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Risk Management: Disclosure Effects

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Abstract

This thesis explores the effect of disclosure on risk management policies. Following recent theory on risk management, with market imperfections, risk management creates value by reducing the volatility of the cash flows. Those risk policies are conditioned by actual disclosure rules that reduce information asymmetry between managers and shareholders, providing a comprehensive view of the firm. However, disclosure gives different accounting choices, hence affecting the decision-making process of managers. The purpose of this thesis is to establish if managers adapt their actual risk policy to disclosure rules. Specifically, we discuss how managers make decisions regarding exchange rate risk in forecasted transactions. In addition, we discuss how hedging affects valuation by using an investor perspective. This is done through the analysis of the automotive industry in Sweden, Germany and France and the considerations of analysts and auditors. We found that risk management policies are affected by accounting rules and that analysts are aware of those effects but have problems to measure them. However, not enough evidence was found to prove that managers try to avoid the volatility the fair value option brings when hedging a forecasted flow.

Keywords: Risk management, information asymmetry, disclosure

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1 INTRODUCTION

According to the interpretation of Ross (1996), in complete markets with no information asymmetry problems, transactions costs and taxes, as proposed by Modigliani and Miller (MM), hedging activities do not add value to firms therefore companies should not hedge. By definition MM and Capital Asset Pricing Model (CAPM) models are established under the assumption that markets are efficient. Market efficiency means that market prices are capable to reflect and capture information with great velocity and exactness. However, empirical evidence has identified different market imperfections, which transform hedging in a value creation tool. One of those market imperfections is the information asymmetry between managers and investors. One way to narrow this gap in information is through the disclosure requirements that each company has on their financial reports. Since 2005, all European listed companies are required to follow rules pronounced by the International Accounting Standard Board (IASB). These rules outline a set of parameters that determine when hedge accounting or mark-to-market accounting should be used for hedging activities. Derivatives are one of the most used financial instruments employed by managers of non-financial companies to hedge the exchange rate in future cash flows.

1.1 Background

Healy and Palepu (2001) points out the importance of disclosure to solve information asymmetry in the capital markets. Information asymmetry and incentive problems are problematic in capital markets in terms of achieving an efficient allocation of resources. In addition, Barnes (2001) states that financial reporting cannot have a neutral role in the economy; it significantly affects the decision-making process of individuals. As a result, any reporting rule will have consequences in the decision making process of

investors. As such, accounting standards should limit large disturbances in the pricing of future contracts.

The American Institute of Certified Public Accountants (AICPA) defines accounting as the art that recognizes, classifies and summarizes transactions and events in monetary terms. Thus accounting standards must find better ways to reflect reality by working as a mirror (Hamberg, 2004). The problem arises when accounting is not only affecting disclosure but also behavior. Under Regulation 1606/2002 of the European Parliament and of the Council of 19 July 2002, the European parliament and the council of the European Union required all listed companies to apply the International Financial Reporting Standards (IFRS), the body of standards issued by IASB, to their consolidated accounts for financial years starting from January 2005. Under this body of standards, International Accounting Standard (IAS) 32, IAS 39 and IFRS 7 regulates presentation, recognition, measurement and disclosure of financial instruments. IAS 39 establishes that all financial instruments and specially derivatives, which will be the focus of this thesis, have to be accounted under mark-to-market accounting or fair value accounting. However, in special cases, financial instruments that are within a hedging relationship can be classified as hedging instruments. Those financial instruments are accounted for under the rules for hedge accounting. Since hedge accounting is treated differently than the rest of the rules for financial instruments, the requirements that firms have to meet to be allowed to use this kind of accounting are detailed and strict. Nevertheless, depending on the accounting option taken by the firm, the balance sheet and the income statement will be different. In summary, hedge accounting creates an opportunity for companies to account differently than the main rule established in IAS 39 (Lopes 2007).

In capital market theory, with efficient markets, any actions performed by managers in an attempt to mitigate the risk of the company is of no value since shareholders have well diversified portfolios and risk management activities do not add value to them.

With efficient markets, companies have access to capital markets so management should not worry about financial problems (Hamberg, 2004). However, it is clear that companies work in markets that are far from efficient. There is empirical evidence that non-financial firms widely use derivatives for the management of their risk (Schöndube-Pirchegger, 2006). This leads to the necessary conclusion that one or more of the assumptions under capital market theory are violated. This thesis is in line with DeMarzo and Duffie (1995) and Raposo (1997), who established asymmetric information and managerial incentives as one of the reasons for corporate risk management, stressing the importance of separating the hedging effect from the operating result of the company.

1.2 Problem Discussion

Managers have incentives to smooth earnings and one way to achieve this is through the use of derivatives. Empirical research shows that through the use of derivatives a company can reduce volatility in cash flows (see Tufano, 1996). In addition, considering that the earnings of a company are equal to cash flows plus or minus accruals that have been made, if the company can reduce volatility in cash flows through derivatives, it can reduce volatility in earnings (Li, 2004).

Under IAS 39, all financial instruments including derivatives are reported in the balance sheet as an asset or liability at their fair value and the counterpart (a gain or a loss) will be recognized in the income statement. This rule has an exception, when derivatives are used in a hedge relation and meet the requirements specified in the standard, companies are allowed to recognize those changes in a reserve in equity and show it in the Other Comprehensive Income (OCI). When the hedged transaction affects the income statement, the amounts recognized in equity are transferred from equity into the income statement in the same line as the hedged item.

Companies use the hedge accounting option to set up a cash flow hedge to secure the exposure of a specific risk; for instance, the exchange risk of forecasted sales in a currency different than the reporting currency. When forecasted sales are confirmed, the changes in fair value of the contracts used as hedging instruments are recycled from equity to the sales account. According to Raposo (1997), the idea behind this treatment is that the gain or loss of the hedged item is going to be reflected in the income statement in a future period. The result of the hedging contract should be taken into the income statement when the hedged contract matures. This generates differences in how to account for hedge accounting versus fair value accounting. The timing of when net income of the company is affected differs; in mark-to-market accounting the result always affects the income statement immediately. If the firm makes a cash flow hedge the result of the hedge is instead, taken into the operating result when the forecasted transaction matures.

Most valuation models are based on sustainable earnings from core operations (Damodaran, 2002). Precisely, the income of a company can be divided into operating and financial items. The operating assets are the value drivers of a company. They are used in the core business of the firms, thus they require a return (Hamberg, 2004). Hence, it is crucial for investors to identify the core operating result of the firm. When the changes in fair value of financial instruments are taken into the income statement, separating the different results may not be an easy task. Therefore, it is useful for companies to report earnings from financing and investing activities independently from business operations (PriceWaterhouseCoopers, 2008). DeMarzo and Duffie (1995) supported this, stressing the effects of disclosure on hedging and the importance of separating the hedging result from the operating activities. They also state that different disclosure policies can have a real effect on the value of the firm.

Further research was needed to establish how disclosure discretion regarding risk management policies was affecting analysts' valuation. Precisely, how disclosure of

hedging exchange rate risk of forecasted flows was affecting valuation, considering also the accounting choices that the hedging instruments bear. This was done through the analysis of the hedging policy regarding exchange rate risk for forecasted transactions in the automotive industry. More specifically we analyzed the automotive industry in Sweden, Germany and France. We considered it first from a manager perspective, analyzing the effect of disclosure and accounting choices in risk management policies. We then analyzed if managers try to avoid the volatility that the fair value option brings into the income statement. Leading us to consider how analysts are taking into account those hedging activities from a valuation perspective.

1.3 Purpose

The purpose of this thesis is to explore the effect of disclosure and accounting choices on corporate risk management policies applied by companies. Managers have incentives to reduce the volatility in cash flows and smooth earnings and risk management policies are a mean to achieve it. The earnings that companies report are ruled by different disclosure rules. One of the goals of these rules is to solve information asymmetry between managers and shareholders. This thesis tries to determine if managers have particular incentives to adapt risk policies to disclosure rules and aims to develop an understanding of how analysts see the accounting options. Lastly, it also aims to determine how different accounting options are affecting the valuations of firms and how current disclosure rules regarding hedging are covering the needs of investors.

1.4 Limitations

Being as objective and thorough as possible, our personal interest and experience may influence the content of the topic. The focus is set on the automotive industry in Sweden, Germany and France. Even though we consider that this topic is theoretically applicable to other industries, we do not have all the required elements to assess other industries. This thesis will consider how these companies have treated their hedging

instruments, more specifically how they have treated their cash flow hedges for exchange rate risk, under the period 2006-2008. Previous periods were not considered since the appliance of IASB standards were mandatory for companies from financial reports beginning on January 1st 2005, and one of the companies merged in 2005 making that the financial statements from previous periods not comparable. This task will be performed through the analysis of the annual reports and interviews with analysts and auditors to understand their perspective on how accounting standards and disclosure rules have affected the risk policy of the different firms. Therefore the results are dependent in part on the outcomes of the interviews.

1.5 Outline of the thesis

In chapter 2, theory and hypothesis are discussed. In chapter 3 we discuss the methodology approach that we have and how it is linked with the theory, a discussion on how the process of collecting all the necessary data is also included. Our empirical results are displayed in Chapter 4 and 5. Chapter 4 describes the analysis of annual reports, and Chapter 5 covers the results and analysis of the interviews. Chapter 6 concludes our work with some suggestions for further research.

2 LITERATURE REVIEW

2.1 Risk Management and value

Graham and Rogers (1996) proposed an extension of the MM theory on capital markets and dividend policies. In a perfect world, with no market imperfections, hedging activities do not add value to the firm. Investors already have well-diversified portfolios and at first glance they do not need those actions taken by managers. Shareholders have all the necessary information of firms' risk exposure so they can create their specific risk profiles by selecting a portfolio that adjusts to their desired risk. However, empirical proofs exist that state that under certain circumstances, with risk adverse managers and asymmetric information (as is the case with actual disclosure requirements), hedging made by companies has proved to be valuable to shareholders (Schöndube-Pirchegger 2006).

