interest rate movements are slow and small, thus not affecting their business significantly.

Oil logistics constitutes the majority part of their business operations, consequently they are exposed to oil price movements. Bominflot, however, has insured 100% of their storage, meaning that if they buy oil physically then they sell futures and vice versa. Such action is also clearly stated in their financial policy and speculation in this case has never been taken under consideration. Their core idea is to use all the necessary hedging instruments in order not to profit from them, but not to lose money.

When it comes to making hedging decisions and figuring out what kind of hedge to use, then it is being done on the spot. In addition, they do not need to bring in external advisors on these matters, because they have know-how in house.

Bominflot makes their hedging decisions by following their rather strict hedging policy. As they have a well-defined risk management policy and guideline they also have the financial

competence within the company. However, when there is a situation that is not stated in the policy then the policy still states clearly who needs to be notified and included in the process in this case.

4.2.5. Baltic Maritime Logistics Group AS

Baltic Maritime Logistics Group (BMLG) is an Estonian logistics firm offering different types of maritime, rail and road transport services. The company operates in 6 member states of the European Union, as well as Russia, Kazakhstan and Belarus. The interview was conducted with Ants Ratas, member of the board.

As transport with trains, ships and trucks is a capital-intensive business, BMLG incorporates debt to finance purchasing of new vessels and trucks as well as the building of warehouses and other buildings. This leaves them exposed to interest rates. BMLG does not hedge their interest exposure, arguing that banks have constantly told them that interest rates have reached their “bottom” while in reality they have fallen further. In addition, BMLG values the freedom of being able to pay back liabilities ahead of schedule, which the interest rate swap would restrict since they would have to pay for the swap price difference as a lump sum, if interest rates have fallen further. They have always negotiated with banks to have this sort of early repayment clause in their loan contracts.

A key cost in BMLG’s operations, especially vessels, is fuel, which constitutes around 25% of a ship’s total costs. To hedge their exposure to oil prices they always index the prices of their services with regards to the price of fuel. Meaning that if the price of fuel increases by 2% then the price of their service also increases by the same amount. The same indexation, however, does not apply in the case of fuel prices falling.

In addition, BMLG has dealings in US Dollars and tries to hedge their exposure to the currency by matching cash inflows and outflows. However, if they are not able to completely hedge the underlying risk and the currency moves against them, then this means a small decrease in their profit margin, which is not a significant amount in their eyes.

Mr Ratas said that the transportation market itself is far more volatile than their financial risks and that this is a risk they cannot limit their exposure to. Mr Ratas said that this is a risk they have to live with and that if they suffer, then so is everyone else in the industry. Mr Ratas also stated that as a large part of the goods they transport are connected to the price of oil (pellets, oil shale, chemicals etc.), then falling oil prices can result in unpaid invoices.

Thus arguing that a slow and steady market is much better to operate in than one that rises and falls constantly.

4.2.6. Liviko AS

Liviko is an Estonian alcohol producer that was established in 1898. Producing more than 70 brands of alcoholic beverages, Liviko operates in more than 20 export markets. In addition, Liviko represents more than 600 imported drink brands in Estonia. The following interview was conducted with Gea Reimann, the CFO of Liviko AS.

As a raw input to its products Liviko regularly purchases ethanol from the Americas. Due to the contracts being in US Dollars, Liviko has a considerable exposure to the movement of the EUR/USD currency pair. To reduce their forex risk Liviko actively hedges their exposure through currency options and swaps. The basic principles of their hedging are defined in the company's financial policy. Liviko's financial policy is rather flexible and the manager can go against the policy with the confirmation of the executive board. Every year the board analyses the upcoming financial year and sets certain targets regarding risk management.

Today a distinctive criteria to Liviko's hedging is that they do not pay option premiums. To avoid this they both buy and sell options simultaneously. The buying and selling of options is done by the CFO herself, however, they regularly consult with banks regarding various ways of hedging their forex exposures.

