

Research-Thesis: Application of hedge accounting under IFRS by industrial and commercial companies as part of their risk management strategies: a review of market practices.

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APPLICATION OF HEDGE ACCOUNTING UNDER IFRS BY INDUSTRIAL AND COMMERCIAL COMPANIES AS PART OF THEIR RISK MANAGEMENT STRATEGIES: A REVIEW OF MARKET PRACTICES

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Table of contents

List of abbreviations.....	1
I. Introduction.....	2
II. Part I - Theoretical Framework.....	4
1. Risk management in industrial and commercial companies.....	4
1.1 Concept of risk management in companies.....	4
1.2 Main financial risks faced by industrial and commercial companies.....	4
1.2.1 Foreign exchange risk.....	4
1.2.2 Interest rate risk.....	5
1.2.3 Price risk.....	5
1.3 Financial instruments used in risk management.....	6
1.3.1 Swaps.....	6
1.3.2 Forwards.....	6
1.3.3 Futures.....	7
1.3.4 Options.....	7
1.3.5 Floors.....	7
1.3.6 Caps.....	7
1.3.7 Collars.....	7
1.3.8 Non-derivative instrument.....	7
2. What is hedge accounting?.....	8
2.1 Definition and objectives of hedge accounting.....	8
2.2 Hedge accounting versus accounting without hedge accounting.....	8
2.3 Qualifying instruments.....	9
2.4 Hedged items.....	9
2.5 Qualifying criteria for hedge accounting.....	10
2.5.1 Hedge effectiveness.....	10
2.5.1.1 Economic relationship.....	10
2.5.1.2 Credit risk.....	10
2.5.1.3 Hedge ratio.....	11
2.5.1.4 Rebalancing.....	11
2.5.2 Hedge documentation.....	11
2.6 Types of hedge relationships.....	12
2.6.1 Fair value hedge.....	12
2.6.2 Cash flow hedge.....	12
2.6.3 Hedge of a net investment in a foreign operation.....	13
3. IFRS 7: Financial Instruments: Disclosures.....	14
3.1 Objectives of IFRS 7.....	14
3.2 Disclosure requirements related to hedge accounting.....	14
3.2.1 Risk management strategy.....	14

3.2.2 Amount, timing and uncertainty of future cash flows.....	15
3.2.3 Effects of hedge accounting on financial position and performance.....	15
4. Advantages and limitations of hedge accounting under IFRS.....	16
4.1 Advantages of hedge accounting for companies.....	16
4.2 Limitations and constraints of hedge accounting.....	16
III. Part II - Empirical Framework.....	18
1. Research design and methodological framework.....	18
1.1 Research approach and objectives.....	18
1.2 Mixed-method approach: quantitative and qualitative analysis.....	18
2. Sample selection and description.....	20
2.1 Selection of stock indices.....	20
2.2 Inclusion and exclusion criteria.....	20
2.3 Final sample composition.....	20
3. Quantitative analysis of hedge accounting market practices.....	22
3.1 Sectoral classification of the sample.....	22
3.2 Risk management policies, objectives and financial risk exposure.....	22
3.3 Extent of hedge accounting adoption among industrial and commercial companies.....	24
3.3.1 Hedging Strategies.....	24
3.3.2 Implementation of IFRS 9 Hedge Accounting.....	26
3.4 Hedging instruments and hedge accounting relationships observed.....	27
3.5 Impact of hedge accounting on financial statements.....	29
3.6 Transparency and disclosure practices under IFRS 7.....	31
4. Qualitative analysis: insights from professionals.....	33
4.1 Objectives of the interviews.....	33
4.2 Key insights from practitioners.....	33
5. Limitations of the empirical study.....	36
III. Conclusion.....	37
Appendices.....	39
List of resource persons.....	83
Bibliography.....	84

List of abbreviations

- OCI: Other Comprehensive Income
- P&L: Profit and Loss
- IFRS: International Financial Reporting Standards
- EFRAG: European Financial Reporting Advisory Group
- IASB: International Accounting Standards Board
- COSO: Committee of Sponsoring Organizations of the Treadway Commission

I. Introduction

Companies face many risks during their existence. Depending on the economic situation, geopolitical context and other external or internal factors, the nature and severity of these risks can vary over time. For example, variations in interest rates, foreign exchange rates, commodity prices and inflation can have a significant impact on companies' financial stability and performance (Panaretou et al., 2013). In today's globalised and volatile environment, companies face increasing challenges in managing and mitigating financial risks (dos Santos et al., 2022). As a result, risk management has become an essential part of companies' activities and decision-making processes.

To manage these exposures, companies implement different risk management strategies. One of them is the use of derivative financial instruments. Indeed, their use has considerably increased over recent decades (Panaretou et al., 2013). Companies frequently apply these instruments to mitigate their exposure to risks. This practice is called hedging. Hedging involves using a hedging instrument to offset gains or losses arising from a hedged item, thereby reducing the firm's exposure to financial risk (PwC, 2017). However, this method creates significant volatility in financial statements when accounting standards are applied under general measurement rules. Indeed, under IFRS, derivative instruments are generally measured at fair value through profit or loss, while the hedged items may follow a different accounting treatment. This accounting mismatch can result in artificial volatility that does not necessarily reflect the economic substance of the hedging relationship (PwC, 2017). It is precisely to address this issue that hedge accounting was introduced under IFRS.

In this context, hedge accounting plays an important role. Initially introduced under IAS 39 and later significantly revised under IFRS 9, hedge accounting aims to better align accounting treatment with companies' actual risk management activities (Poincelot & Chambost, 2015). More specifically, it allows entities to recognise gains and losses on hedging instruments and hedged items within the same accounting period. It reduces accounting mismatches and improves the faithful representation of economic reality in financial statements (EY, 2014). Nevertheless, the application of hedge accounting remains optional, meaning that companies may choose whether or not to apply it. In addition, IFRS 9 is complemented by IFRS 7, which requires entities to provide transparent and relevant information regarding their risk exposures, hedging strategies and the impact of hedge accounting on financial statements (KPMG, 2013).

Compared to IAS 39, IFRS 9 introduced several changes, particularly regarding the assessment of hedge effectiveness. Companies now have greater flexibility in demonstrating hedge effectiveness (Singh, 2019). Nevertheless, despite these improvements, hedge accounting remains one of the most complex areas of financial reporting under IFRS. The application of IFRS 9 still requires formal documentation, continuous assessment of hedge effectiveness and the designation of qualifying hedging instruments and hedged items, which may impose a significant administrative burden on companies (Singh, 2019).

Therefore, it appears particularly interesting to analyse how companies implement this complex accounting principle in practice and how they disclose it in their financial statements. The objective of the present thesis is to analyse how industrial and commercial companies apply hedge accounting under IFRS as part of their risk management strategies.

The study focuses on companies listed on three Benelux stock indices, the BEL 20, the AEX 25 and the LuxX Price Index, as of 31 December 2024. The Benelux region was selected because the three countries have strong economic ties and a long history of financial integration. In addition, all listed companies are required to prepare their consolidated financial statements in accordance with IFRS, ensuring a high degree of comparability. The final sample consists of 32 industrial and commercial companies, while financial institutions were excluded due to the specific regulatory frameworks and risk exposures characterising that sector.

The main research question addressed in this thesis is therefore the following: *"How do industrial and commercial companies apply hedge accounting under IFRS as part of their risk management strategies, and what are the current market practices?"*.

To answer this question, the research adopts a mixed-method approach combining both quantitative and qualitative analyses. The quantitative part of the study is based on the analysis of the 2024 financial statements of industrial and commercial companies listed on the BEL 20, AEX 25 and LuxX Price Index. The analysis focuses on 10 criteria, including the types of risks hedged, the hedging instruments used, the hedge accounting approaches adopted and the disclosures provided in the financial statements.

To complement these findings and provide practical insights, qualitative interviews were also conducted with auditors, treasury professionals and IFRS specialists. The qualitative part is based on six interviews with professionals from Deloitte, KPMG, PwC, Umicore, UCB and EFRAG. These interviews provide valuable insights into the practical realities of hedge accounting implementation.

This thesis is divided into two main parts. The first part presents the theoretical framework relating to risk management, financial instruments, hedge accounting under IFRS 9 and disclosure requirements under IFRS 7, as well as the main advantages and limitations associated with hedge accounting. The second part develops the empirical analysis of hedge accounting market practices among the selected companies, combining quantitative findings and qualitative insights from professionals. Finally, the thesis concludes by summarising the main findings.