Damodaran (2002) argues that the value of a firm can be calculated using free cash flows to equity, in which case the value of the firm is the sum of the free cash flows to equity discounted at the cost of equity. Alternatively, the value of the firm is the free cash flow of the firm discounted at the weighted average cost of capital minus the present value of debt. Either valuation model should derive the same result. The formula can be written as:

$$FV = \sum_{t=0}^T \frac{E(CF)}{(1+r)^t}$$

Where, FV is the firm value, $E(CF)$ are the expected cash flows, r is the discount factor and t is the future time periods. As we can see from the formula, the value of the firm can change either by changes in expected cash flows or in the cost of capital. Hedging reduces the volatility of those cash flows, which in turn generates that the lower values

will occur with lower probability generating a decrease in the costs associated with market imperfections. Hence, a higher firm value is achieved.

According to Bartram's (2000) interpretation of Markowitz's portfolio theory, if exchange rates, which are considered a financial risk, can be diversified they are unsystematic and the market will not pay an extra premium for this kind of action taken by managers. On the other hand, if exchange rate risk is systematic, then it cannot be diversified. Both the CAPM theory and MM are based on assumptions of perfect markets, which are considered not to hold, that allow corporate risk management to create value to the firm. Therefore, the analysis of value creation will be done through analyzing changes in cash flows and not through the decrease in the cost of capital. Albeit, more stable cash flows will provide a lower perceived risk that in turn generates a lower cost of capital.

Market imperfections have to be present for a corporate hedging strategy to create value. These imperfections create costs to the company and hedging is a way to minimize them. Different authors classify those imperfections in different groups. We will base our theory in the following market imperfections that make cash flows or income volatility a cost factor for the company, which leads to a corporate hedge. The imperfections are: corporate income taxes, costs of financial distress or bankruptcy cost, agency costs and information asymmetry. This thesis will link how disclosure and accounting choices are a consequence and a solution to information asymmetry. Therefore, we will make a short description of the aforementioned imperfections and then focus on information asymmetry.

2.1.1 Financial distress and bankruptcy costs

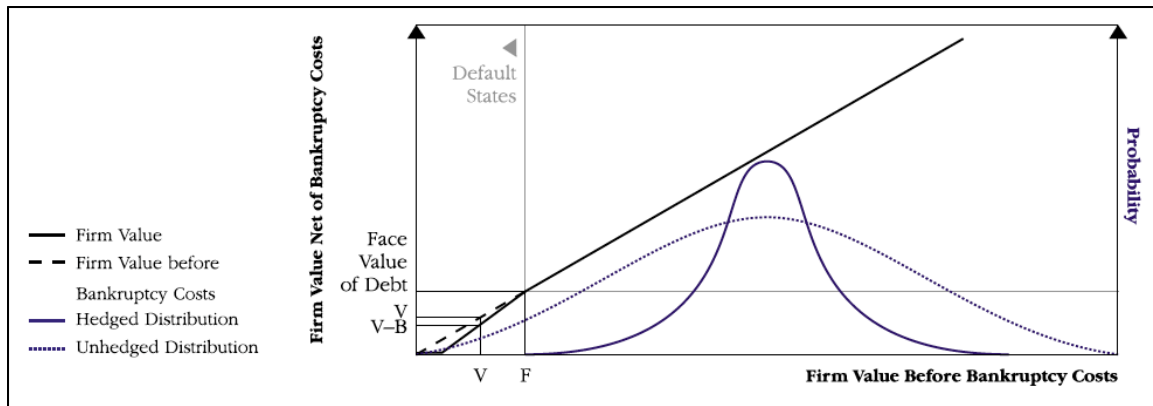
The volatility of cash flow caused by changes in the exchange rate, in interest rates or in the price of commodities increases the probability of financial distress and the company may be forced to declare default. According to Hamberg (2004) financial distress is a

step before bankruptcy is reached, although it does not necessarily cause bankruptcy. Purnanandam (2005) makes a distinction between financial distress and insolvency or default. He argues that financial distress is a situation where the cash flows of the firm are low and the firm incurs in extra costs without being insolvent. Those costs are associated with the loss of customers, suppliers and some important employees. Another source of costs is that companies facing financial distress are more likely to not paying their debt generating extra costs in the form of financial penalties. A third source of costs is related to the costs that arise when the company has difficulties to raise funds for profitable projects. This last point will be developed below.

When a company is affronting a financial distress or if it has to declare default, costs will arise. The present value of those costs is incorporated into the firm's value making that the total value of the firm decreases. Hence, if the management can hedge this variability in the cash flows, reducing or eliminating the probability of default, those bankruptcy costs are eliminated from the valuation of the firm. Thus hedging increases the value of the company. Below is a figure showing how the topic discussed above affects the valuation of the firm.

By analogy this reasoning is applied to all the distress costs. When the company begins to have financial problems, it is more difficult to raise funds. This problem can go up to a point where the funding can be so expensive for the company that management quit investing in profitable projects generating an underinvestment problem. So as long as the corporate risk management can reduce the probability of distress perceived by the market, an increase in the market value of the firm will occur (Stulz 1996).

Figure 2.1 – Distress costs and the value of the firm



*Stulz (1996) – Rethinking risk management – Journal of applied corporate finance – Figure 1 – Pag. 13

2.1.2 Tax benefits

Companies have two tax related incentives to hedge, one is related to reduce the volatility of the taxable income and the other one is related to tax benefits due to increased debt capacity. The reduction in the probability of financial distress can also be viewed from another perspective. It is a way for the companies to increase their debt capacity or leverage. Increase in leverage generates tax benefits. Thus the risk management effect may not be a decrease in the risk for the shareholders since the management is increasing the risk by taking more debt (Ross 1996).

Smith and Stulz (1985) argue that the benefit in reducing taxable income derives from the assumption that countries have convex tax codes. This implies that the effective tax rate of the company increases with the pre-tax income. It is also considered convex when firms have limits to the use of net operating losses carry forwards and with foreign taxes. Through risk management, companies can manage taxable income so that it falls in an optimal range of tax rates.

Even though the assumption of tax convexity is used in many articles, Graham and Rogers (2002) did the first test to analyze this assumption. Their conclusion is that they could not find any evidence that firms could reduce their tax liability when tax functions

are convex. They concluded that in general, firms do not hedge for reasons related to tax incentives because those incentives are quite small. The reason for hedge relies in other imperfections where the relation between the cost of hedging and the benefits of the hedge are bigger.

2.1.3 Agency Costs

Agency theory analyzes the relation between shareholders and managers or agents of the firm. One of those agency costs that firms face is that while managers acts in the interest of the shareholders they have also personal interests. This is usually reinforced by the fact that managers do not have well diversified portfolios and are dependent on the result of the firms. If companies hire managers and the compensation of those managers is related to the volatility in the income of the company, supposing concave utility functions, then this volatility can be very costly for those managers. Therefore, if the company can reduce this risk in their compensation, then managers are going to reduce the premium that they are requiring of the company. A hedging policy is then increasing the value of the firm through the reduction in the compensation demanded by the managers (Graham and Rogers, 1999).

In this context, Bartram (2000) argues that by linking management compensation and evaluation to the stock price they can ensure that the shareholders are taken into account and usually risk is reduced. Thus, corporate risk management is a way to reduce agency costs.

2.1.4 Information asymmetry

DeMarzo and Duffie (1995) and Raposo (1997) argue that informational asymmetries exist between managers and shareholders. The main issue is that managers have private information that is costly to convey to shareholders. Managers are also concerned with the accounting consequences of the hedging decisions that they make. Those hedge

decisions set restrictions on the way they hedge and their decision to hedge. They put their analysis on the informational effect of hedging, identifying two effects. The first is that the quality of the information that investors receive regarding the results shown by the management, is a condition on their decision to continue or not continue with the investment. The second is that the wage of the manager is tied to the reputation that the manager has. This, in turn, is related to the information provided by the manager about the profits of the firm. This informational asymmetry is a condition to the disclosure that companies are required to do, leading us to the theory behind disclosure and going in more in detail about the different accounting choices that companies make.

2.2 Accounting and disclosure for financial instruments

Before the introduction of IFRS, all financial instruments used for hedging activities were kept off balance. They were only considered when the hedged item was realized and recognized in the balance sheet or income statement. With the adoption of IFRS, financial instruments have to be accounted for according to IAS 39. This standard defines the recognition and measurement of financial instruments. This is an extensive and detailed standard covering many issues. Since we are not interested in the whole standard rather the treatment of derivatives and the different accounting options that they have, we shall describe the parts of the standard that are relevant for this thesis.

IAS 39 defines derivatives as *“financial instruments with the following characteristics:*

- a) Its value changes in response to the change in a specified interest rate, financial instrument price, commodity price, foreign exchange rate, index of prices of rates, credit rating of credit index of other variable, provided in the case of a non-financial variable that the variable is not specific to a party to the contract (sometimes called “underlying”);*

- b) It requires no initial net investment or an initial net investment that is smaller than would be required for other types of contracts that would be expected to have a similar response to changes in market factors;*
- c) It is settled at a future date.”*

2.2.1 Fair Value Accounting

Financial assets and financial liabilities should be measured at their fair value. When those financial assets or financial liabilities are not classified at fair value through profit or loss, the transactional costs related to the acquisition or issue of the financial instrument should be included. After initial recognition, companies have to measure financial assets, including derivatives that are assets, at their fair values. Financial liabilities must be measured at fair value through profit or losses, including derivatives that are liabilities.

Fair value is established from quoted prices in an active market. If the market is not active, fair value is established by using a valuation technique. This is an attempt to come up with a price that would have been on the measurement date in an arm's length exchange motivated by normal business considerations. This valuation has to use as much market input as possible and as little entity specific input as possible. Gain or losses originated by the changes in the fair value of a financial asset or liability classified as at fair value through profit or loss, including derivatives that are not part of a hedging relationship, shall be recognized in profit or loss as they arise (IAS 39).

2.2.2 Hedge Accounting

Since this accounting method is an exception to the general rule, some conditions have to be met. These conditions are (IAS 39):

- a) When the hedge is set up there has to be formal documentation of the hedging relationship, which is the entity's risk management objective and the strategy for

undertaking the risk. The entity should also establish how it would measure the hedging instruments effectiveness in offsetting the risk.

- b) The hedge must be highly effective in offsetting the changes in the cash flows related to the hedged risk. The company has to be able to measure that effectiveness; this is the fair value of the future cash flows and the fair value of the hedging instrument.
- c) If the company is hedging a forecasted transaction, the risk in the volatility of future cash flows that would affect profit or loss, has to be very probable.
- d) The hedge is assessed constantly and it has to be effective throughout the whole period that it is assessed as a hedge.