To finance their operations Liviko uses both short and long term credit lines. Currently Liviko does not hedge any of their interest rate risk. The reason being that the interest rate swap has always been costly in their eyes. However, in the current near-zero interest rate climate Liviko has started considering hedging their long-term loans.

4.2.7. M.V. Wool AS

M. V. Wool is an Estonian family-owned fish production company, founded in 1988. The company was nominated as "family-company of the year 2013" by Forbes Magazine Estonia. The interview was conducted with Mati Vetevool, the founder and active shareholder.

According to the owner, M.V. Wool operates in a very segmented market, meaning that each company has a well-defined area of expertise and products.

As M.V. Wool imports most of their raw fish from Norway, they have exposures to the Norwegian Krone. They hedge this risk in two ways. Firstly, they try to match cash flows of payments and revenues. In addition, when they import their goods to Sweden they denominate the contracts in Norwegian Krone. In case they are under- or over hedged by a significant amount they make forward agreements with banks.

The company is by nature conservative when it comes to leverage. Their view is that debt has to be paid back as soon as possible. The company once had debt when they were building a factory, however, the debt was paid back in two and a half years even though the loan schedule was five years.

In order to ensure that they receive money from the customer, they have used factoring, which is a “purchase-of-receivables” service offered by banks. All invoices from abroad have been fully factored, thus M.V. Wool carries zero credit risk in their imports.

When it comes to making decisions then all family members, who are actively working in the company, have a say and decisions are made collectively. Even though, Mr Vetevool himself is in charge, but he really respects his family members’ views and arguments for and against decisions.

4.2.8. Nordic Contractors AS

Nordic Contractors AS is an Estonian holding company that operates in the construction and real estate sector. The most important companies in the Nordic Contractors group are Nordecon AS, a public construction company and Arealis AS, a real estate developer. The interview was conducted with Andri Hõbemägi, the chairman of the supervisory board.

Through its construction activities Nordic Contractors has exposure to only one commodity, which is bitumen. This oil product is a key component in road construction and its price is always contractually hedged.

In addition, Nordic Contractors owns numerous office buildings. Currently they have only hedged half of the interest exposure of one building – the Nordea Bank building in Tallinn. This hedge was a requirement by Nordea Bank – the financier of the construction. This hedge will expire this year and it is highly unlikely that it will pay off since it was made during considerably higher interest rates. In general they have not hedged their exposures because

they see the swap rate being too high, with respect to the spot rate. However, with the current near-zero interest rates they are considering hedging more of their exposures. This is being done for both the low interest expenses, as well as surety in the future.

Due to the fall of the Ukrainian hryvnia, Nordic Contractors faced a 1,2 million euro loss from discounting claims. This, however, is currently an unrealized loss so if the currency returns to its previous levels the company's loss would disappear. When asked about whether it was possible to hedge this exposure Mr Hõbemägi said that they have not looked into how they could have protected themselves from it. While as a public company Nordecon AS has a financial policy that transfers the responsibility of financial risk management to the board. Arealis, however, does not have a financial policy that covers the treatment of financial risks.

In terms of financial competence and know-how Mr Hõbemägi said that they understand what they want and cooperate with banks to find solutions. Mr Hõbemägi admitted that, in his opinion, only a few banks actively promote such products.

4.2.9. Merko Ehitus AS

AS Merko Ehitus is an Estonian public construction company which provides both professional project solutions and develops real estate. Merko Ehitus is listed on the Tallinn Nasdaq exchange under the ticker symbol MRK1T. The interview was made with Signe Kukin, the CFO of Merko Ehitus.

As Merko's main business activity, construction, is a local business, they mainly operate in the Baltic States and are not exposed to considerable foreign exchange risks. However, Merko has a few suppliers outside the Eurozone, but in the eyes of the management these deals are not significant in size.

The only financial risk that Merko carries is interest rate risk. However, due to the short duration of most construction projects the loan schedules are usually under 24 months. As a result of this Merko does not hedge their interest rate risks. Even though they have various overdraft and other credit lines open, Merko does not use these facilities due to their strong existing balance sheet and liquidity. Merko does, however, use both factoring and supply chain management products, provided by banks. As these interest-bearing liabilities, however, are short-term, Merko does not hedge the interest rate risks resulting from them.