II. Part I - Theoretical Framework

1. Risk management in industrial and commercial companies

1.1 Concept of risk management in companies

Risk management is a key component of modern companies. In recent years, globalization, technological advances and the growing interconnection of financial markets have significantly increased both the complexity and severity of internal and external risks (Sunaryo et al., 2025). Organizations face numerous risks arising from different aspects of their business activities (PwC, 2017). These risks may result from external factors such as economic conditions or geopolitical events. Companies are also exposed to risks caused by their day-to-day operations, including fluctuations in interest rates, exchange rates, equity prices and commodity prices (Müller, 2020). To mitigate these risks, firms rely on various risk management techniques (PwC, 2017). In today's challenging business environment, companies have less tolerance for unexpected events and increasingly adopt a holistic approach to risk management. Regulatory requirements related to board oversight further encourage organizations to implement an enterprise-wide perspective on risk (Deloitte, s.d).

The Committee of Sponsoring Organizations of the Treadway Commission (COSO) defines enterprise risk management as *"a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives."* This definition highlights that enterprise risk management is not a one-time action but a continuous and organization-wide process. It is embedded in the company's strategy and involves all levels of the organization to identify and control risks. Ultimately, its objective is to ensure that risks remain within acceptable limits in order to support the achievement of the entity's goals.

It was suggested that one of the biggest factors leading to the destruction of value is to develop and implement a strategy without assessing the associated risks (Grove & Clouse, 2016). Indeed, effective risk management plays a key role in improving financial performance by reducing default risk, strengthening governance and optimizing working capital management (Ait Novatiani et al., 2022, cited in Sunaryo et al., 2025).

1.2 Main financial risks faced by industrial and commercial companies

As discussed in Chapter 1.1, companies are exposed to various financial risks that can significantly impact their performance and financial stability. For instance, some entities are primarily concerned with exchange rate or interest rate fluctuations, while others are more exposed to commodity price volatility (PwC, 2017). This chapter focuses on three specific types of financial risk: foreign exchange risk, interest rate risk and price risk, as these are the most commonly managed through hedging strategies (Allini et al., 2024).

1.2.1 Foreign exchange risk

Foreign exchange risk is an important financial risk for firms operating internationally. Exchange rate movements affect both the cash flows generated by a firm's activities and the discount rate used to value these cash flows, which in turn has a direct impact on the firm's value (Muller & Verschoor, 2006). More generally, exchange rates are widely seen as a major source of macroeconomic uncertainty and can therefore influence the performance and valuation of firms with international operations (Muller & Verschoor, 2006).

Foreign exchange risk is defined by Yusoff et al. (2023) as the variability or fluctuations faced by global companies in consolidated earnings resulting from unexpected changes in currencies. This risk is particularly relevant because companies, investors and other economic agents frequently carry out transactions in foreign currencies, which makes their results and profitability sensitive to exchange rate changes (Al Mansoori et al., 2024).

Foreign exchange risk is usually divided into three main types: transaction risk, translation risk and economic risk (Al Mansoori et al., 2024). Transaction risk appears when a firm enters into a foreign currency transaction and there is a delay between the agreement and the actual payment. During the delay between the agreement and the actual payment, exchange rates may fluctuate, which can result in a different amount being paid or received. This creates financial uncertainty for companies (Raza et al. 2022). On the other hand, translation risk appears when a company holds assets, investments or subsidiaries in foreign currencies. In this case, exchange rate variations affect their value when they are converted into the reporting currency, even if no actual cash flow is involved (Zhu & Sardana, 2020). Finally, economic risk refers to the longer-term impact of exchange rate movements on a firm's competitiveness, future cash flows and overall profitability (Al Mansoori et al., 2024).

In today's highly interconnected economy, foreign exchange risk is driven by a combination of economic, financial and geopolitical factors, which makes it a key issue for multinational firms (Al Mansoori et al., 2024). To manage this risk, the literature identifies several strategies. Hedging is the most commonly discussed tool, but firms can also rely on other approaches such as using local currencies, netting exposures, matching inflows and outflows in the same currency or applying leading and lagging strategies, which involve accelerating or delaying payments depending on expected exchange rate movements (Al Mansoori et al., 2024).

1.2.2 Interest rate risk

Interest rate risk refers to the potential impact of fluctuations in interest rates on an organisation's financial position and it must be identified, measured, and managed by treasury functions. Companies are exposed to this risk due to their significant financial commitments, particularly debt, which makes them vulnerable to changes in interest rates and may lead to financial instability. Effective management of interest rate risk helps reduce borrowing costs by optimizing the debt structure, particularly in terms of maturity and financing composition (PwC, 2024).

Interest rate risk is primarily reflected in the structure of debt, particularly through the distinction between fixed-rate and variable-rate borrowings. Variable-rate debt adjusts immediately to market conditions, meaning that changes in interest rates have a direct impact on financial expenses. In contrast, fixed-rate debt is not affected in the short term. However, its impact becomes progressively visible as existing borrowings mature and are refinanced (Banque de France, 2024).

Thus, fluctuations in interest rates affect the overall cost of corporate debt. When interest rates rise, the cost of financing increases, leading to higher interest expenses and potentially reducing available cash flows. This mechanism also influences corporate financing decisions, particularly firms' reliance on debt and their overall capital structure (Zhao & Han, 2025).

1.2.3 Price risk

Commodities such as metals, agricultural products and energy resources are important inputs in the operations of commercial and industrial companies. Their prices are highly volatile due to multiple external factors, including changes in supply and demand, geopolitical events, currency fluctuations, and shifts in economic policy (KPMG, 2024). Over the past three decades, commodity markets have experienced a significant increase in both price volatility and the dispersion of volatility across different types of commodities, with commodity prices also exhibiting higher volatility compared to stock market indices, interest rates, and exchange rates (Han et al., 2022).

Commodity price risk originates from the volatility of raw material and energy prices, which creates uncertainty for firms in their production processes. In this context, risk exposure represents the sensitivity of a firm's value to changes in commodity prices (Tang, 2015). From a financial perspective, commodity prices affect firm value through their impact on corporate cash flows, as they influence both input and output factors in the production process (Bartram, 2005). Consequently, unmanaged exposure to commodity price fluctuations can quickly erode profit margins, destabilise cash flows and weaken a firm's overall competitiveness (Deloitte, n.d.).

This volatility also leads to unpredictability in production costs, which complicates financial planning and liquidity management and may negatively affect long-term investment decisions, making companies more cautious in uncertain market environments (KPMG, 2024). As a result, all sectors are exposed to this risk, with an estimated exposure ranging between 8% and 11% to commodity price movements (Zhao & Han, 2025).

1.3 Financial instruments used in risk management

To mitigate their risks firms rely on various risk management techniques, with hedging being one of them (PwC, 2017). In this context, companies use derivative instruments to hedge the financial and operational risks they face (Müller, 2020; Panaretou et al., 2013). As noted by (Panaretou et al. 2013), *“the use of derivative instruments for corporate risk management has grown dramatically over the past decades.”*

A derivative instrument is a financial instrument or a non-financial contract that has three characteristics. First, the instrument or contract must include one or more underlyings as well as one or more notional amounts or payment provisions (or both). An underlying variable can be, for example, the price of a traded asset. Second, it must require either no initial net investment or an initial net investment that is smaller than would be required for other types of instruments or contracts that are expected to react in a similar way to changes in market factors. Third, the instrument or contract contains a net settlement provision. Net settlement generally refers to a one-way transfer of an asset, most often cash, from the counterparty in a loss position to the counterparty in a gain position. This settlement can be achieved either directly, through a contractual net settlement between the two parties, or indirectly, through a market mechanism that facilitates net settlement, or through the delivery of either a derivative or an asset that is easily convertible into cash (KPMG, 2026).

The following sections provide definitions of the most common derivative and non-derivative instruments, both of which may be used by firms for risk mitigation purposes through hedging.

1.3.1 Swaps

Deloitte defines a swap as a contract between two parties who agree to exchange cash flows in the future according to rules set in advance. The agreement specifies the dates on which the cash flows will be exchanged as well as how they will be calculated. The most common types of swaps are interest rate swaps and currency swaps (Deloitte, s.d).

In an interest rate swap, one party pays interest at a fixed rate to another party, based on a notional principal, over a specified period. In return, it receives interest at a floating rate from the other party, on the same notional amount and over the same period (Deloitte, s.d).

As for currency swaps, they are contracts in which two parties exchange principal amounts as well as interest payments, which can be at fixed or floating rates, but in different currencies. The contract specifies an amount in each of the two currencies. These amounts are generally exchanged at the beginning of the contract and then again at the end. In general, they are chosen to be approximately equivalent in value, based on the exchange rate at the start of the swap (Deloitte, s.d).