The three types of hedge relationships allow by the standard and their accounting treatment is as follow (IAS 39):

- a) A fair value hedge is a hedge of the exposure to changes in fair value of an asset or liability, an unrecognized firm commitment or a portion of the asset or liability that has a risk that can be identified and that could affect profit or loss. The gain or loss from re-measuring the hedging instrument at fair value has to be recognized in profit or loss. The gain or loss of the hedged item that is related to the hedged risk shall adjust the carrying amount of the hedged item and be recognized in profit or loss.
- b) A cash flow hedge is a hedge of the exposure to volatility in the cash flows of a firm that can be related to a specific risk, associated to an asset or liability that the company has or a highly probable forecasted transaction that could affect profit or loss. A cash flow that meets the definition should be accounted as follows: the part of the gain and loss that is effective should be recognized in OCI. The ineffective part of the hedge is recognized in profit or loss.

The amount recognized in OCI should be reclassified from equity to profit or loss as a reclassification adjustment in the same period or in the periods during which the hedged forecasted transaction affects profit or loss. If the hedged item was forecasted sales, the changes in fair value of the derivative recognized in equity should be reclassified to profit or loss, when those forecasted sales are realized.

- c) A net investment hedge is a hedge of a net investment in a foreign operation including the monetary items that are accounted for as net investment. The part of the gain and loss on the hedging instrument that is proved to be effective has to be recognized in OCI. The ineffective part has to be recognized in profit or loss. And the gain or loss of the hedging instrument that has been recognized in profit or loss has to be reclassified from equity to profit or loss when the firm makes a partial disposal or disposal of the foreign operation.

IFRS 7 gives the mandatory disclosure requirements. This accounting standard requires companies to disclose the risk divided into three different groups: market risk, credit risk and liquidity risk. Companies must also disclose their activities related to hedge accounting and their derivatives. Market risk is divided into the different risks the company may have, these are exchange rate risk, interest rate risk and commodities price risk. Within the exchange rate risk, common risks include the transactional risk and the translation risk. Translation risk is the risk that the exchange rate of the financial statements of the subsidiaries changes. Thus, during the consolidation process, the remaining equity of those subsidiaries will fluctuate with currencies. This kind of risk is usually hedged with net investment hedges and sometimes by fair value hedges. Transactional risk is the risk associated with the contractual flow the company will have in the future in a foreign currency. This kind of risk, which is the aim of this thesis, is usually hedged with derivatives or options accounted as cash flow hedges.

2.3 Disclosure and accounting choices

When thinking about different disclosure requirements, the question of the relevance of accounting arises. As mentioned before, in a world of complete and perfect markets, there is no need for accounting in general, because under this assumption information is free and there are no transactions costs. However in a world with market imperfections, the role of financial disclosure is clear: to solve the information asymmetry between managers and investors (Fields 2001).

There is no unifying theory of disclosure, rather economic based models that focus on small parts of the overall disclosure. However, these models can be classified in three big groups (Verrecchia 2001). The first category of research is how disclosure is associated or related to changes in the actions of the investors, measured mainly through the behavior of asset prices and trading volumes. The second category considers unconditional disclosure choices and puts the focus on which are the best disclosure options when there is no first hand or *ex ante* information. The third category considers how managers and firms generally apply discretion when disclosing information. This research line considers the market as the consumer of disclosed information. Our thesis is aligned with the third category and therefore it will be explored further on.

The discretion that managers apply about disclosure is influenced by the different accounting choices that they have when preparing financial information. Healy and Palepu (2001) propose a classification of the different accounting choices. They classify the managers reporting decision in two ways: positive accounting theory and voluntary disclosure theory.

2.3.1 Positive accounting theory

Managers have different reasons to make accounting choices given that the markets are not perfect. Under these assumptions, there are three reasons to accept different accounting choices (Watts and Zimmerman, 1986). The first reason is the presence of agency costs. Management might have incentives to choose an accounting method that maximizes their compensation schemes. This has been one of the areas where a relation between the manager's incentives and their accounting choices can be seen. The second reason is related to the intention of managers in influencing the asset prices or stock prices given the information asymmetry prevailing between managers and investors. Managers take actions toward smoothing earnings over time, to avoid losses or to try to maximize the earnings over a period of time (Fields, T. 2001). The third reason is related to the intention of managers to influence external parties. Different accounting choices have different impact on the financial numbers, and managers expect to influence them with the information presented.

In the previous section of this chapter, we discussed the reasons that companies have to set up a risk management policy. The most important argument in favor is that corporate risk management creates value. In addition, accounting plays an important role reflecting the "reality" of the firm, which is in turn shown to the market through disclosure rules. On the other hand, increased market efficiency is achieved. The problem arises when those disclosure rules affect the decision-making process of risk management by providing different accounting choices. One of those options is hedge accounting; companies are allowed to take profits generated from hedging in a reserve and account them in the operating income matching the operations when they occur, thereby smoothing operating profits. According to Cornell and Landman (2006) companies can manage their income statement by choosing to fit a financial instrument in a hedging relation. This leads to the first expectation:

E1: Risk management is affected by accounting rules.

Companies that are hedging exchange risks in a forecasted flow are doing it mainly through the use of forward contracts or options and have two alternatives on how to book the financial instruments. The measurement rules for accounting choices are regulated under IAS 39, which will be developed below. When companies do an “economic hedging” and account derivatives under the general rule established in IAS 39, they have to recognize changes in fair value in the income statement as they occur. Hence, the company begins to recognize a result in the income statement for the hedge of an operation that has not always been recognized in the income statement. This incorporates volatility in the income statement of the company, which is not a desired result for managers and is the basis for the second expectation of this thesis:

E2: Managers do not want to incorporate the volatility that fair value accounting brings into the income statement when hedging exchange rate risk.

2.3.2 Voluntary disclosure theory

Besides mandatory requirements, each company has its own policy about voluntary disclosure. They have a specific interpretation of what is relevant to the market and which additional information they want to convey to the market. Voluntary disclosure theory is a complement of the positive accounting theory that focuses on how accounting and disclosure decision affects the stock market. The aim of this theory is to achieve a better understanding of the companies. This is achieved by complementing the required information with supplemental information that increases the credibility of the financial reports, enhancing the information about the strategy of the company and the growing plans. This supplemental information has to be related to the business model that the company is pursuing and the value drives attached to that. All this information should be disclosed as a way of achieving an accurate valuation of the firm (Hutton 2004). An increased level of disclosure should reduce the gap in informational asymmetries between managers and investors. This, in turn, should reduce the adverse

selection costs that investors face when buying shares and should reduce the discount in the price of the share (Leuz and Verrecchia 2000). Therefore, a lower cost of capital is achieved and as seen before, this is one of the determinants of the value of the firm. Hence a lower cost of capital results in a higher firm value.

Some of the problems that mandatory disclosure rules have and that should be solved through voluntary disclosure, for a better understanding of the situation of the company, are: even though companies have to disclose the fair value of the derivative they do not have to independently report the part of the gain that comes from fair value gains. From a valuation perspective, it is not possible to estimate the gain related to the derivative (Cornell and Landford, 2006). Since this is more of a short-term gain than the rest of the components of the operating profit, it should have a lower valuation multiple. Another problem is that managers can choose which derivatives they are setting within a hedge relation and as such, it is very difficult for an outsider to tell from the financial statements when fair value accounting is used to manage the income statement (Nocco and Stulz 2006). Moreover, there are no requirements to disclose the notional amount of the derivatives and the average secured rate, generating uncertainty about the risk level of the company. This lack in information generates problems in the market for estimating the real effect of the hedges that companies are doing and gives rise to the third expectation of this thesis:

E3: Analysts have difficulties to incorporate the hedging effect into their valuation models.

3 METHODOLOGY

3.1 Research approach

Our research aims are to provide an understanding of the behavior of managers regarding risk management policies when facing different accounting choices and how analysts perceive these risk policies and incorporate them into their valuation models. Companies from different countries within the automotive industry will be considered and different actors will be asked to participate in an interview to give their perception about risk management, accounting choices and the implication in valuation. This process will allow us to discuss the expectations presented in chapter 2.

In this thesis the deductive research approach was used (Bryman and Bell, 2007) to tackle a problem in the market that pertains to risk management and disclosure theory. The first step in this approach was to formulate research expectations and objectives based on the literature. Afterwards, the necessary and relevant information needed to be collected. In our case, these included annual reports of the chosen companies and interviews with analysts and auditors. By analyzing annual reports and interviews, conclusions were drawn, which serve as a base to discuss the proposed expectations.

3.2 Research design

The main topic of the thesis is to explore the effects of disclosure and accounting choices on risk management policies. In order to reach our goal, we conduct two separate but integrated studies: 1) collect and analyze information from annual reports (see section 3.3) and 2) collect information by directly interviewing the involved persons (see section 3.4). This kind of approach with two parallel studies is used by Marton (1997) to test the impact of accounting in capital markets.

We will work with the hedge of exchange rate risk on forecasted transactions rather than any other type of risk because the information is well disclosed and it is in the market in which companies use the cash flow hedging. Bodnar et al. (2001) made a survey about the utilization of derivatives in The United States and the Netherlands; they found that exchange rate exposure is the risk that companies tend to hedge the most¹.

Due to the nature of the research, both primary and secondary data will be used. The information collected from the interviews will be considered primary data, since the design of the questions and the collection of information is done directly by us. The information extracted and analyzed from annual reports will be secondary data, because the information has already been collected, processed and analyzed, by the firms themselves. They have published the information for the public in general, and we will add our interpretation and restructure the information for our own use. In addition, journals and books will also be used as a source of secondary data. Since this topic concerns capital markets and accounting issues, different types of sources will be employed in order to generate the link between both theories.

From the study of the annual reports we expect to get an overview of the risk management policies of different firms. This process will be important for understanding what companies are doing in terms of risk policy and will give us important information that enhances the interview process and generates a pattern about their behavior. Disclosure theory is reflected in the annual reports. We expect that the information published in the annual reports will be similar for all companies, making possible to identify how companies have applied the different accounting choices that will support data collected in the interviews (see section 3.3).