As a public company Merko has a clearly structured chain of command and decision powers.

The manager added that she is competent in the use of financial instruments but due to the small size of Merko's financial risks they do not use hedging instruments. Merko's financial policy also says that their financial department is in charge of dealing with financial risks, however, that they are currently insignificant in terms of their balance sheet.

4.2.10. US Invest AS

US Invest is an Estonian private equity investment company, specializing in, but not limited, to real estate. With an investment portfolio of around 170 million euros the company is a major or sole shareholder in more than 60 companies with over 5000 employees. Their investments are made in the Baltics, Russia and Ukraine. The company has one majority owner Urmas Sõõrumaa. The interview was conducted with Martin Ühtegi, the CEO of US Invest.

Even though US Invest has investments and dealings in Ukraine and Russia, today their currency risk from there is minimal due to contracts being pre-emptively made in euros.

As US Invest mainly invests into a relatively safe asset class of real estate, they incorporate considerable amounts of bank financing in each investment. US Invest assesses the feasibility of hedging interest rate risk with a case-by-case approach, thus there is no strict financial policy. The company mainly invests into cash flow generating real estate projects, which they divide into two different categories and hedging practices.

Firstly, if the project only has one source of income as the tenant and the contract is binding and cannot be terminated, then it would make sense to hedge the interest rate. The reason being that in this case they can relatively accurately predict the income and thus locking in the cost will allow forecasting the entire project's stable cash flow. On the other hand, if a project has a large number of short-term contracts, all expiring at different times then they believe it is not optimal to hedge the interest rate risk. Due to the short-term nature of the rental contracts, the rental income will follow economic cycles. In this case a natural hedge appears, as interest levels are usually high during an economic boom and vice versa. Meaning that interest rates will be strongly correlated to the rental income generated by the project.

In addition to the rental income dynamics, US Invest assesses the interest rate expense and liquidity as a component of expenses. By assessing liquidity they determine the opportunity cost of entering the interest rate swap agreement, as it requires a one-time payment.

Consequently, if the bank does not require the interest rate to be hedged then they prefer to use this money in other projects. Another argument against hedging is its binding property. For example, if a loan contract is cancelled then the swap still remains, which requires a one-off settlement of the price difference.

All in all, US Invest does not follow a specific financial policy but has, instead, opted for a case-by-case approach. So far they have not financially benefited from any interest rate swap.

5. Discussion of results

The following table below illustrates how each company corresponded with the hypotheses presented by the authors. The table presents a brief overview, however, the specific results and identified trends/outliers will be discussed in the following part. Firstly, the specific hypotheses presented in the previous part of the thesis will be addressed, afterwards the answers to the research question will be proven on a company-specific basis. Lastly, the authors will present notable findings, combined with the views of bank representatives. A more detailed case of each company is discussed in the Results part of the paper.

	H1	H2	H3	H4	H5
Eesti Energia AS	TRUE	TRUE	TRUE	FALSE	TRUE
Elering AS	TRUE	TRUE	TRUE	TRUE	TRUE
Tallinna Sadam AS	TRUE	TRUE	TRUE	FALSE	FALSE
Eesti Raudtee AS	TRUE	TRUE	FALSE	TRUE	TRUE
Estonian Air AS	TRUE	TRUE	FALSE	TRUE	N/A
Viru Keemia Grupp AS	TRUE	TRUE	FALSE	TRUE	TRUE
Alexela Group AS	TRUE	TRUE	FALSE	TRUE	TRUE
VOPAK E.O.S.	TRUE	TRUE	FALSE	TRUE	TRUE
Bominflot AS	TRUE	TRUE	TRUE	FALSE	FALSE
Baltic Maritime Logistics Group AS	TRUE	TRUE	FALSE	TRUE	TRUE
Liviko AS	TRUE	TRUE	TRUE	TRUE	TRUE
M.V. Wool AS	TRUE	TRUE	FALSE	TRUE	TRUE
Nordic Contractors AS	TRUE	TRUE	Both	TRUE	TRUE
Merko Ehitus AS	TRUE	TRUE	TRUE	TRUE	N/A
U.S. Invest	TRUE	TRUE	FALSE	TRUE	TRUE

Table 3: Overview of the company-specific hypothesis. Made by the Authors.