1.3.2 Forwards

Deloitte defines a forward as *“an agreement to buy or sell an asset on a future date for an agreed-upon price.”* This means that this derivative implies that, at the maturity date, the underlying asset must be exchanged at the price agreed upon in the contract (PwC, 2024). This derivative is traded in the over-the-counter market (Deloitte, s.d).

One of the parties to the contract takes a long position and agrees to buy the underlying asset on a specified future date at a predetermined price. The other party takes a short position and agrees to sell the asset on the same date and at the same price (Deloitte, s.d). Most of the time, entering into a forward

contract does not require any initial cost, which represents an advantage for companies wishing to use it as a hedging instrument.

1.3.3 Futures

A futures contract is similar to a forward contract, as it is an agreement between two parties to buy or sell an asset at a future date and at a price agreed upon today. However, unlike forward contracts, futures are generally traded on an exchange. To make trading possible, the exchange imposes standardized features. Since the parties do not necessarily know each other, the exchange also ensures that the contract will be honored (Deloitte, s.d).

1.3.4 Options

In its 2024 publication *“US Derivatives & Hedging Guide”*, PwC defines an option as a derivative that gives its holder the right, but not the obligation, to exercise the contract. Therefore, in general, the holder will only exercise the option if it is advantageous for them, that is, when the option is “in the money”. Otherwise, they will not exercise it if it is not profitable. Call options, put options and warrants are the most common types of options.

A call option gives the right to buy an asset at a predetermined price, known as the strike price. A put option gives the holder the right to sell an asset at a predetermined price on a specified date. For example, it may grant the right to sell shares at a fixed price. Finally, a warrant is a call option issued by a company on its own shares. It gives the right to purchase shares of that company at a predetermined price.

1.3.5 Floors

In its paper *“Product Disclosure Statement”*, JPMorgan defines a floor as an interest rate option that protects against falling floating interest rates below a predetermined strike rate during a specified period. In simpler terms, it sets a minimum interest rate below which the rate cannot fall.

1.3.6 Caps

A cap is the opposite of a floor. In its paper *“Product Disclosure Statement”*, JPMorgan defines a cap as an interest rate option that protects against rising floating interest rates above a predetermined strike rate over a specified period. In other words, it sets a maximum interest rate above which the rate cannot rise.

1.3.7 Collars

An interest rate collar is a derivative that allows a company to benefit from a floating interest rate while limiting its movements within a predefined range. This range is set by a floor and a cap. In other words, the company continues to pay a floating interest rate, but this rate is restricted to fluctuate between a minimum level and a maximum level (Forbes, 2019).

1.3.8 Non-derivative instrument

Non-derivative instruments are financial instruments that do not meet the definition of a derivative under IFRS 9. They typically include financial assets and liabilities such as loans, bonds, deposits and cash holdings. Unlike derivatives, their value is not primarily dependent on changes in an underlying variable as defined in IFRS 9.

2. What is hedge accounting?

2.1 Definition and objectives of hedge accounting

Hedge accounting is a voluntary accounting treatment in accordance with IFRS 9 Financial Instruments, issued by the International Accounting Standards Board (IASB). This standard defines the principles, eligibility criteria and application requirements for hedge accounting. Hence, a large part of this chapter 2 is based on the IASB's official publication, particularly the sections relating to hedge accounting (IASB, 2014).

IFRS 9 replaced the previous standard IAS 39 (Poincelot & Chambost, 2015). Compared to IAS 39, IFRS 9 introduced several changes, mainly in the way hedge effectiveness is assessed. Companies now have more autonomy in demonstrating hedge effectiveness (Singh, 2019), which makes hedge accounting more flexible than under IAS 39.

As quoted in Chapter 1.3, companies can mitigate risk through hedging. Hedging involves using a hedging instrument to offset gains or losses arising from a hedged item, thereby reducing the firm's exposure to financial risk (PwC, 2017). However, in the absence of hedge accounting, hedging activities may create what has been described as a "misleading phenomenon" (Allini et al., 2024). Indeed, derivatives are measured at fair value through profit or loss, which can increase earnings volatility (PwC, 2017). As a result, financial statements may not fully reflect the underlying economic reality of the company, which goes against the objective of financial reporting under IFRS.

The objective of hedge accounting is therefore to better reflect risk management activities in financial statements and to ensure that the hedged item and the hedging instrument are economically aligned (Singh, 2018). In paragraph 6.1.1, IFRS 9 states that the objective of hedge accounting is to allow entities *"to represent, in the financial statements, the effects of an entity's risk management activities that use financial instruments to manage exposures arising from particular risks that could affect profit or loss."*

If all the conditions set out in IFRS 9 are met, an entity can formally designate a hedging relationship between a hedging instrument and a hedged item. This ensures that gains and losses are recognised in the same period, either in profit or loss or in other comprehensive income, depending on the type of hedge. As a result, hedge accounting enhances the relevance and stability of financial reporting (Allini et al., 2024) and helps avoid economically unjustified earnings volatility (Dinh & Seitz, 2020).

In practice, the most commonly used hedging instruments are forwards, swaps and options. The extent to which companies apply hedge accounting depends on the industry. For instance, sectors such as oil and gas, petroleum, chemicals, telecommunications, healthcare and airlines make extensive use of hedge accounting (Allini et al., 2024).

Finally, IFRS 9 distinguishes three types of hedging relationships: fair value hedges, cash flow hedges and hedges of a net investment in a foreign operation (Müller, 2020). These will be explained in the following sections.

2.2 Hedge accounting versus accounting without hedge accounting

Without hedge accounting, derivatives and hedged items are accounted for separately, which can lead to accounting mismatches in financial reporting. Derivatives are generally measured at fair value, with changes recognised directly in profit or loss. In contrast, the hedged items are often measured using different bases, such as amortised cost or fair value through other comprehensive income (EY, 2014). This difference in accounting treatment creates a timing mismatch. Gains and losses on derivatives are recognised immediately, while those related to the hedged items may be recognised at a later stage. As a result, earnings can appear more volatile, even if the hedging strategy is economically effective (PwC, 2017; Allini et al., 2024).

Hedge accounting aims to address this issue. It allows companies to recognise the effects of the hedging instrument and the hedged item in the same period, either in profit or loss or in other comprehensive

income, depending on the type of hedge. This reduces the mismatch and provides a more consistent representation of the company's financial performance. In simple terms, hedge accounting modifies the usual recognition of gains and losses on hedging instruments and hedged items, so that they are recognised in the same accounting period (PwC, 2017).

Therefore, the main difference between accounting with and without hedge accounting lies in the timing of recognition of gains and losses. While accounting without hedge accounting may introduce artificial volatility, hedge accounting helps align the accounting treatment with the economic reality of the hedging strategy (Dinh & Seitz, 2020).

2.3 Qualifying instruments

Several types of financial instruments can be designated as hedging instruments under IFRS 9. First, all derivatives measured at fair value through profit or loss are eligible, except for certain written options (as specified in paragraph B6.2.4 of IFRS 9). Second, a non-derivative financial asset or liability measured at fair value through profit or loss can also be used as a hedging instrument under certain circumstances. More specifically, a financial liability measured at fair value through profit or loss cannot qualify if the portion of its fair value changes attributable to changes in the credit risk of that liability is recognised in other comprehensive income.

In the context of hedging foreign currency risk, the foreign currency component of a non-derivative financial asset or liability may be designated as a hedging instrument, provided that it is not an equity instrument for which fair value changes are recorded in other comprehensive income. In such cases, only the eligible risk component may be designated rather than the instrument in its entirety. It is also important to note that only instruments concluded with external parties can be designated.

When a financial instrument is designated as a hedging instrument, it must, in principle, be designated in its entirety. However, certain exceptions allow only part of the instrument to be designated. When an option is used, the intrinsic value may be separated from the time value and the entity may choose to designate only the intrinsic value. In the case of a forward contract, the forward element may be separated from the spot element, allowing the entity to designate only the spot element and exclude the forward element. Similarly, the foreign currency basis spread may be excluded from the designation. An entity may also designate a proportion of a hedging instrument, for example 50% of its nominal amount, but it cannot designate only a portion of the change in fair value over a specific period. Finally, several instruments may be combined and treated as a single hedging instrument, provided that, in substance, they do not constitute a net written option at the date of designation.

2.4 Hedged items

Under IFRS 9, a hedged item may consist of a recognised asset or liability, an unrecognised firm commitment, a forecast transaction or a net investment in a foreign operation. If the hedged item is a forecast transaction, it must be highly probable. A hedged item may be either a single item or a group of items, provided that it is reliably measurable. An entity may also hedge a net exposure, which represents a combination of an eligible hedged item and an existing derivative. A forecast transaction may be included in a net exposure if it is highly probable and if, once it occurs, it would qualify as an eligible hedged item.