¹ The result was 79% in United States and 96% in the Netherlands. The difference is explained about the openness of the economy. Interest rate risk occupied the second place with 81% in the Netherlands and 73% in United States. The last place is occupied by commodity hedging with 20% among Dutch firms and 44% in US firms. The study also found that the reason of hedging is to reduce volatility in the cash flows.

Interviews will be used as they are best suited to analyze in depth the topic presented in the thesis. The study of the effects of an accounting rule in the decision-making process cannot be taken directly from the annual reports, since annual reports have to follow those rules. The role of accounting is to reflect reality and it should not alter or influence managers to make decisions based on how they will account the information. Therefore the goal of analyzing annual reports is to analyze behavioral patterns of companies that will allow us to structure and enhance the interview questions, in order to reduce variability in the answers of the interviewees. Since the information is standardized this helps us to provide a structure to the interviews². In addition, interviews as a research method translate the opinions and beliefs of actors. Since the goal is to understand how the accounting options are affecting risk management policies and how analysts are interpreting the risk policies, the understanding of how actors perceive these effects will help resolve the mentioned expectations.

3.3 Annual Reports

3.3.1 Sampling

In order to choose the companies that we will analyze we will select a manufacturing industry that proves to harsh global competition. The exposure to exchange rate risk is higher when companies utilize global input and output markets. Manufacturing companies sell products abroad and are in need of raw materials to start producing. Depending on the characteristics of the raw materials, these need to be imported. As a result this industry has inflows and outflows of cash flows in external currencies that need to be hedged. Manufactures encompass many companies; thus they need to be narrowed down. The automotive industry is one of the most globalized industries with high exposure to exchange rate fluctuations and hence it fits our requirements. When analyzing companies from Sweden, a country with a small independent currency, it will be interesting to compare them with companies located in countries with strong

² In Marton (1997) he followed the same process and found about the mentioned benefits; although, the study was not focus on interview methods and he used the reports of the same analysts, we decided to follow a proven strategy.

currencies. Patterns of behavior can be generated, if companies located in different countries with different exchange risk rate exposure are compared. Hence, three different markets are considered: Sweden, France and Germany.

The next step is to identify the relevant study objects'. Companies with high turnovers are more likely to operate in international markets. Therefore the analysis of the type of companies will start from the turnover. According to Abeysekera and Guthrie (2005), large companies tend to disclose more in their annual reports. The list of the chosen companies is presented in the following table:

Table 3.1 – Chosen companies per country

Country	Companies
Sweden	Volvo and Scania
France	PSA Peugeot Citroën and Renault
Germany	Volkswagen, Daimler, and BMW

3.3.2 Design

Since the purpose of the study is to see the effects of the different accounting choices and disclosure on risk management, the design of this approach is divided into two parts. The first part is to identify all the relevant information regarding risk management policies that companies publish in their annual report. The most relevant information is how the companies hedge their future cash flows in foreign currency. The second part is to identify how hedging is affecting the income statement of the company. As discussed in the theoretical part, the accounting choice determines the results of the operating profit. As such, our research will be designed in order to identify the fair value of outstanding derivatives related to hedging exchange rate risk of cash flows, identifying the result that companies recycle from equity into operating profit and the amount of the changes in fair value of the hedging instruments that is taken into equity. This information will give us some indicators of the effect that the different accounting choices have on operating profit.

3.3.3 Operationalization

Gathering the information regarding risk management policies will allow us to identify which are the reporting items and the hedging strategy of the different companies³. The combination of information regarding hedge policies with the information managed below regarding hedge accounting, will serve us as a base to discuss with analysts how they see company's hedging and how they incorporate it into their valuation models. This insight will be done discussing what the automotive industry does regarding their hedging.

Companies apply hedge accounting to book their hedging instruments regarding exchange rate risk of forecasted transactions. If they also apply fair value accounting to some part of the hedging, it is not clarified since disclosure rules do not require it. Collecting information regarding the amount recycled from equity into the operating profit and the changes in fair value that are taken into equity during the year, will enable us to identify the effects that hedge accounting has on the operating profits and operating margins. This will be compared with the operating profits of the companies making the assumption that they had accounted all their hedges at fair value accounting instead of hedge accounting. The analysis of these elements with hedge accounting and without hedge accounting will allow us a comparison of the effect of the two accounting choices. This in turn, will give us an indication on how risk management may be adapted depending on the chosen accounting option. It will also give us an indication if companies would prefer to avoid the incorporation of volatility in the fair value accounting option.

³ Appendix IV endeavors to provide information regarding generalities about the analyzed companies

3.4 Interviews

3.4.1 Sampling

When choosing the interviews different options are available – analysts, auditors and managers. According to Holme and Solvang (1991), there are two different ways of simplifying information: to focus on a small part considered highly relevant or by using high-level simplified models. In our study, we will use the first option because of the nature of the available information. Thus, we will interview financial analysts and auditors.

The reason of choosing analysts is because they better suit our problem discussion. As mentioned above in this thesis, the most important problem is the impact of the accounting standard on the decision-making process of investors and how analysts incorporate those hedging options into their valuation models. Francis and Soffer (1997), argue that financial analysts tend to be a close approximation to the market. In addition, Marton (1997) argues that analysts are the main users of annual reports. Since the information of annual reports is interpreted before the interviews, we will gain from their interpretation of information and their behavior. We will select analysts that followed the selected companies and are located in Sweden⁴.

Auditors will be interview since they have a broader understanding of the accounting effects derived from different choices. Watts and Zimmerman (1982) argues that since managers hire auditors, auditors tend to act in the interest of managers; therefore interviewing auditors will permit to understand managers' behavior towards risk. They also tend to have a good view of the behaviors of managers towards a specific accounting rule since almost all managers discuss the implications of a new standard with their auditors. Auditors also have the view of many managers and industries since

⁴ Looking at the annual reports and the companies' websites 26 analysts of the automotive industry were selected to be contact. We contacted the analysts and received 3 positive answers but one of the interviews was canceled in the last minute.

they do not only have one client. The selected auditors will be from the four biggest auditing firms located in Sweden⁵.

3.4.2 Design

The qualitative approach is used in the interviewing both analysts and auditors. One of the reasons of having a qualitative approach in the interviews is the flexibility that it brings. It will give us the opportunity to incorporate new information that could arise during the interview. It will allow for a full understanding of the topic while enabling us to discuss the proposed expectations.

The interviews are planned to be hold in the offices of the interviewees. This is due to their time restrictions. In addition, their offices will provide a friendly and comfortable environment for the interviewees. The interviews are estimated to last for one hour each. While holding the interviews we are not planning to present our opinion regarding the different expectations in order to not to bias their answers. Even though the interviews will be hold as open discussions, the interviewees will be push to answer all the formulated questions. The questions used as guidelines to determine the topics of the discussion and can be found in appendix II and III.

3.4.3 Operationalization

During the interviews we will introduce the topic giving a broader understanding about our research. Additionally, we will answer questions to clear any misunderstanding in order to focus only in our three expectations. The questions will be used as guidance to have an open discussion. As interviewers our points of view will not be revealed. We will

⁵ PriceWaterHouseCoopers, KPMG, Deloitte, and Earnest & Young. Only one positive answer was received (PriceWaterhouseCoopers). However the interviewee is a specialist in risk management and Partner of the firm and hence reliable source.

have a passive role taking notes and analyzing the answers in order to choose the next question. Not all the questions are planned to be asked, if the answer is given in advance the question will be avoided. However, all the topics contained in the questions need to be discussed.

The questions are formulated as to discuss our three expectations. Each expectation is included under an area of understanding. The questions of the interviews are grouped under those areas, being the groups as follows:

3.4.3.1 A view of the companies risk management policies

In order to present our expectation 1, questions 5⁶, 7⁷ and 8⁸ in Appendix II and questions 2⁹, 6¹⁰, and 8¹¹ in appendix III will be asked. The combination of all the answers will lead to discuss the expectation.

3.4.3.2 Effect of hedging on earnings

In order to discuss our expectation 2, questions 6¹² and 9¹³ in appendix II and questions 3¹⁴, 4¹⁵ and 5¹⁶ in appendix III will be asked.

⁶ From a valuation perspective do you consider that derivatives carried at fair value should be treated differently than derivatives carried as cash flow hedges?

⁷ Do you think managers hedge their exposure in foreign currencies until the level in which the mentioned hedge can be accounted as cash flow hedge?

⁸ There are several researches that argue that the salaries schemes generate incentives for managers to not to perform at the level shareholders would like them to. Do you think managers use cash flow hedging pointing to stabilize the operating profits thinking in reducing the volatility in their own salaries?

⁹ Based on your experience, how do the mentioned options condition the Risk Management Policies of firms?

¹⁰ One of the concerns of companies is to hedge the downside exposure, but it also can be used to reduce the overall volatility. Based on your experience, how and which reasons may they have in order to act in that way?

¹¹ Do you think managers hedge their exposure in foreign currencies until the level in which the mentioned hedge can be accounted for as cash flow hedge?

¹² Theory says that the fair value option for the accounting of derivatives increases the volatility of the income statement, do you agree?

¹³ When is it considered that a company is hedging more or less than required? How do you determine the optimum point? If you do so.

¹⁴ What do you perceive that managers are pursuing when using cash flow hedge? Do you believe that managers use the cash flow hedge options in the belief that it is important to reduce the volatility in the operating profit that they will present to the market?

¹⁵ Is it possible that the market is affected by the different choices that risk management takes? Or are the analysts going to remove those effects when they do the valuation of the firm?

¹⁶ When companies are hedging, they can do it to hedge their positions but they can also do it in a speculative matter in order to get a "pulse" of the market. Which of the options do you perceive that risk management is taking?

3.4.3.3 Analysts view of companies hedging

In order to discuss expectation 3, questions 2¹⁷, 3¹⁸, 4¹⁹, 10²⁰ and 11²¹ in appendix II and question 7²² in appendix III.