H1: Financial managers are aware of the financial risks they are exposed to and know how to reduce these exposures.

All companies in the sample were aware of the financial risks they are exposed to and how to hedge these risks. A minor exception was in the case of Nordic Contractors AS, who had identified their financial risks, however, recently suffered a 1,2 million euro loss from the fall of the Ukrainian hryvnia. The company had not looked into the possibility of hedging this position, as it was a claim that was denominated in the Ukrainian currency.

H2: The more significant the exposure, the more likely the manager would hedge the financial risk. □

All companies in the sample agreed that in most cases the more significant a risk, the more likely they are to hedge this risk. The significance, however, derives from a rather subjective

benchmark in the manager's view. Key aspects, on which this benchmark depends on, are: the size of the exposure, both nominally and as a percentage of revenues, liabilities or costs. However, this benchmark also depends on the overall volatility of the risk.

H3: Large companies have a financial policy in place that covers the treatment of specific financial risks.

The hypothesis that received the least confirmation was that regarding the presence of a financial policy that covers the treatment of financial risks. Eight companies out of fifteen did not have a formal financial policy, which also covers the financial risks. These companies either do not have significant financial risks in their eyes or simply make decisions based on the current situation. It must be also noted that Nordic Contractors AS is the holding company of two companies, one of which had an aforementioned policy and the other one did not.

H4: Financial managers are independent to make the decision to engage in hedging activities. □

The managers of most companies were relatively independent to make hedging decisions. There is, however, a direct link to the existence of a financial policy and its coverage of the treatment of financial risks. Eesti Energia, for example, has a detailed risk management policy and guideline, which sets various benchmarks and boundaries to the managers, reducing room for managerial opportunism. Even more, due to the relatively large size of the company, Eesti Energia has a special risk management department. An opposite example is U.S. Invest, which treats its financial risks on a case-by-case basis without any clear financial policy.

H5: The high cost of the hedging activity can cause the manager to decide against hedging the risk, despite the significance of the exposure. □

A majority of the companies in our sample (eleven out of fifteen) agreed that the cost of hedging plays a role in the hedging decision. Alexela, for example, brought this out as one of the reasons why they have not currently hedged their interest rate risk and also plan not doing this in the near future. In the case of Estonian Air it is not possible to prove or deny this hypothesis, as they do not hedge any risks using financial instruments and the main reason was the lack of resources within the company. In the case of Merko Ehitus the interview did not provide any evidence for this hypothesis, as they do not have any significant financial risks. Bominflot and Tallinna Sadam both stated that they hedge financial risks to be conservative, despite its cost.

RQ: What are the reasons behind using/not using financial instruments to hedge financial risk among large Estonian companies?

Eesti Energia AS

The main rationale behind Eesti Energia's hedging practices is to secure the stability of revenues and profits. Through their active hedging practices they are able to meet their target ratios and gather financing.

Elering AS

Due to their nominally large loan portfolio and long debt schedules, Elering hedges half of their interest rate exposure. A key part of Elering's financial risk management is the identification of natural hedges. As Elering is an infrastructure operator and a monopoly, if their expenses were to exceed revenues then they would simply request for permission to apply higher fees.

Tallinna Sadam AS

Tallinna Sadam hedges their financial risks because of their state-owned nature, which results in conservativeness. In addition, they are consistent in their hedging practices and hedge despite its profitability.

Eesti Raudtee AS

As Eesti Raudtee does not have a written financial policy, which covers the treatment of financial risks, they analyse the necessity of hedging on a case-by-case basis. Furthermore, they mainly carry interest rate risk, which they hedge for certainty of future cash flows and financial planning.