As a general rule, only items involving parties external to the entity can be designated as hedged items. Therefore, intragroup transactions cannot be designated in the consolidated financial statements, as they are eliminated upon consolidation. However, they may be designated in the individual financial statements of the entities concerned.

An exception applies to foreign exchange risk. The FX risk of an intragroup monetary item may be designated as a hedged item if it gives rise to foreign exchange gains or losses that are not eliminated upon consolidation under IAS 21. This is typically the case when the entities involved have different functional currencies. Similarly, the FX risk of a highly probable forecast intragroup transaction may also qualify as a hedged item.

Finally, an entity may hedge either the entire hedged item or only a component of it. When a component is hedged, it must be clearly identifiable and reliably measurable if it relates to a specific risk. An entity may also hedge selected contractual cash flows or a proportion of the nominal amount of the hedged item.

2.5 Qualifying criteria for hedge accounting

Hedge accounting is an option that IFRS grants to companies to better reflect their risk management strategies in their financial statements. However, these accounting rules are an exception to the usual accounting principles, which means that certain conditions must be met before a hedging relationship can qualify. In other words, an entity can only apply hedge accounting if it satisfies the required eligibility criteria.

2.5.1 Hedge effectiveness

In the document « In depth: Achieving hedge accounting in practice under IFRS 9 », PwC defines hedge effectiveness as « *the extent to which changes in the fair value or cash flows of the hedging instrument offset changes in the fair value or cash flows of the hedged item* ». IFRS 9 introduces 3 hedge effectiveness requirements: economic relationship, credit risk and hedge ratio.

2.5.1.1 Economic relationship

Firstly, there must be an economic relationship between the hedged item and the hedging instrument. This means that their values should move in opposite direction due to the same risk or underlying factor. For example, to protect itself against interest rate fluctuations, a company may use an interest rate swap. In this contract, it receives fixed-rate payments and pays variable-rate interest. Thus, when interest rates change, the effects of both elements offset each other, which helps reduce risk. To ensure that this economic relationship is maintained, the company must perform an ongoing assessment of the hedging relationship throughout its duration. The purpose is to verify that the hedge remains consistent with the risk management objective.

However, it is important to note that it is unlikely that an entity would designate a hedging instrument without an underlying economic relationship. Therefore, according to PwC, this requirement is generally not burdensome. IFRS 9 accepts proxy hedging. This means that the hedge does not exactly reflect the actual risk management approach, but it is still acceptable if it relates to the same type of risk and reflects the entity's risk management intention. For example, IFRS 9 does not allow the hedging of a net position of interest rate-related cash flows, which requires companies to designate partial gross positions and therefore leads them to use proxy hedging strategies. (PwC, 2017)

2.5.1.2 Credit risk

Secondly, IFRS 9 requires that, in order to apply hedge accounting, the impact of changes in credit risk must not be of such magnitude that it dominates value changes, even in the presence of an economic relationship between the hedged item and the hedging instrument. Credit risk may affect both the hedging instrument and the hedged item, in the form of counterparty credit risk or the entity's own credit risk. The assessment of whether credit risk "dominates" value changes relies on professional judgement. However, it necessarily implies a very significant impact on the fair value of either the hedging instrument or the hedged item. The standard also specifies that minor effects should be disregarded, even if, in a given period, they may have a greater impact on fair value than changes in the hedged risk. This assessment is therefore both relative and absolute. Even where an economic relationship exists, credit risk must therefore not be sufficiently significant to dominate the value changes arising from that relationship.

Indeed, the hedge accounting model is based on a compensatory relationship between changes in the hedging instrument and those in the hedged item. If the effect of credit risk becomes dominant, this compensation may become unstable or irregular. For example, a company wants to protect itself against changes in the price of a raw material it plans to buy in the future. To do this, it enters into a derivative contract with Bank X to purchase the raw material at a fixed price at a future date. If this contract is not collateralised and Bank X's financial situation worsens significantly, credit risk may have a strong impact on the fair value of the derivative. This impact can even become more important than the effect of changes in the commodity price. In contrast, the value of the company's future purchases mainly depends on the price of the raw material. It is not affected by the financial situation of Bank X (EY, 2014; PwC, 2024).

2.5.1.3 Hedge ratio

Finally, the last requirement is hedge ratio. The hedge ratio can be defined as « *the relationship between the quantity of the hedging instrument and the quantity of the hedged item in terms of their relative weighting* » (PwC, 2017). It therefore shows how both are proportioned within a hedging strategy. IFRS 9 requires this ratio to be the same as the one used by the entity in its risk management. The main idea is that hedge accounting should reflect the economic reality and the way the entity actually manages its risks. There is no need to perform a retrospective effectiveness test, as under IAS 39. However, the entity must continuously assess whether the hedge remains effective and whether the hedge ratio remains appropriate. The entity must therefore always use a ratio that is consistent with its risk management strategy. It cannot intentionally adjust this ratio in order to obtain a better accounting outcome. This means that the ratio cannot be chosen solely to improve accounting results or to artificially reduce ineffectiveness. However, this does not mean that the hedge must be perfect. Differences may exist, but they must not be intentionally created. The objective is simply to avoid artificial imbalances between the hedging instrument and the hedged item (PwC, 2017).

2.5.1.4 Rebalancing

IFRS 9 introduces the concept of rebalancing. This mechanism allows entities to adjust the quantities of either the hedged item or the hedging instrument within an existing hedging relationship in order to maintain a hedge ratio that complies with hedge effectiveness requirements. In this way, companies can adapt their hedge to changes in the underlying or risk variables. This is a positive development, as rebalancing does not require the de-designation and re-designation of a hedging relationship. Instead, the relationship is treated as a continuation of the existing hedge. However, at the time of rebalancing, any hedge ineffectiveness must be measured and recognised immediately before the adjustments are made. Rebalancing is designed to prevent a hedge from becoming unbalanced. This assessment is required at inception, at each reporting date, and whenever a significant change in circumstances occurs, whichever happens first. When a hedging relationship is rebalanced, the entity must also update its documentation, including the analysis of the sources of hedge ineffectiveness that are expected to affect the relationship over its remaining life. However, rebalancing is not always possible. For example, if the risk management objective changes, rebalancing is no longer permitted, and hedge accounting must be discontinued (PwC, 2017).

2.5.2 Hedge documentation

At the inception of the hedging relationship, the hedge must be formally designated and documented. This documentation must specify, in particular, the hedging instrument, the hedged item, the nature of the risk being hedged and the way the entity assesses whether the hedging relationship meets the effectiveness requirements. It must also include an analysis of potential sources of hedge ineffectiveness and explain how the hedge ratio has been determined. In contrast to IAS 39, documentation is no longer static and must be updated by the entity over time. For example, companies are required to update their documentation when applying rebalancing, as explained above or when revising the analysis of the sources of hedge ineffectiveness (PwC, 2017).

2.6 Types of hedge relationships

There are three types of hedging relationships: fair value hedges, cash flow hedges and hedges of a net investment in a foreign operation (Müller, 2020).

2.6.1 Fair value hedge

The concept of a fair value hedge is based on the idea that a company try to protect itself against changes in the value of an asset, a liability or an unrecognised firm commitment when these changes are caused by a specific risk and could affect P&L. In this context, the risk being hedged is the risk that the fair value of an element may change due to factors such as changes in interest rates, foreign exchange rates, equity prices or commodity prices (PwC, 2017).

When hedge accounting is applied, the carrying value of the hedged item is adjusted for the fair value changes attributable to the risk being hedged and those changes are recognised in profit or loss. At the same time, the hedging instrument is measured at fair value and any changes in its fair value are also recognised in profit or loss. As a result, gains and losses on the hedged item and on the hedging instrument are recognised in the same place, allowing them to offset each other. This accounting treatment reduces the impact of market fluctuations on the company's financial performance and ensures that it reflects the economic purpose of the hedge (BDO, 2019).

Example without applying fair value hedge accounting:

	Period 1	Period 2	Total
Hedged item		50	50
Derivative	-50		-50
P&L	-50	50	0

Example with the application of fair value hedge accounting:

	Period 1	Period 2	Total
Hedged item	50		50
Derivative	-50		-50
P&L	0	0	0

We can see in this example that, without hedge accounting, the application of hedging creates volatility in profit or loss. However, when hedge accounting is applied, the impact on profit or loss is eliminated.