3.5 Validity and Reliability

According to Bryman and Bell (2007), the validity of a study lies in the veracity of the conclusions. In other words it measures the connection between the theory and the results of the study. It is important to mention that it was not possible to find articles or theory that created a link between risk management and disclosure theory regarding hedge accounting and fair value accounting. Therefore, the link between the theories was done directly by us. The validity in this study can be expressed with the following questions: Did we capture the relevant information about the behavior of managers regarding risk management policies when they are facing different accounting choices? Do the interviewed analyst represent what the market is doing regarding how hedging is incorporated into the valuation models?

In order to answer these questions it is necessary to highlight some limitations. Regarding the study of annual reports it was expected that the information published would be similar for all the companies. However, the standard provides a framework and not a tabular format, generating differences on how companies reported the information regarding risk management. This implied that a full and extensive reading of the annual reports from all the years was necessary in order to extract the relevant information.

¹⁷ Which are the hedging items that you look into the annual reports when valuing companies?

¹⁸ Do you take information besides the annual report related to the level of hedging?

¹⁹ If you answered yes in question 3, which are the sources for the additional information and which kind of information do you require?

²⁰ From a valuation perspective, do you consider that hedging creates value?

²¹ According to theory, risk management is supposed to create value by reducing volatility on the operating income. On the other hand, the income generated by hedging is not considered one of the core operations of the company and is treated differently when doing the forecast of the cash flows. How do you consider that this affects your valuation?

²² From a valuation perspective do you consider that hedging creates value?

Concerning the interviews different limitations may arise. First of all, we are aware about our limited experience conducting interviews. Therefore, the questions were formulated thoughtfully in advance to compensate it. However, some of the questions were not prepared to be answer with positive or negative answers²³, consequently an analysis of the answers has to be made and our analysis could bias the final conclusions. In order to not to skip important information the interviews are going to be recorded and listened several times before typing the information and concluding.

The interviews will be conducted according to the qualitative method. This is supported by Fielding and Fielding (1986) who argued that quantitative methods cannot model human behavior. In addition, this method allowed us flexibility in our interviews. For instance, we can include questions in the interviews that were not previously formulated. This is advantageous since it allows in-deep discussions of different problems with different interviews. Bryman (1988) says that one of the biggest problems of interviews is that “notes and extended transcripts” are not usually available in the study papers. A minor but latent limitation is that the interviews themselves carry a problem of geographical limitation. Only analysts and auditors established in Sweden were interviewed.

Bryman and Bell (2007) defined reliability as: “whether the results of a study are repeatable”. Regarding the study of annual reports we believe that the results can be expected to be equal or better depending on the time period of other studies. Since the information regarding risk management policies is publish just once a year in the annual report, other studies would not be able to extract better information, facing the same limitation that we faced. Nevertheless, the Financial Accounting Standards Board (FASB) has imposed for the companies in The United States to publish this information in the interim reports. Consequently, we believe IFRS will also require it in the future. Therefore, future studies will be able to do gather better information.

²³ In some interviews the whole process was conducted as an open discussion.

Concerning the interviews we believe that it is difficult to determine a high degree of reliability because the answers of auditors and analysts bear their subjectiveness about the different questions. A second degree of subjectiveness is also found in the interpretation of the answers when we analyzed them, although we made our best effort to be as objective as possible throughout the thesis.

4 ANALYSIS OF ANNUAL REPORTS

4.1 Risk management information

By selecting three different countries this study compares how risk policies change depending on how strong the reporting currency is. Swedish companies have a small and independent currency (SEK) and are affected by the movement of almost all currencies. Their commercial flows occur, almost entirely, in currencies that are different from the reporting currency and with less volatility. More than 90% of sales occur outside Sweden compared to companies located in Germany and France, countries in which the range of sales that occur in the Euro Zone varies from 40% to 60%. This makes Swedish companies more vulnerable to the volatility of the Swedish Crown with respect to currencies like USD and EUR. According to the information published in the annual reports, Swedish companies hedge a big part of their forecasted transactions for the first six months and a lower amount of forecasted transactions from the seventh month to the twelfth. This information is presented in the table 4.1. Alternately, if we consider which commercial flow affects other markets, in the case of PSA Peugeot-Citroën, the company states that their major exposure is to the British pound and the Japanese yen and results in their hedging a small part of their forecasted transactions. Hence, the value of outstanding contracts that are in a cash flow hedge relation is relatively low.

All the companies use both fair value accounting and hedge accounting. One of the weaknesses of the standard regarding fair value accounting is that, when this method is used, there is no need to disclose how it is used. This does the task of evaluating the hedge of forecasted transaction very hard. For the case of hedge accounting the information is very detailed. However, if a company decides to manage their derivatives under fair value accounting instead of hedge accounting, it is not possible to measure the effect separately. We will consider further on the amount of cash flow hedges for

hedging exchange rate risk that are reported under the hedge accounting method. Afterwards we will show how the operating profit and operating margins of the analyzed companies had looked like if those amounts recorded as hedge accounting had been recorded as fair value accounting. Our aim with this is to give an indication of the volatility that the fair value accounting brings. This in turn should be an incentive for managers to try to avoid it.

One of the key figures to be disclosed by companies is the amount that they are going to hedge in the future and the amount that they have already hedged. A summary of the policies of the different firms can be found on table 4.1. It is observable that only one company specifies its hedging policies regarding the forecasted flows. The rest of the companies make a vague statement of the amounts that they hedge, specifying only for how long in the future they have made hedging contracts. Without those numbers is difficult to establish how the hedging is going to affect the future flows, it can be anything between 0% and 100%.

Table 4.1 – Amount of forecasted transactions that have been hedged.

Company	Amount of hedged forecasted transactions		Comments
	< 6 month	6 month - 1 year	
Volvo	75%	50%	Policy will change in 2009, hedge 1 year of future transactions
Scania	Not Specified	Not Specified	Bigger in the first half than second half, hedge 1 year of future transactions
Volkswagen	Not Specified	Not Specified	Hedge up to five years in some cases
Daimler	Not Specified	Not Specified	Unclear how they hedge forecasted transactions
BMW	Not Specified	Not Specified	They hedge up to 48 months of forecasted transactions
Peugeot	Not Specified	Not Specified	Hedge up to five years in some cases
Renault	Not Specified	Not Specified	Hedge 1 year of future transactions

* Source: Annual reports of companies for 2008

From the annual report of 2008, it can be observable that Volvo - the only company publishing their hedging policy - is going to change it for 2009 without stating how it is going to change. This raises questions for analysts like: How does this change in the

policy impact on your estimations? Or what do you think companies are after with this change?

From the analysis of risk management policies disclosed in the annual reports it is clear that companies are not publishing all the necessary information regarding their risk positions. All the analyzed companies are compiling with the standards and disclose the information required by the rules. While very few of them are doing voluntary disclosure about their hedges. One of the major limitations is that there is not full disclosure of the derivatives and the prices of the contracts. Some companies publish the notional amount of their derivatives and the sensitivity of the total contracts to changes in the underlying variables of the instruments. On the other hand, none of the companies report the average secured rate. A summary of the information that companies present regarding the notional amount and the average rate of contracts is presented in table 4.2. This makes it difficult to assess the impact of those hedging contracts in the future and even more so if we consider the long-term. Even if it were possible to assess the impact of actual hedges on the balance sheet and on the income statement, the impact would only be for the next year. The long-term impact would then depend on what the companies plan to do in the future regarding their financial instruments. Many companies enter into this kind of contracts to have a “pulse” of the market; in other words, to see where the market is moving and how their company should be positioned. If we add to this the fact that some companies try to hedge the “negative” effect of interest rates, currencies or prices in the commodities, we assume that companies will hedge their risk at a level that is in accordance with their impression on where the market is moving.

Table 4.2 – Disclosure of notional amounts and average rates about derivatives

Company	Notional Amounts	Average secured rates
Volvo	YES	NO
Scania	NO	NO
Volkswagen	YES	NO
Daimler	NO	NO
BMW	NO	NO
Peugeot	YES	NO
Renault	YES	NO

* Source: Annual reports of companies for 2008

It is possible to conclude that the estimation of the impact of risk management through the disclosure of companies is a difficult task. Even though the long-term effect of hedging policy is difficult to establish, it is also important to determine the effect of hedging on the result of companies for the present year. This will be developed in the next section.

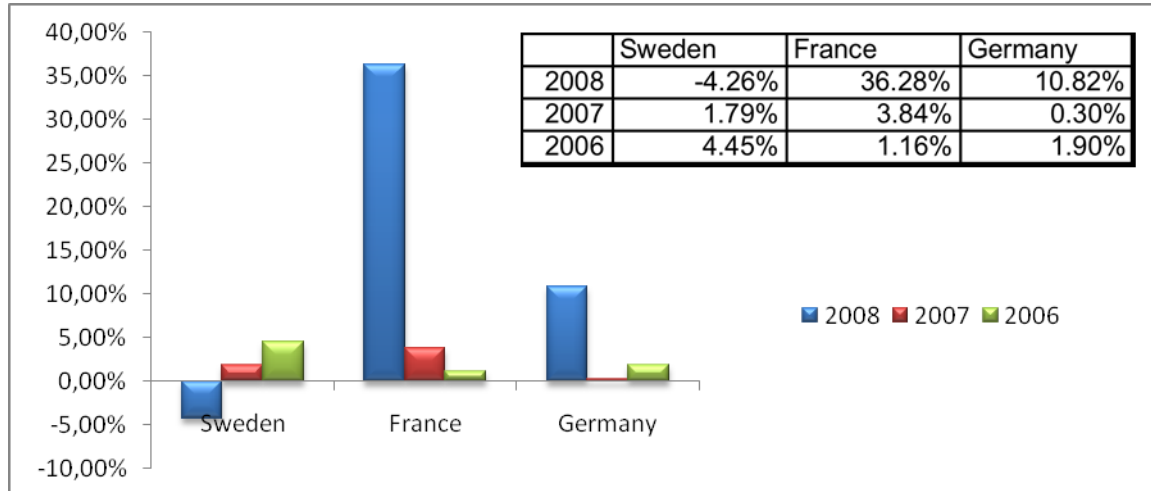
4.2 Effects on Operating Profits

From a valuation perspective it is crucial to establish the core activities of the company and which activities only have a one-time effect on the operating result. In order to do this, we extracted the effect that cash flow hedges - related to exchange rate risk of forecasted transactions - had on the operating profit of the firms and divided by country and year. This is shown in Figure 4.1 as relative values.