Estonian Air AS

Estonian Air also does not have a written financial policy, while also lacking the resources to use financial instruments for hedging. This leads to no hedging with financial instruments within the company.

Viru Keemia Grupp AS

VKG makes hedging decisions on a case-by-case basis, lacking a consistent pattern of hedging practices. Overall, they are less risk averse in their hedging decisions and most of the hedges that they do make are requirements set by debtors. In addition, they noted that hedging oil products through banks operating in the region is expensive in their eyes.

Alexela Group OÜ

As Alexela has various financial risks they have a different approach to each one. They do not hedge the price of oil in their retail sales segment since the revenues are always at market prices and margins are very tight. They hedge parts of their electricity production due to the fact that the end product offered to the customer is also at a fixed rate. In addition, they hedge parts of their shale oil production for security and in order to reduce risks. They have not currently hedged the interest rate risk due to their plan to renegotiate their loan contract in the near future. However, they also do not plan on hedging the proceeding exposure due to their vision of continuously low interest rates and the significant cost of the hedging activity.

VOPAK E.O.S AS

Vopak does not hedge their financial risks because they are insignificant in their eyes.

Bominflot AS

Bominflot has a straightforward guideline for hedging risks. They hedge 100% of their oil exposure because they are the middlemen, not the producer of their products.

Baltic Maritime Logistics Group AS

BMLG lacks a consistent policy for financial risks. They do not hedge their interest rates because they do not believe the banks when the latter say that interest rates cannot go any lower. In addition, they hedge their foreign exchange risk by matching cash flows, thus there is no need for financial instruments. In general, their vision is to sustainably operate at market prices.

Liviko AS

Liviko does not hedge their interest rate exposure because they find it costly. However, they actively hedge their foreign exchange risk due to its significance.

M.V. Wool AS

M.V. Wool hedges their foreign exchange risk because they are conservative in nature. They hedge this partially through factoring and partially through forward contracts. Furthermore, they carry a principle to hold a minimal amount of debt in the company and when taking loans, they hedge the interest rate.

Nordic Contractors AS

Nordic Contractors has hedged a small amount of their loan portfolio (half of the loan of one office building) because it was a requirement set by the bank. They have not hedged more because they have always seen the swap rate as too high, relative to the spot rate.

Merko Ehitus AS

Merko does not hedge any of their risks due to them being insignificant.

U.S. Invest AS

U.S. Invest hedges their interest rate risk on a case-by-case basis. They mostly try to hedge the risk of a project which revenues are also easily forecastable. Furthermore, they consider liquidity as an important factor of the hedging activity, meaning that by hedging a risk they are also reducing their liquidity because the hedged instrument needs to be secured by an asset.

6. Notable findings

The following is a description of the interesting trends and observations that have been identified by the authors during interviews with the companies. In order to evaluate the findings, the authors have asked for comments/opinions from the counterparties of the hedging activity – the bank representatives.

As discovered from the interviews and the hypothesis that received the least confirmation, most companies in the sample do not have a written financial policy that also covers the treatment of financial risks. This is also the biggest divergence of the opinions between the companies and the banks. The banks, in general, strongly agreed that a larger company should have such a policy in a written form however, that the policy needs to be regularly reviewed. The exception was Swedbank, where Mr Gecevicus argued that it depends on each company's size and complexity and that in general the existence of such policy usually results in lower financing costs for the company. Mr Treialt, from Nordea bank commented that taking an ad-hoc approach to such a topic always results in making emotional and subjective decisions, which usually end up being the wrong ones. He added that having a written policy of not hedging is also a policy, it simply needs to be thought through and well argued. As a large part of the companies in the sample of this study had active majority shareholders, another bonus of such policy is that it reduces the manager's fear of making such decision. If the hedge turns out to be unprofitable, then the manager was simply following the policy and cannot be blamed for this action.