2.6.2 Cash flow hedge

The objective of a cash flow hedge is to mitigate the exposure to variability in future cash flows. This variability may arise from a specific risk associated with a recognised asset or liability, an unrecognised firm commitment (only in the case of foreign currency risk) or a highly probable forecast transaction. These changes in cash flows may affect profit or loss. Future cash flows can be related to existing assets or liabilities, such as future interest payments or receipts on floating-rate debt. They can also be linked to forecast transactions, such as expected sales or purchases in a foreign currency. The volatility of these future cash flows may result from changes in interest rates, exchange rates, equity prices or commodity prices (PwC, 2017).

Where a hedging relationship is effective, changes in the fair value of the hedging instrument are recognised in Other Comprehensive Income (OCI) instead of profit or loss (BDO, 2019). The ineffective portion of the change is recognised in profit or loss. By the ineffective part, it is meant that the cumulative change in the hedging instrument exceeds the change in the hedged item. If the change in the hedging instrument is smaller than the change in the hedged item (an « under-hedge »), no ineffectiveness is recorded. This is different from a fair value hedge, where ineffectiveness is recorded in both under-hedges and over-hedges (EY, 2014).

When the hedged item is recognised in profit or loss, the accumulated gains or losses previously recorded in equity are reclassified to profit or loss (PwC, 2017).

The amount recognised in OCI corresponds to the lower of the gain or loss on the hedging instrument since inception, and the change in the value of the expected cash flows of the hedged item since the beginning of the hedge (EY, 2014).

Example without applying cash flow hedge accounting:

	Period 1	Period 2	Total
Hedged item		50	50
Derivative	-50		-50
P&L	-50	50	0

Example with the application of cash flow hedge accounting:

	Period 1	Period 2	Total
Hedged item		50	50
Derivative		-50	-50
P&L	0	0	0

As illustrated in the fair value hedge accounting example, this case shows that without hedge accounting, hedging creates volatility in profit or loss. However, when hedge accounting is applied, this volatility in profit or loss is eliminated.

2.6.3 Hedge of a net investment in a foreign operation

Under IAS 21, a net investment in a foreign operation represents the reporting entity's share in the net assets of that operation, including any recognised goodwill. Hedges of a net investment in a foreign operation follow an accounting treatment similar to that of cash flow hedges. Exchange differences arising on the consolidation of these net assets are recognised in OCI and accumulated in equity until the foreign operation is disposed of or liquidated. Upon disposal or liquidation, they are reclassified to profit or loss as part of the gain or loss on disposal.

Foreign currency gains or losses on the hedging instrument are recognised in OCI, to the extent that hedge accounting is applied and the hedge is effective, until the subsidiary is disposed of or liquidated. At that point, they are reclassified to profit or loss.

3. IFRS 7: Financial Instruments: Disclosures

3.1 Objectives of IFRS 7

IFRS 7 « *Financial Instruments: Disclosures* », was issued in August 2005. As its name suggests, the purpose of this standard is to require companies to provide information in their financial statements for users (IASB, 2021). This objective is consistent with the broader aim of the international standard setter to develop high-quality financial reporting standards in order to improve the comparability of financial statements (Mnif et al., 2024).

The information provided in the financial statements should help users assess, on the one hand, the significance of financial instruments for the entity's financial position and performance. On the other hand, it should allow them to assess the nature and extent of the risks arising from these financial instruments. These risks include those to which the entity is exposed during the period as well as at the reporting date. Finally, the standard also requires entities to describe how they manage these risks. Therefore, IFRS 7 plays a complementary role by ensuring that users are able to interpret the accounting treatment of financial instruments provided under IFRS 9 and IAS 32 (IASB, 2021).

Following the introduction of IFRS 9, IFRS 7 was changed resulting in the addition of new disclosure requirements as well as significant changes to existing ones. In relation to hedge accounting, feedback from financial statement users provided to the IASB indicated that previous disclosures were not sufficiently useful and did not provide adequate transparency regarding entities' hedging activities. In response to these concerns, the IASB introduced enhanced disclosure requirements (KPMG, 2014).

The requirements set out in IFRS 7 complement those of IFRS 9 and IAS 32. While IFRS 9 defines the rules for the recognition and measurement of financial instruments and IAS 32 sets out their presentation in the financial statements, IFRS 7 focuses on additional disclosure requirements (IASB, 2021).

3.2 Disclosure requirements related to hedge accounting

When a company decides to apply hedge accounting, it must provide a set of disclosures in accordance with IFRS 7. The entity is required to present information regarding its risk management strategy and how it implements this strategy to manage its risk exposures. In addition, it must explain how its hedging activities may affect the amount, timing, and uncertainty of future cash flows. Finally, it must also disclose the impact of hedge accounting on its financial statement and whether the entity is applying the option to designate a credit exposure as measured at fair value through P&L (PwC, 2017).

Information related to hedge accounting must be grouped in a single note or section of the financial statements. If some information has already been presented elsewhere in the financial statements, it does not need to be repeated, entities may refer to it through cross-references. Furthermore, information must be presented by risk category, defined according to the risks hedged by the entity in a consistent manner. The entity has some discretion regarding the level of aggregation or disaggregation of the information but it must remain consistent with the other presentation requirements set out in IFRS 7 and IFRS 13 (KPMG, 2013).

To provide a clearer analysis of these requirements, the following sections will examine the risk management strategy, the impact of hedging on future cash flows and the effects of hedge accounting on financial position and performance.

3.2.1 Risk management strategy

In the document « *First Impressions: IFRS 9 (2013) – Hedge Accounting and Transition* », KPMG explains that, in the financial statements, entities must disclose an explanation of their risk management strategy for each category of risk exposure that they choose to hedge and for which hedge accounting is applied. The information provided should enable users of the financial statements to understand how each risk arises, how the entity manages these risks and the extent of the risk exposures that the entity manages. Entities

must also indicate whether they hedge an item in its entirety for all risks or whether they hedge one or more risk components of an item, as well as the reasons for adopting this approach.

In addition, entities are required to describe the hedging instruments used and how they are used to hedge risk exposures. They must also determine the economic relationship between the hedged item and the hedging instrument in order to assess hedge effectiveness. Finally, entities must explain how they establish the hedge ratio and identify the sources of hedge ineffectiveness.

When an entity designates a specific risk component as a hedged item, it must provide additional qualitative and quantitative information. In particular, it must explain how the risk component was identified, including a description of the nature of the relationship between the risk component and the overall item. It must also explain how the risk component relates to the item as a whole.

3.2.2 Amount, timing and uncertainty of future cash flows

Entities have to provide quantitative information, by risk category, enabling users of the financial statements to assess the terms and conditions of hedging instruments and their effect on the amount, timing and uncertainty of future cash flows. In particular, companies must explain when amounts related to hedging instruments will mature, in order to show when cash flows are expected to occur. They must also, where necessary, disclose the average prices or rates used in these instruments, such as strike prices or forward rates (IASB, 2021).

If a company frequently changes its hedging relationships as part of a dynamic risk management strategy, it may be exempt from providing certain detailed disclosures. However, it must still explain its overall risk management strategy, how it applies hedge accounting in this context, and how often it adjusts its hedging relationships. IFRS 7 also requires entities to explain the main sources of hedge ineffectiveness, as well as any other factors that may reduce the effectiveness of hedges and their impact. Finally, for cash flow hedges, companies must disclose whether any previously forecast transactions designated in hedging relationships are no longer expected to occur (IASB, 2021).

3.2.3 Effects of hedge accounting on financial position and performance

Given that users of financial statements favor a risk-based analysis rather than an analysis based on types of hedging relationships, the IASB recommends that entities present information in a tabular format. This presentation combines risk categories and types of hedges in order to link financial information to risk management (KPMG, 2013).

With regard to financial position, companies are required to disclose information relating to hedging relationships that affect the statement of financial position. For fair value hedges, this includes the carrying amount of hedged items as well as cumulative fair value adjustments recognised under hedge accounting. For cash flow hedges and hedges of net investments, entities must present the accumulated balances within equity, in particular the cash flow hedge reserve, as well as the movements affecting these reserves during the period (KPMG, 2013).

With regard to financial performance, IFRS 7 requires disclosure of the impact of hedge accounting on profit or loss and OCI. This includes the recognition of hedge ineffectiveness in profit or loss, as well as gains and losses on hedging instruments recognised in OCI. Entities must also disclose amounts reclassified from equity to profit or loss when the hedged item affects earnings, enabling users to assess the timing and impact of hedge-related adjustments on performance (KPMG, 2013). An illustrative example of these disclosures is provided in Appendix 1, based on the document *“Hedge Accounting under IFRS 9”*, published in February 2014.