From the figure it can be observed how the movement in currency and prices has affected 2008. The figure shows that cash flow hedges of certain companies had a major impact on the operating result. However, 2008 was a very hard year for all the automotive industry independently on where they were located. All companies faced big losses in their operating incomes as consequence of the impressive decrease in the volumes. Consequently, it makes that the analysis of the result of hedging, over an

already hard treated operating profit, can create the false impression of the real impact of the hedge. Therefore we made an additional analysis on the impact of the hedge on the operating margin instead. This is shown in Figure 4.2.

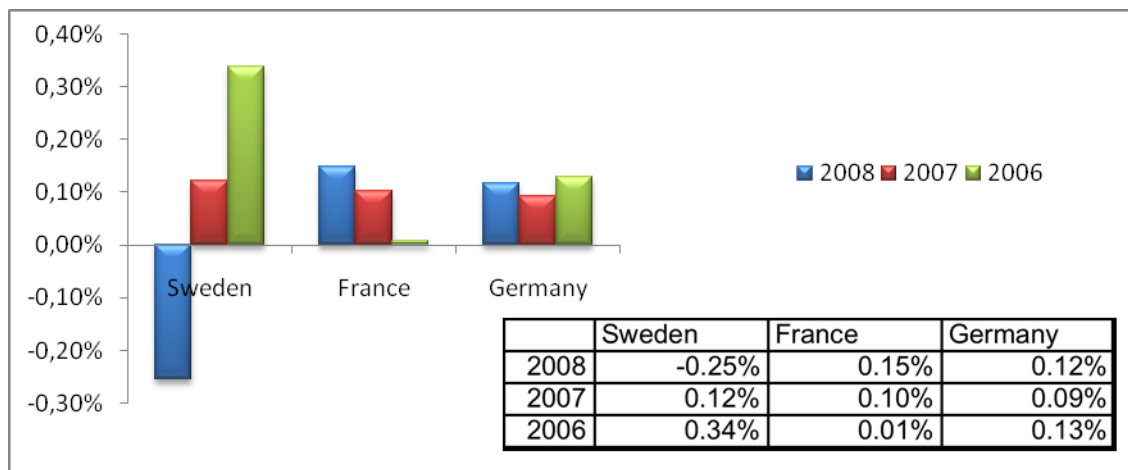
Figure 4.1 – Effects on operating profits of hedge accounting



*Source: Each firm's annual reports in the years 2006-08

From looking Figure 4.2, it can be concluded that the maximum impact the cash flow hedging of exchange rate risk had on the operating margin is about 0.25% in absolute values for 2008.

Figure 4.2 – Effects on the operating margin of hedge accounting



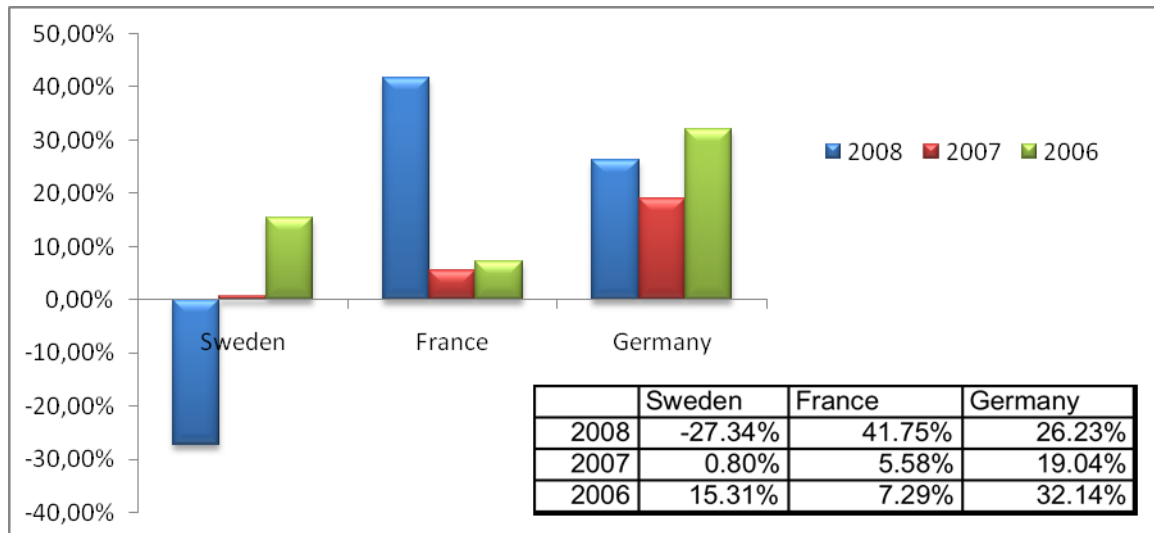
*Source: Each firm's annual reports in the years 2006-08

It can also be seen from figure 4.2, as it was expected, that for Swedish firms the impact on the operating margin of the hedge is the highest and lowest. This confirms that the Swedish currency is more volatile than other stronger currencies, making the impact of hedging on the operating profit more significant for these companies.

Another effect of actual disclosure rules is that changes in the fair value of derivatives, that are in a hedge relation and accounted for as cash flow hedge, are recognized in equity as a special reserve. This reserve shows the amount the company would have taken as operating profit if those derivatives were carried at fair value accounting. As discussed before, this kind of accounting brings volatility into the operating result since the changes in the fair value of the instruments have to be accounted for in the income statements as they occur. This leads to our second expectation that companies make contracts to hedge the exchange rates of forecasted cash flow up to the level where those contracts can be accounted as cash flow hedges. If they have to account for them as fair value accounting, they would probably reduce the level of hedging. This will be tested with the interviews to auditors and analysts. However, from the information of the annual reports we have indicators of its likelihood.

From the information disclosed in the annual reports it is possible to establish the effect on the operating profit if those amounts had not been taken into the reserve in equity. How the operating profit would have been affected if the hedge reserve had been taken directly into the income statement is presented in Figure 4.3.

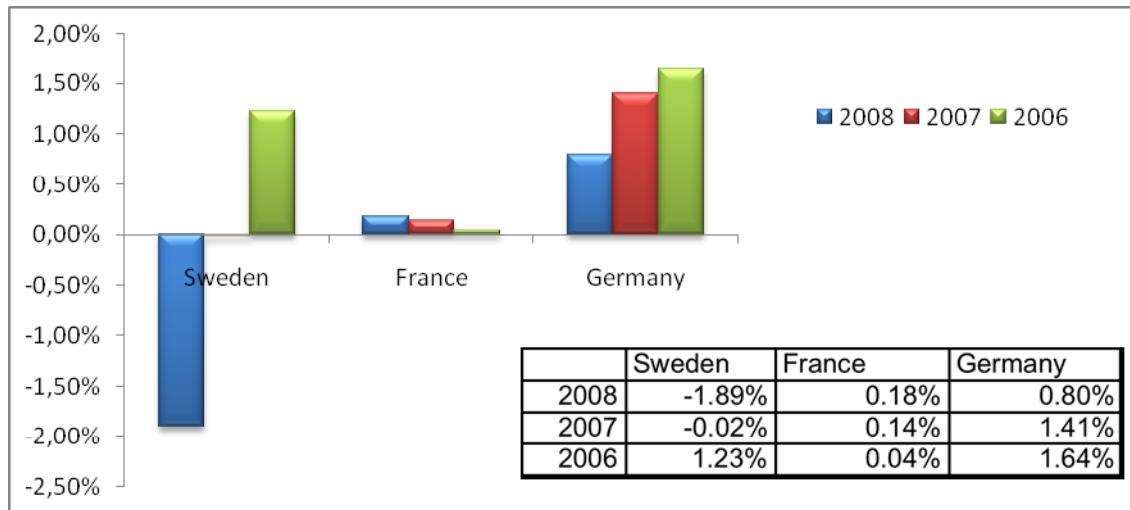
Figure 4.3 – Effect on operating profits if hedge accounting had been treated as fair value accounting



*Source: Each firm's annual reports in the years 2006-08

Swedish companies had a big loss in the hedging contracts they made. This is understandable if we consider that companies made forward contracts or options to hedge the risk in the exchange rate in the forecasted transactions between one to twelve months before they occurred. When the currencies began to move heavily in September 2008, the contracts were already fixed at a lower rate, causing big losses for companies in those contracts. The increased benefit that they achieved by the devaluation of the SEK against the major currencies was offset by the loss in contracts. However, not all the loss from the change in fair value of the contracts was taken into the result, a large part of that amount was put into the reserve in equity. We can see that if it had been mandatory to consider the results in the operating profit, the results of the companies would have been different. For Swedish companies this would have implied a change in the operating margin of -1.9% on average for 2008.

Figure 4.4 – Effect on operating margin if the hedge accounting had been treated as fair value accounting



*Source: Each firm's annual reports in the years 2006-08

With hedge accounting the operating margin in Sweden was affected on average -0.25% in 2008. The same contracts would have affected the operating margin in -1.89% if they had been accounted under fair value accounting. If the rest of the years are compared, it is observable that there is an increase in the absolute value if the hedging instruments had been accounted under fair value accounting. This gives an indication on how the fair value accounting brings volatility into the income statement. Some of the questions that arise for the analysts are: How do you consider the difference that arises between the two accounting options into your valuation models? If the company did not recognize the hedge as cash flow hedge, how do you identify the effects of the hedge on earnings?

5 INTERVIEWS

This chapter is a summation and description of the results of the interviews with analysts and auditors. The questions were organized in three groups to give an answer to our expectations presented in chapter 2. The interviews were organized as open discussions about the topic with the questions as a reference. Thirty analysts and auditors invited to participate of this research, however only one auditor and two analysts accepted to have an interview.

5.1 A view of the companies risk management policies

In this section the relation between disclosure rules, accounting choices and risk management is discussed. To examine this area we asked both analysts and auditors. Albeit the answers of both groups are important, more weight is given to the answers made by the auditor. Auditors are the sources used by managers when applying new accounting rules. They helped companies to implement IFRS, having a comprehensive view of what companies were doing when they followed local GAAPs and which were critical areas during the changing process. The rules regarding financial instruments and disclosure of risk were complex areas that made auditors participate in great manner in the companies' changing process. To cover the topic, we asked auditors questions such as²⁴: Even though accounting and disclosure rules regarding financial instruments and disclosure of risk are constantly changing, the biggest change that companies faced was when they went from local GAAPs into IFRS. From your experience, how did risk management policies accompany this process? Do think that companies tried to adapt their risk management to those new rules? Analysts were asked questions such as: Have you perceived a change in the risk management of companies with the implementation of IFRS?