However, when asked about the significance of the exposure and whether it should be hedged, all companies unanimously agreed. The same opinion was shared by the banks, which added that it is still a subjective topic as significance can be evaluated very differently. In addition, the nature of the risk can influence the decision. For example, Mr Mäemets said that foreign exchange risk can even be hedged in terms of single invoices, whereas raw materials, such as steel, can be considerably more difficult, if not impossible, to hedge. Mrs Soosalu's opinion was that in order to reduce the vulnerability to this sort of subjectivity, a company should also cover key benchmarks in their financial policy. Mr Gecevicus stated, however, that a company's hedging strategy, meaning the products used, should still remain flexible and under constant supervision.

Another interesting case, discovered by the authors, was the unpopularity of options among the three large shale oil producing companies – VKG, Alexela and Eesti Energia. The reason

was that they are too expensive as well as having a speculative nature. At the same time, the authors believe, which makes this case even more interesting, that due to their size and risk exposures, these companies can be considered to have the most financial competence within the company. The banks had various explanations to these opinions that share a common trend. Firstly, Mr Mäemets commented that virtual trading platforms have created false illusions of prices, as the products used by these companies are over-the-counter tailor-made products. In Mr Mäemets' eyes, it is also very difficult in Estonia to get rid of the public opinion of the options as a speculative instrument, which they are definitely not, if used for hedging purposes.

When asked about financial competence, Mrs Soosalu said that a company's main purpose is not to know everything about various financial instruments and their usage. This is where the bank can contribute through know-how and propose various solutions to each company's case. She added, however, that a company should not have subjective opinions of various instruments. All other bank representatives shared this opinion. For example, due to the downward trend of interest rates, during the past 8 years practically all interest rate swaps have made a loss for the buyer. This has caused companies to form a reluctance to hedging interest rates, which is based on a rather short-term personal experience. All bank representatives stated that due to human nature, companies can have a relatively short memory when it comes to this topic. Even more, Mr Mäemets added that usually companies are interested in hedging once the market has already moved considerably against them. This is again an issue that can be avoided, if covered in the company's financial policy.

Due to the fact that many companies in the sample did not have a detailed financial policy, several companies had also experienced a case where the bank had included hedging requirements in the loan terms.

7. Conclusion

As previously mentioned, risk management is a wide topic with various approaches to conducting research. Even with the company-specific approach used in this paper we can, in short, say that there are several issues where companies and banks both share the same opinion, however, there are still numerous divergences. When looking at the hypotheses presented in the paper then most of the hypotheses found strong confirmation or rejection. The rejected hypotheses usually found strong approval by the banks. For example, most companies in the sample did not have a written financial policy that covers the treatment of financial risks, while banks found that companies should have the aforementioned written policy. In other words, most of the hypotheses were presented rather straightforwardly. However, there are still issues where there were differences among the companies, not to mention the banks that argued unanimously against the specific statements.

The authors presented five hypotheses in the paper in order to explain the rationale behind hedging/not hedging financial risks among the large Estonian companies. Within the sample, valuable information as well as interesting knowledge has been gathered regarding the risk management field as a whole.

The first two hypotheses found strong confirmation among the companies. Firstly, all the companies were aware of the financial risks they were exposed to and how to theoretically hedge them. Secondly, all the companies agreed that the more significant a financial risk, the more likely they were to hedge this risk.

When asked about the manager's independence of making hedging decisions, all but three companies considered the decision to be rather independent. The last hypothesis, which concentrated on the cost effect on the hedging decision received mixed answers and cannot be explicitly confirmed nor denied.

Based on the individual cases presented in the paper, the authors were able to form answers to the research question. However, due to the small size of the sample, the answers to the research question cannot be translated to be the general practice of Estonian companies as a whole.

As a result of the findings of this paper, the authors have identified several potential implications for further research on the topic. First and foremost, as the sample only covers 15 large Estonian companies, then the most obvious way to continue the study would be to

narrow the sample to a specific sector or a different size of companies, or a combination of the two. The authors believe that the findings of a similar study among medium size companies would be considerably different from the ones in this study. Furthermore, another topic the authors identified was that numerous companies in the sample found hedging, as a whole, to be too expensive. A potential study focus would be to identify the specific products that companies find more expensive, as well as the reasoning behind this.