4. Advantages and limitations of hedge accounting under IFRS

4.1 Advantages of hedge accounting for companies

As explained in previous chapters, the main reason why companies apply hedge accounting is to reduce volatility in financial statements arising from the use of derivative instruments. By aligning the accounting treatment of hedging instruments and hedged items, it improves the representation of an entity's underlying risk management activities (Singh, 2017; Tami Dinh & Barbara Seitz, 2020). However, beyond this accounting impact, the literature also highlights several broader economic and financial benefits of hedge accounting.

Firstly, it has been shown that firms applying hedge accounting under IFRS tend to invest more than non-users. A positive relationship has been observed between hedge accounting usage and the level of capital investment (Kreß et al., 2025). Moreover, this effect is now stronger with the introduction of IFRS 9, which has improved the flexibility and relevance of hedge accounting practices (Allini et al., 2024).

Secondly, hedge accounting has been shown to generate value-relevant benefits for firms. It is associated with an increase in firm value in many countries (dos Santos et al., 2022), a reduction in information asymmetry in financial markets, higher debt capacity and lower financial distress costs (Allini et al., 2024). By improving the transparency of hedging activities, hedge accounting allows investors to better understand how firms manage risk, thereby enhancing the overall information environment (Allini et al., 2024). In addition, firms applying hedge accounting may rely less on accrual-based earnings management to smooth reported results (Jin & Rui, 2024).

More broadly, these effects suggest that hedge accounting improves both market perception and financial reporting quality. For example, studies suggest that hedging activities reduce information uncertainty and enhance earnings predictability, which in turn improves the reliability of financial information provided to market participants (Manconi et al., 2018; Ranasinghe et al., 2022).

Beyond these general benefits, IFRS 9 introduces specific improvements compared to IAS 39. One key improvement is the introduction of the rebalancing mechanism. Under IAS 39, hedging relationships that became ineffective had to be discontinued, which often increasing volatility in financial statements. In contrast, IFRS 9 allows entities to adjust hedge relationships without discontinuation, thereby reducing unnecessary volatility and better aligning accounting outcomes with actual risk management strategies (Müller, 2020). This improves the consistency between accounting and economic reality. In addition, IFRS 9 broadens the range of eligible hedging instruments, which particularly benefits companies with limited access to derivative markets or with constraints related to collateral requirements or uncollateralised OTC instruments (EY, 2014). Overall, IFRS 9 is widely considered to provide a more flexible and principles-based framework than IAS 39, making hedge accounting more accessible and more closely aligned with firms' risk management practices (Allini et al., 2024; PwC, 2017).

Finally, IFRS 9 enhances transparency through improved alignment between hedge accounting and risk management disclosures. These changes aim to ensure that financial reporting more accurately reflects how companies manage risk, while also increasing flexibility in the application of hedge accounting (PwC, 2017).

4.2 Limitations and constraints of hedge accounting

Although IFRS 9 is more flexible than IAS 39, it remains complex and difficult to implement. Recent discussions led by EFRAG, as presented in the *PIR IFRS 9 – Hedge Accounting Issues Paper* (EFRAG, 2025), highlight the difficulties faced by companies in practice.

The first point of discussion concerns the concept of « highly probable ». Indeed, in order to qualify as a hedged item, a forecast transaction must be considered highly probable. This requirement, inherited from IAS 39, was initially intended to regulate the application of hedge accounting and limit volatility in profit or loss. However, in practice, companies often hedge exposures that are reasonably expected, without being

strictly highly probable. As a result, this requirement may prevent some entities from applying hedge accounting to legitimate risk management strategies. This situation therefore limits the ability of the standard to faithfully reflect the economic reality of hedging activities.

Secondly, another limitation concerns the designation of risk components, in particular credit risk. IFRS 9 allows the designation of a risk component only if it is separately identifiable and reliably measurable. However, in practice, credit risk is generally excluded from this possibility, except in very specific cases. Yet, financial markets provide instruments that allow this risk to be observed and managed based on market data, such as credit default swaps (CDS). Therefore, this restriction may create a gap between the accounting treatment required by the standard and the actual risk management practices implemented by companies.

The concept of « unit of account » also represents a limitation to the application of hedge accounting. It reduces the flexibility of hedge accounting, as IFRS 9 generally requires hedging instruments to be designated in their entirety, with only a few exceptions. However, in practice, risk management is often more detailed and granular. For example, a company may choose to hedge only a component of a risk or part of an exposure. This mismatch between the level of granularity allowed by the standard and that used in actual risk management may reduce the flexibility of hedge accounting and limit the relevance of financial reporting.

In addition, IFRS 9 does not provide a precise definition of a “roll-over”, which refers to situations where companies replace or renew their hedging instruments. The standard does not set clear criteria to determine whether such changes should be considered as a continuation of an existing hedging relationship or as a new designation. This lack of clarity leads to different interpretations among companies and practitioners, which may result in inconsistencies in the application of hedge accounting.

Finally, regarding disclosures under IFRS 7, regulatory analyses show that the information presented in companies' financial statements is often insufficient, inconsistent, or difficult to interpret. This makes it more difficult for users of financial statements to fully assess an entity's exposure to financial risks as well as the effectiveness of its hedging strategies.

III. Part II - Empirical Framework

1. Research design and methodological framework

1.1 Research approach and objectives

The objective of this thesis is to analyze how industrial and commercial companies listed on the BEL 20, AEX 25, and LuxX Price Index apply hedge accounting under IFRS as part of their risk management strategies. Although IFRS 9 aims to better align accounting with risk management practices, its application remains complex and can sometimes reduce the clarity of financial information. In this context, it is relevant to examine how companies apply hedge accounting in practice despite these challenges.

This research investigates how hedge accounting is implemented in practice. The study focuses on identifying the main types of financial risks hedged by companies, as well as the derivatives and hedge accounting strategies commonly used. The analysis further seeks to highlight key trends and provide a synthesis of market practices, including the extent to which hedge accounting is used to mitigate financial risks and how these practices align with the objectives of IFRS 7 and IFRS 9, among other relevant aspects. In addition, particular attention is given to the information disclosed in the notes to the financial statements, especially regarding risk management and the relevance of these disclosures for users.

Finally, the study explores whether companies operating within the same sector tend to adopt similar hedging practices, given that they are often exposed to comparable types of financial risks and market conditions. It also examines whether this potential convergence in risk exposure is reflected in their hedging strategies and accounting choices under IFRS.

The main research question addressed in this thesis is therefore: *“How do industrial and commercial companies apply hedge accounting under IFRS as part of their risk management strategies, and what are the current market practices ?”*

1.2 Mixed-method approach: quantitative and qualitative analysis

This research adopts a mixed-method approach, combining both quantitative and qualitative methods in order to provide a more complete and balanced analysis.

The main part of the work is the quantitative analysis. It is based on the 2024 financial statements of industrial and commercial companies listed on the BEL 20, AEX 25, and LuxX Price Index. This sample was selected to represent the financial practices of the Benelux market. The 2025 financial statements were not included, as some companies had not yet published their annual reports at the time the analysis was carried out. The process started with the selection of the sample, followed by the collection and analysis of the companies' financial statements. Since these reports are publicly available online, accessing the data was straightforward.

The analysis was carried out using Excel, which made it possible to organise the data and build tables and graphs to support the interpretation of the results. To structure the analysis, ten key criteria were used:

1. Industry
2. Types of risks
3. Risk management policy and objectives
4. Types of hedges
5. Hedge accounting approach
6. Hedged items
7. Hedging instruments
8. Impact on financial statements (income statement fluctuations, OCI, with and without hedge accounting)
9. Disclosures
10. Impact on financial communication

These criteria allow for a structured comparison of hedge accounting practices across companies. They were designed to reflect the key requirements of IFRS 9 (hedge accounting and risk management practices) and IFRS 7 (financial disclosures and transparency)

To complement and enrich the quantitative findings, a qualitative approach was also used. The purpose of these interviews was to better understand how hedge accounting is applied in practice and to help validate and interpret the results of the financial analysis.

In total, six interviews were conducted for this thesis. Three were carried out with auditors: Mr Carl Verhofstede (Director at Deloitte), Mr Frédéric Poesen (Partner at KPMG) and Mr Kevin Braeckman (Director at PwC). Two interviews were conducted with treasury professionals: the first was a joint interview with Mr Alexandre De Ridder (Senior Treasury Manager) and Ms Delphine Vanhuyse (Senior Consolidation Manager) from Umicore and the second with Mr Benjamin Laame (Head of Treasury Operations at UCB). Finally, one interview was conducted with Mr Serge Vinogradov, Senior IFRS Technical Manager at EFRAG. The interviews are reported in appendices 2 to 7.