²⁴ These questions were not formulated in advance but were included in the interviews.

The auditor made the following comments: Before IFRS, all the financial instruments used for hedging such as, forward contracts to buy or sell currency or options to buy or sell currencies, were kept off balance. This means that companies did not need to report those instruments until the hedged transaction affected the income statement. In this case, the value of the transaction was incorporated at the secured rate of the financial instrument. There was no attention paid to the effects of hedging in the income statement and the balance sheet in the period between the incorporation of financial instruments as hedging instruments and the realization of the hedged transaction. After 2005, when companies began to implement IFRS, they were required to recognize financial instruments in the balance sheet with changes in the income statement or in equity. This resulted in risk management policies becoming closer to what was happening in accounting. Treasury departments, who are in charge of setting up hedging policies, used to work more independently from accounting departments that are in charge of the reporting. Since the implementation of IFRS' requirements of disclosure, accounting managers needed to be more aware of the information that had to be reported. Now hedging policies have an effect on the balance sheet and the income statement that need to be considered and analyzed. Additionally, how these new requirements affect the market value of the company should be considered. This change also brought about a need of rethinking risk policies of the firm and how they are conveyed to the market.

The auditor also commented that when companies began to apply IFRS, there was a general misunderstanding that if the companies sought to apply hedge accounting it had to be done for 100% of the forecasted flow. This generated confusion in the companies making them to change their derivate contracts for new contracts in order to try to fix them according to the standard. After this initial period and verifying that this was not that strict, companies began to change their way of seeing at hedging.

Analysts perceived a change in the risk policies as well. This was perceived mainly through the requirement that companies have to disclose their risk policy. Companies have more concerns on how their hedging instruments were affecting the income statement and the balance sheet. There has also been an increase in the use of derivatives by industrial companies during the last years, this was specifically analyzed within the automotive industry but they perceived it also in for the rest of the industrial companies.

The comments of the analysts and the auditor that with the changes in disclosure and accounting rules there was a change in risk management policies are in line with theory. The aim of disclosure and accounting rules is to solve the information asymmetry between managers and investors and this information asymmetry is in turn one of the market imperfections that makes risk management a value creation tool. Before the implementation of IFRS, companies had more discretion on their risk policies since there was not a requirement to disclose them and the hedging instruments were not included in the financial statements. With a change in the accounting and disclosure rules, this information asymmetry is reduced generating a reduction in the market imperfection. This results in a change in the risk policy with an increase in hedging probably as a result that now investors can see what companies are doing, and companies can show more explicitly how they creates value through hedging. Even though disclosure has improved much the available information, there are still lots of gap in the information presented by companies. This is in line with our first expectation that risk management is affected by accounting rules.

5.2 Effect of hedging on earnings

This section is devoted to discuss if the analysts and the auditor consider that fair value option brings volatility into the income statement. Additionally we expect to find that managers do not want to incorporate this volatility and therefore hedge the exchange rate risk of forecasted transactions up to the level in which those hedges can be

accounted as hedge accounting. This was done through asking analysts questions such as: Theory says that the fair value option for the accounting of derivatives increases the volatility of the income statement, do you agree? or do you think managers hedge their exposure in foreign currencies until the level in which the mentioned hedge can be accounted as cash flow hedge? Regarding auditors, same questions as to analysts were made. In addition some of the following questions were made: IAS 39 gives the option under certain circumstances to account the derivatives under two options, fair value accounting and hedge accounting. Do you think this gives comparability in the operating profits of the different companies? or what do you perceive that managers are pursuing when using cash flow hedge? Do you believe that managers use the cash flow hedge options in the belief that it is important to reduce the volatility in the operating profit that they will present to the market?

The auditor agrees that fair value accounting brings volatility into the income statement of the companies. When companies implemented IFRS, they considered that if they wanted to do hedge it had to be under hedge accounting. Therefore if it could not fit under this relation companies did not hedge at all. With time they realized that hedge relations could also be under fair value accounting, thus they began to include all the hedge relations that could not be set up under hedge accounting, as economic hedges. Companies are aware that if they use fair value accounting for hedging exchange rate risk of forecasted transactions they will bring volatility into the income statement. However, auditors consider that companies should not be concerned about this because they can always give an explanation to the market. They consider that if the company is facing higher variance in earnings due to their choice of the fair value option, they can communicate to the market that their earnings are affected by the hedging option. This in turn would bring down all the negative effect that the increased volatility carries.

Analysts also agree that fair value option brings volatility into the income statement. However, the opinions are divided on how companies should see this. Analyst one

considers that companies doing hedging of future flows should theoretically hedge the net flows but they consider that this is not allowed by the standards. Therefore, hedging will be treated according to fair value accounting rules. He also believes, that during past years, there has been more acceptance in the market that this is a natural consequence of the accounting rules. Hence, analysts have accepted this increased volatility as a part of the business.

We do not share the opinion that since they cannot hedge the net they will automatically have to treat the hedge as fair value hedge. It is true that accounting rules do not allow a cash flow hedge of the net, but they do allow hedging a part of the flow. Companies are actually establishing the net flow that they will have. Afterwards, they set up a cash flow hedge over a part of the sales; this part is the net flow that they had. Doing so, companies are able to make a cash flow hedge over the net of the future flows and as such, are not treating the hedge of the flows under fair value accounting.

On the other hand, analyst two is worried about the consequences of the increases in volatility. He is aware that the information regarding hedges is limited and that companies are not willing to provide much information about the topic. In addition, the disclosure rules regarding fair value accounting are not as complete as those for hedge accounting. This makes it even more difficult for analysts to estimate the effects on the profit of hedgings. If there is an increase in the volatility on the income statement of a company and the company does not specify the effects of the fair value accounting on the income statement, it is difficult for the analyst to establish the reasons for that increased volatility. When doing valuation from his perspective, if two companies are identical but one has more volatility in the income statement, that company receives a lower value. He also considers it preferable for companies to adapt their hedging policies to fit in hedge accounting than having hedges accounted for under fair value accounting; which brings volatility into the income statements and a need to communicate to the market that this is only an effect of the chosen accounting policy.

Based on the results of the interviews, the majority of the interviewees consider that even though the fair value option gives increased volatility in the income statement, companies are able to explain it to the market. Therefore companies are not worried about which accounting treatment is used to account for their future flows. This is not in line with theory. Positive accounting states that managers have different reasons to take different accounting options. They try to influence external parties and stock prices given the information asymmetry that prevails, taking actions toward smoothing earnings over time. According to the response of the interviewees, managers do not try to use this information asymmetry in any case. Even more, managers would not care to try to smooth earnings over time and they do not care if they bring volatility into earnings because they can always explain it to the market. And the market in turn would not “punish” them for this increased volatility. Therefore, based on available data, we cannot confirm our second expectation that companies try to avoid the volatility that the fair value option brings, when hedging exchange rate risk of forecasted transactions. These conclusions may be affected by the size of the sample and the impact will be discussed in the conclusion chapter under reliability.

5.3 Analysts view of companies hedging

This group includes the questions aimed to answer how analysts measure the effect of hedging, where do they take the information from and how they incorporate this into their valuation models. This was done mainly through the answer of analysts and questions as the following were asked: Which are the hedging items that you look into the annual reports when valuing companies? or do you take information besides the annual report related to the level of hedging? or from a valuation perspective, do you consider that hedging creates value?

As mentioned in the introduction of this chapter, we had a very low response of analysts willing to have an interview. Of 26 analysts contacted, only 2 were interviewed. From

the negative answers, the reasons were that this is a very complex topic for them. Even though they are accustomed to look into annual reports, the accounting rules for financial instruments are difficult and not all the necessary information is disclosed in the annual reports. Hence, they do not incorporate the result of companies hedging into their valuation models.

From those analysts that indeed responded, we got the following answers. There is a general agreement that the main sources of information are annual reports and quarter reports. Analysts usually have some contact with companies and in some cases they can get some additional information, mostly from investor relations departments. When it comes to information regarding hedges there is a degree of disagreement. Analyst one and two agreed that this is an area of great difficulty for analysts to understand. In addition, analyst two believes that a great majority of the analysts lack the necessary knowledge about accounting rules, how those rules affect the income statement and the balance sheet of the company and how to look for this information in annual reports. This was confirmed with the comments to the rejected invitation to the interviews. This gap is increased by the fact that companies try to report as little as possible about their hedges. Companies disclose only the information required by the standards and provide few or not at all additional voluntary disclosure that could give better information to the market.

On the other hand, analyst two believes that some analysts try to understand the hedging effect and incorporate it into their valuation. Their main consideration is information about the hedging policy of the firm with regards to the forecasted flows, i.e. how much the company is planning to hedge of future flows. This is crucial information since it is incorporated into the valuation models. When information is lacking in the annual report, different analysts take different actions. Some analysts estimate the amounts with great uncertainty, even though they consider it worth it.

Other analysts consider that the range, 0 and 100% of the future cash flows, is too large to be estimated and decide against estimating.

Another problem is that, according to actual disclosure rules, information regarding hedges is not mandatory to report in interim reports or quarter reports. Investors get the true effects of hedging policies only once a year in the annual report. If the company changes the hedging policy in the meanwhile, analysts will not be aware until next annual report. The key information taken from the annual report by the analysts is the amount of hedges that affect the result and the amount taken into equity. It is important to separate the activities that have a short time effect on cash flows from those that are not part of the core operations of the company. Even though companies apply the same disclosure rules, as seen before, each company has its own understanding on how this information should be presented in the annual reports and the information is not standardized. Each annual report looks different and a full reading and understanding of each annual report is necessary to find the relevant information regarding hedging. This is another obstacle for analysts. Given that all companies report at the same time, if analysts want a full understanding of the companies they must invest a lot of resources and time. This is not always possible, and hedging is often neglected when compared with other available information.