However, as the most controversial finding of this paper was regarding the presence of a detailed financial policy in the company, the authors see this as a definite phenomenon for a further research. For instance, it would be of great interest to specify the effect of such a financial policy in the company in order to show the validity of the strong opinion of the banks that such a policy should exist.

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Appendix 1. Questionnaire for companies

- (1) Is your company exposed to financial risks, in your opinion?

If yes, then which?

Do you hedge these risks?

- (2) Do you consider these risks/exposures to be significant?
(3) What makes a risk significant, in your opinion? (for example, the overall amount under risk or the volatility of the underlying)

Would you say that this is the reason that you hedge these risks?

- (4) What kind of financial instruments do you use?
(5) How well do you consider yourself to understand financial instruments?

Do you consider yourself familiar with option strategies etc.?

- (6) In your opinion, has hedging historically paid off?
(7) If a hedging activity yielded a NPV of 1Eur, then would you still consider doing it?
Meaning that does the saved amount have to be significant, for you to decide to hedge?
(8) What would you say are the main determinants influencing your hedging decisions?
(9) Would you say that the overall global economic turmoil influences your decision to hedge a financial risk?
(10) How independent are you to make this sort of decision? (To hedge or not)
(11) Does your company have a financial policy/strategy?

How strict is this policy?

If there is room for “opportunistic” behaviour, who is in charge of these decisions.

- (12) Are you always involved in meetings where these topics are discussed?

Does it also cover hedging of financial risks?

Specific questions regarding risk:

The following questions depend on the answers from previous questions.

Forex

What are the main currencies that's fluctuation you are exposed to?

When deciding to hedge/not, do you also consider your personal expectation of the exchange rate?

Do you also consider your expectation of the overall volatility of the rate? Would this make you more likely to hedge?

Interest rate

Are you more likely to hedge when the loan schedule is with a longer duration?

When deciding to hedge/not, do you also consider your personal expectation of future interest rates?

Do you also consider your expectation of the overall volatility of interest rates? Would this make you more likely to hedge?

Commodities

When deciding to hedge/not, do you also consider your personal expectation of future commodity prices?

Do you also consider your expectation of the overall volatility of the commodity price?
Would this make you more likely to hedge?

Do you treat commodity risk as you would treat foreign exchange or interest rate risk?

Appendix 2. Questionnaire for bank representatives

- (1) Do you always determine a company's exposure to financial risks?
- (2) How do you determine a financial risk to be significant? Do you also take a company's natural hedges into account?
- (3) What makes a risk significant, in your opinion? (for example, the overall amount under risk or the volatility of the underlying)
- (4) Are all/some of these processes governed by a specific guideline/instruction?
- (5) How do you decide which financial instrument to recommend to a customer?
- (6) In your opinion, is it always rational to hedge a significant financial risk?
- (7) What makes you include hedging obligations in loan covenants/terms?
- (8) Would you say that the global economic turmoil has made you review previous practices regarding identifying risks and suggesting hedging instruments?
- (9) In your opinion, should a company have a financial policy that covers financial risk management?
- (10) What is your opinion of the following statements?
 - It is currently pointless to hedge risks as the swap costs a considerable amount more than spot rates and no-one forecasts interest rates rising in the medium-term.
 - If both your income and expenses are variable, then hedging only one of these is basically "shooting yourself in the foot".
 - The spreads of less popular financial instrument prices are a lot wider, when offered by local banks in Estonia.
 - Options are too expensive.
 - It is pointless for me to hedge my interest rate risk because I may want to refinance or renegotiate or even repay my loan before the current deadline.
 - One should hedge more when margins are high, not hedge when margins are lower and hedge more for safety when margins are very low. (Commodities)
 - A state-owned company should be more conservative and risk-averse in financial risk management.
 - Why should we hedge risks? If we are doing bad then so are others in the industry.
 - Hedging never pays off; you are always on the losing end. Especially in the case of interest rates.