2. Sample selection and description

2.1 Selection of stock indices

The research focuses on companies listed on the BEL 20, AEX 25, and LuxX Price Index. While the Belgian market served as the initial point of departure, a sample limited to the BEL 20 would have yielded only 11 industrial and commercial companies, which would have resulted in a relatively limited sample size for the purposes of this study. By extending the scope to the Benelux region, the sample was increased to 32 companies, thereby enhancing the reliability of the findings while maintaining a coherent geographical and economic framework.

The Benelux was chosen because the three countries share close economic ties and are strongly integrated within the European financial market. Indeed, as early as 1948, these nations decided to abolish customs duties on their mutual trade and to apply a common external tariff toward third countries (Benelux, n.d.). This demonstrates a long-standing history of cooperation. In addition, all companies listed on these indices are required to prepare their consolidated financial statements in accordance with IFRS (EY, 2025), ensuring a high degree of comparability regarding financial risk management and hedge accounting practices.

2.2 Inclusion and exclusion criteria

The selection of companies included in the sample was based on several inclusion and exclusion criteria in order to ensure the consistency, comparability and relevance of the analysis.

First, only industrial and commercial companies were retained in the sample while financial institutions such as banks and insurance companies were excluded. This exclusion is justified by the specific nature of financial institutions which operate under distinct regulatory frameworks and present significantly different financial risk exposures compared to non-financial companies.

Second, the analysis was based exclusively on the composition of the BEL 20, AEX 25 and LuxX Price Index as of 31 December 2024. This methodological choice was made to ensure consistency with the financial statements analyzed which relate to the 2024 fiscal year. Since the composition of certain indices changed during 2025, the historical composition applicable at the end of 2024 had to be reconstructed by taking into account the index revisions and company replacements that occurred subsequently. This approach ensured consistency between the selected sample and the 2024 financial statements analyzed in this study.

Several modifications indeed occurred in the composition of the selected stock indices during 2025. In March 2025, Galapagos was replaced by Montea in the BEL 20 index (Euronext, 2025). Similarly, the AEX index was expanded from 25 to 30 companies in 2025, resulting in the inclusion of additional companies such as CVC Capital, InPost, JDE Peet's, WDP, and Just Eat Takeaway (Euronext, 2025). Subsequently, Just Eat Takeaway was removed from the index and replaced by Magnum (Nasdaq, 2025). In contrast, the composition of the LuxX Price Index remained unchanged during the period considered (Luxembourg Stock Exchange, n.d.).

2.3 Final sample composition

Following the application of the inclusion and exclusion criteria presented above the final sample consists of 32 industrial and commercial companies listed on the BEL 20, AEX 25 and LuxX Price Index as of 31 December 2024.

Companies included in the analysis	Companies excluded from the analysis
<u>Bel 20</u>	<u>Bel 20</u>
- AB InBev - Argenx - Azelis Group - D'leteren - Galapagos - Lotus Bakeries - Melexis - Solvay - Syensqo - UCB - Umicore	- Ackermans & van Haaren - Aedifica - Ageas - Cofinimmo - Groupe Bruxelles Lambert - KBC groupe - Sofina - Warehouses De Pauw (WDP)
<u>AEX 25</u>	<u>AEX 25</u>
- Ahold Delhaize - Akzo Nobel NV - ArcelorMittal - ASM International - ASML Holding - BE Semiconductor Industries - DSM-Firmenich - Heineken NV - IMCD - Koninklijke KPN NV - Philips - Prosus - Randstad N.V. - RELX - Shell - UMG - Unilever - Wolters Kluwer N.V.	- ABN AMRO Bank - Adyen - Aegon - ASR Nederland - Exor - ING Groep - NN Group N.V.
<u>LuxX Price Index</u>	<u>LuxX Price Index</u>
- Aperam - RTLGroup - SES FDR - (ArcelorMittal)¹	- Socofinasia - Brederode - ReinetInvest - Socfinaf - Luxempart

¹ ArcelorMittal is already included in the AEX 25 index and is therefore not counted twice in the final sample.

3. Quantitative analysis of hedge accounting market practices

3.1 Sectoral classification of the sample

In order to allow a relevant comparative analysis, the companies in the sample were grouped into five sectors based on two criteria: the nature of the company's main activity and the similarity of the resulting financial risk exposures. The Commodity and Materials sector (31%) includes companies involved in the production, processing, or distribution of raw materials and chemical products. The Consumer Multinationals sector (19%) groups together large consumer companies operating on an international scale. The Healthcare and Biotech sector (9%) includes pharmaceutical and biotechnology companies. The Services, Media and Information sector (25%) covers companies active in business services, media and information activities. Finally, the Technology and Advanced Manufacturing sector (16%) includes technology companies and companies specialized in high-precision industrial manufacturing. This classification, adapted to the objectives and the limited size of the sample, aims to identify possible systematic differences in hedge accounting practices across sectors. The detailed distribution of companies across sectors is provided in appendix 8.

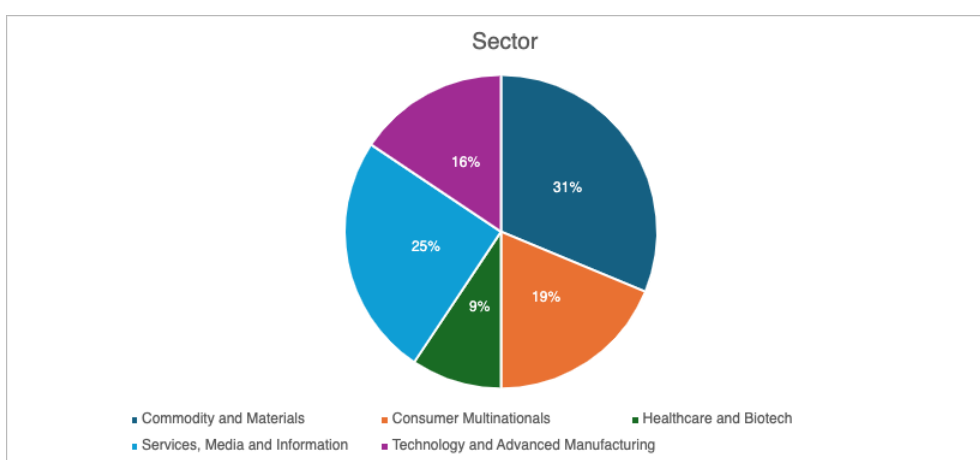


Figure 1: Sectoral distribution of the sample

3.2 Risk management policies, objectives and financial risk exposure

The analysis of the sample shows that the most common financial risks are foreign exchange risk, interest rate risk, credit risk and liquidity risk. Indeed, all companies in the sample report exposure to these four risks.

However, the degree of exposure varies significantly across companies depending on their financial structure, business model and sector of activity. ASM International represents a particularly interesting case. The company reports a very limited exposure to interest rate risk, which is only related to its cash deposits. As of 31 December 2024, ASM International had no outstanding financial debt and was therefore not exposed to interest rate fluctuations on borrowings. Consequently, the company does not actively manage this type of risk, making it a specific case within the sample.

Other financial risks appear less frequently. Commodity price risk is reported by 17 out of 32 companies (53.13%), mainly in industries exposed to raw materials and energy inputs. Equity price risk remains relatively limited, affecting only 2 companies (6.25%). Capital risk is identified in 5 companies (15.63%), while 6 companies (18.75%) disclose additional financial risks that are more closely related to their specific operating environment or business activities.

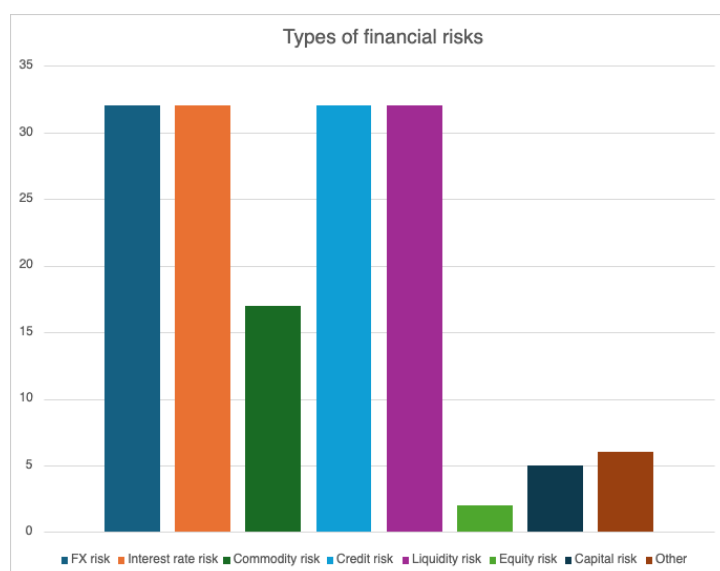


Figure 2: Distribution of the main types of financial risks

First, it is expected that all companies in the sample are exposed to foreign exchange risk, as they operate internationally and generate revenues and costs in multiple currencies. Companies are generally exposed to two types of foreign exchange risk: transaction risk and translation risk. Transaction risk arises from operations carried out in foreign currencies, while translation risk results from the conversion of foreign subsidiaries' financial statements into the group's reporting currency during the consolidation process. Consequently, exchange rate fluctuations may significantly affect consolidated financial statements and reported financial performance.