Regarding the specific questions that arose through the analysis of the annual reports, we had the following answers: the auditor believes that the change in policy in the case of Volvo is probably due to the decrease in volumes that the company is facing. Therefore instead of securing the probable forecasted flow, they are securing the confirmed flow. If they had continued with the same policy, a big part of the hedging would have been ineffective have to be taken into the income statement directly. Analyst two agree in the auditor response and from his perspective the most difficult part is how to estimate the new levels of hedging that the company will do, increasing the uncertainty into their models.

To the question of comparability under the different accounting options, as stated before, disclosure regarding “economic” hedging is not mandatory, making impossible to compare two financial statements. This makes that if a company chooses to recognize their hedging instruments of forecasted flows under fair value accounting to “manage” the income statement it is very difficult for the analysts to know it unless the company specifically disclose it.

It is difficult to make conclusions on some of the aspects of the questions since we have responses of only two analysts. Regarding the complexity of the topic and the lack of knowledge of analysts of accounting rules and their impact on hedging is confirmed not only by the interviewees but also by many of the rejected invitation to the interviews. This increases considerably the sample for the conclusions. Between the two analysts, there is an agreement that it is very hard and time consuming to find the necessary information about companies’ hedging policies and their effects on the financial statements. This is reinforced by the fact that there is no information about the hedges in the interim reports. This is in line with DeMarzo’s (1995) findings that there are informational asymmetries between managers and shareholders because managers have private information that is costly to convey to shareholders. Even though his findings were previous to all the changes in accounting standards both in FASB and IFRS, and besides the fact that IFRS have brought much more information about hedges, reducing the information asymmetry. We believe that there is still a big gap in information validating the existence of information asymmetry. This is also reinforced by the fact that companies are not doing voluntary disclosure about this issue, almost all companies are just compiling with the standard. From the available data we can confirm the third expectation that analysts have difficulties to incorporate the hedging effect into their valuation models.

6 CONCLUSIONS

The purpose of this thesis was to explore the effect of disclosure on corporate risk management policies. We identified a concrete problem in the market related to risk management and disclosure theory. When companies set up their risk policies, managers face different accounting choices on how to account the hedging instrument used to secure the risk. They also have to follow rules on what to disclose, being able to complement this information with voluntary disclosure. Depending on the level of disclosure it can generate problems for analysts on how to assess the impact of hedging when valuing the firm. These problems were approached using three expectations.

1. Risk management is affected by accounting rules

With market imperfections, risk management creates value to the firm. One of those imperfections is information asymmetry. This asymmetry is solved through disclosure and accounting rules. Thereby, accounting rules set conditions on risk management. In this study we have confirmed that the implementation of IFRS and specifically, IAS 39 for accounting of financial instruments has changed risk policies of firms. Indeed, risk management is affected by accounting rules. This has been confirmed through the view of auditors, which helped companies during the process of changing from local GAAPs into IFRS, being a part of the process. Analysts also confirmed the change in the risk management during this course of action and one of the most important changes is the increase in the available information regarding risk management, even though it is still not enough for valuation purposes.

2. Managers do not want to incorporate the volatility that fair value accounting brings into the income statement when hedging exchange rate risk.

Positive accounting theory state that managers have different reasons to make accounting choices given that markets are not perfect. The aim is to reduce the volatility in the cash flows creating value to the firm. With the available data, we could not confirm that firms prefer the hedge accounting option over the fair value option as a way to reduce volatility. There is a general agreement that fair value accounting brings volatility into the income statement, but in general it is consider that this volatility can be explained through disclosure. Hence, companies should not worry about the chosen accounting option.

3. Analysts have difficulties to incorporate the hedging effect into their valuation models.

The information asymmetry between managers and investors is solved through disclosure, both mandatory and voluntary. The latter theory aims to achieve a better understanding of the company. After interviewing analysts we confirmed that they are conscious about hedging activities of firms, but with available disclosure rules and with no intent of companies to voluntarily provide additional information, the hedging effects are difficult to forecast for valuation purposes. This makes that many analysts do not incorporate the effect of hedging into their valuation models. Another problem mentioned by analysts when invited to participate of the interviews is that this was a complex and important topic but they do not make estimations because of a lack of full understanding of the presented information. In addition, analysts stated that even in cases where all information was available from the annual reports, hedging information is available only once a year; quarter reports, which are an important source of information for them, do not contain the necessary disclosure.

It was also found that companies from different countries have different formats when reporting information. In addition, the information that is published is not standardized. Not all the information regarding hedges is published, i.e. not all companies publish the notional amount of their contracts and not any of the analyzed companies publish the average secured rate, making it difficult to estimate the risk level that they have. However, it was found that Volvo is the company that states clearer their hedging activities and risk management policies.

From the 26 contacted analysts only 2 were interviewed. From the 4 contacted auditors only 1 was interviewed, making a total of 3 interviews. We are aware that the size of the sample is not representative to be a generalization about the changes in risk management policies concerning accounting choices. However, analysts and auditors that accepted the interviews are highly positioned within their companies and have extensive knowledge of the topic, which was beneficial for this study. Our conclusions should not be blindly accepted. As stated above, the main reason was the complexity of the topic and the lack of information.

The interviews were related to what has been done in the automotive industry. As discussed earlier the intention was to analyze how company specific actions regarding hedging affected the views that analysts had on that company. We believe that this did not affect the generality of the conclusions, since all the industries should face more or less the same problems.

Analysts stated in the interviews that disclosure has clearly increased, hence providing more accurate information in their valuations. However, the disclosure regarding the specific topic of this thesis is still weak. Therefore the real effects are difficult to be considered into their valuation models. However, the disclosure of hedging policies is an issue that standard setters are improving constantly. In the United States a new standard was issued at the beginning of the year that requires companies to disclose

their hedging activities in the interim reports. This goes inline with the comments of analysts who stated that they only get to see a real and complete picture of the company ones per year. This change will be probably undertaken by IFRS, creating further opportunities for research in this topic.

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APPENDICES

APPENDIX I

Number of contacts and companies contacted

Company	Number of persons contacted
E&Y	1
Deloitte	1
PWC	1
KPMG	1
ABG Sundal Collier	1
CA Cheuvreux	2
Carnegie AB	2
Danske Bank	1
Enskilda Securities (SEB)	4
Öhman Fondkommission	2
Erik Penser Bankaktiebolag	2
Evli Bank	2
Hagströmer & Qviberg	3
Handelsbanken Capital Markets	2
Nordea	2
Swedbank Markets	3
Total Contacted	30

APPENDIX II

Questionnaire used with financial analysts

1. Which of the mentioned companies are you following?	
<input type="radio"/> Volvo Group	<input type="radio"/> Scania
<input type="radio"/> Volkswagen Group	<input type="radio"/> Daimler Group
<input type="radio"/> BMW Group	<input type="radio"/> Renault Group
<input type="radio"/> PSA Peugeot – Citroen Group	<input type="radio"/>

2. Which are the hedging items that you look into the annual reports when valuing companies?

3. Do you take information besides the annual report related to the level of hedging?

4. If you answered yes in question 3, which are the sources for the additional information and which kind of information do you require?

5. From a valuation perspective do you consider that derivatives carried at fair value should be treated differently than derivatives carried as cash flow hedges?

6. Theory says that the fair value option for the accounting of derivatives increases the volatility of the income statement, do you agree?

7. Do you think managers hedge their exposure in foreign currencies until the level in which the mentioned hedge can be accounted as cash flow hedge?

8. There are several researches that argue that the salaries schemes generate incentives for managers to not to perform at the level shareholders would like them to. Do you think managers use cash flow hedging pointing to stabiles the operating profits thinking in reducing the volatility in their own salaries?

9. When is it considered that a company is hedging more or less than required? How do you determine the optimum point? If you do so.

10. From a valuation perspective, do you consider that hedging creates value?

11. According to theory, risk management is supposed to create value by reducing volatility on the operating income. On the other hand, the income generated by hedging is not considered one of the core operations of the company and is treated differently when doing the forecast of the cash flows. How do you consider that this affects your valuation?

APPENDIX III

Questionnaire used with risk's specialist within auditing firms

1. IAS 39 gives the option under certain circumstances to account the derivatives under two options, fair value accounting and hedge accounting. Do you think this gives comparability in the operating profits of the different companies?
2. Based on your experience, how do the mentioned options condition the Risk Management Policies of firms?
3. What do you perceive that managers are pursuing when using cash flow hedge? Do you believe that managers use the cash flow hedge options in the belief that it is important to reduce the volatility in the operating profit that they will present to the market?
4. Is it possible that the market is affected by the different choices that risk management takes? Or are the analysts going to remove those effects when they do the valuation of the firm?
5. When companies are hedging, they can do it to hedge their positions but they can also do it in a speculative matter in order to get a "pulse" of the market. Which of the options do you perceive that risk management is taking?
6. One of the concerns of companies is to hedge the downside exposure, but it also can be used to reduce the overall volatility. Based on your experience, how and which reasons may they have in order to act in that way?
7. From a valuation perspective do you consider that hedging creates value?
8. Do you think managers hedge their exposure in foreign currencies until the level in which the mentioned hedge can be accounted for as cash flow hedge?

APPENDIX IV

Company	2008			2007			2006		
	Net Sales	Operating Profits	Operating Margin	Net Sales	Operating Profits	Operating Margin	Net Sales	Operating Profits	Operating Margin
Volvo	303,667 kr	15,851 kr	5.22%	285,405 kr	22,131 kr	7.75%	258,835 kr	20,339 kr	7.86%
Scania	88,977 kr	12,098 kr	13.60%	84,486 kr	11,632 kr	13.77%	70,738 kr	8,260 kr	11.68%
Peugeot	54,356 €	-367 €	-0.68%	58,676 €	1,120 €	1.91%	55,185 €	311 €	0.56%
Renault	37,791 €	-117 €	-0.31%	40,682 €	1,238 €	3.04%	40,332 €	877 €	2.17%
Volkswagen	113,808 €	6,333 €	5.56%	108,987 €	6,151 €	5.64%	104,875 €	4,383 €	4.18%
Daimler	95,873 €	5,956 €	6.21%	99,399 €	7,885 €	7.93%	99,222 €	5,040 €	5.08%
BMW	53,197 €	921 €	1.73%	56,018 €	4,212 €	7.52%	48,999 €	4,050 €	8.27%