Furthermore, several companies choose a presentation currency other than the euro. AB InBev, ArcelorMittal, Argenx, Prosus and Shell report in US dollars, while RELX reports in pounds. Unilever previously reported in pounds but changed its presentation currency in 2024.

For example, Argenx explicitly states that reporting in US dollars constitutes a significant source of exposure, as most of its transactions are denominated in euros while its financial statements are presented in US dollars. The company reports a net exposure to exchange differences on monetary assets amounting to \$756.7 million (€726.4 million). In its sensitivity analysis, Argenx further indicates that, as of 31 December 2024, a 10% appreciation or depreciation of the euro against the US dollar would have resulted in a negative or positive impact of approximately \$76 million.

Regarding interest rate risk, companies generally prefer fixed interest rates as they provide greater predictability over future financing costs. Nevertheless, Randstad represents an interesting exception within the sample. In March 2024, the company issued a fixed-rate €500 million Eurobond and subsequently entered into an interest rate swap in order to convert its fixed-rate exposure into a floating-rate exposure. Randstad justifies this strategy by arguing that the staffing industry naturally hedges against interest rate fluctuations, as EBITDA levels tend to evolve in line with changes in interest rates.

Commodity price risk, although less widespread than foreign exchange or interest rate risk, remains particularly important in certain sectors. In the beverage industry, companies such as AB InBev and Heineken are exposed not only to energy prices but also to fluctuations in the prices of agricultural raw materials such as barley, malt and corn as well as packaging materials including aluminium, glass and plastic. In contrast, Umicore and ArcelorMittal are particularly exposed to volatility in the prices of precious metals and iron ore. Shell is exposed to oil, gas and LNG prices and Umicore is structurally affected by movements in precious metals such as platinum, palladium, rhodium, gold and silver as well as battery materials such as lithium and cobalt. This highlights the extent to which financial risk exposure depends on the company's industry and operational environment. Indeed, by contrast, firms operating in asset-light or

knowledge-based sectors, such as Randstad, RELX or Wolters Kluwer report no material commodity price risk.

Finally, a major trend observed across the sample is the centralization of financial risk management activities within dedicated treasury departments or enterprise risk management frameworks. Companies such as Melexis, Solvay, Syensqo and Ahold Delhaize apply a centralized approach to financial risk management. Overall, the main objective of these policies is to reduce volatility in cash flows, earnings and financial performance while improving predictability for investors and other stakeholders. Furthermore, a fundamental principle shared across the sample is the strict prohibition of speculative trading. Most firm explicitly states that financial derivatives are employed exclusively for hedging purposes.

3.3 Extent of hedge accounting adoption among industrial and commercial companies

3.3.1 Hedging Strategies

Among the 32 sampled companies, 87.5% (28 out of 32) use derivatives to hedge their financial risks. Of the four companies that do not use derivatives, three rely exclusively on natural hedging techniques. Only one company, ASM International, does not employ any form of hedging in 2024. Nevertheless, the company states in its annual reports that it may enter into forward exchange contracts to hedge foreign exchange risk if necessary. This suggests that even companies with limited current hedging activity still consider hedging as part of their risk management framework. Overall, the results indicate that hedging constitutes a widespread and structurally embedded practice among the sampled industrial and commercial groups.

Five main types of hedging were identified across the sample: natural hedging, foreign exchange hedging, interest rate hedging, commodity hedging and equity hedging. Approximately 56% of the companies use natural hedging, which in most cases consists of matching revenues and expenses in the same currency to reduce transaction exposure without recourse to derivatives. Two companies illustrate natural hedge particularly well.

Universal Music Group states in its financial statements that its exposure to foreign exchange transaction risk remains limited because cash inflows and outflows in local currencies naturally offset each other to a significant extent. Similarly, ArcelorMittal benefits from a natural hedge generated by its vertically integrated business model. As the group owns mining operations in addition to steel production activities, fluctuations in commodity prices partially offset each other across business segments. Rising steel prices may compress steel margins while simultaneously increasing mining profitability, thereby reducing the group's aggregate exposure to commodity price volatility. These examples demonstrate that operational structure itself can constitute an important risk mitigation mechanism, independently from derivative usage.

Regarding derivative-based hedging, all 28 companies that use derivatives employ them most of the time for foreign exchange risk management, it represents 87.5% of the total sample. 65.63% (21 out of 32) of companies use derivatives to hedge their interest rate risk and 40.63% (13 out of 32) for commodity risk. Only one company, AB InBev, hedges equity risk. AB InBev uses equity swap derivatives to hedge the price risk related to its share-based payment programs and the shares issued during the Modelo and SAB acquisitions. This represents a significant risk for the company. The sensitivity analysis shows that a possible 19% variation in the AB InBev share price would have a positive or negative impact of \$960 million on the 2024 profit before tax. In 2023, the impact amounted to \$1,181 million based on a volatility of 18%. These derivatives do not qualify for hedge accounting.

Beyond the type of hedge types used, the number of different hedge types employed by a company provides a useful insight on the strategic importance of hedging. The distribution across the sample is presented in the table below.

Number of types of hedge applied	Number of companies
0	1 out of 32
1	6 out of 32
2	6 out of 32
3	13 out of 32
4	6 out of 32

The results indicate that 19 out of 32 companies use three or more types of hedge types, suggesting that hedging constitutes a significant component of their risk management strategy. Notably, all six companies that employ four distinct hedge types are large multinationals operating across multiple geographies and asset classes, including AB InBev, Heineken, Unilever, DSM , ArcelorMittal and Solvay which reflects the complexity of their risk exposures.

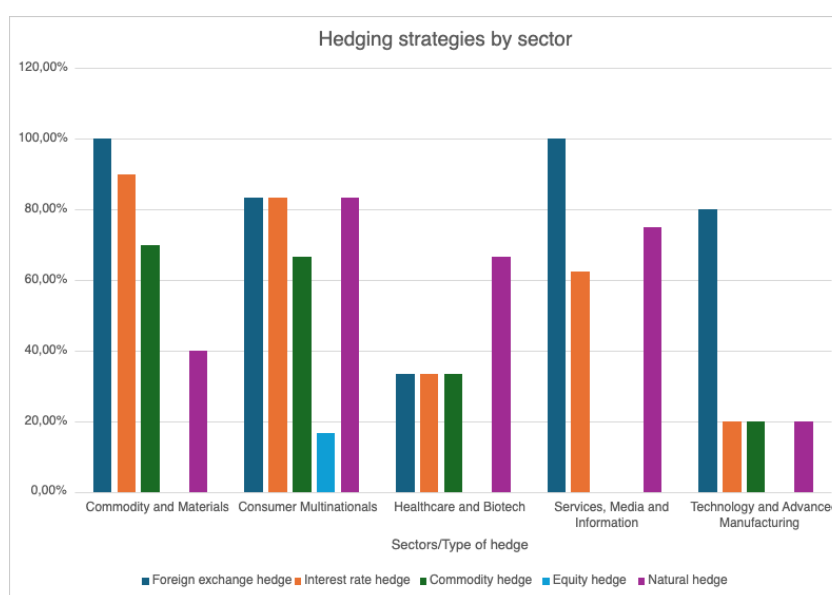


Figure 3: Comparison of hedging by sector

Figure 3 illustrates that hedging practices vary significantly across sectors, both in terms of the types of hedging used and their frequency. The Commodity and Materials sector stands out as the most active in terms of hedging, both in the variety of types of hedge used and in their frequency. This can be explained by the nature of these activities. These companies depend heavily on raw materials in their production processes and operate with high capital intensity, making them particularly vulnerable to price and exchange rate fluctuations.

Consumer Multinationals show a more balanced profile across the different types of hedging, with a notable use of natural hedging (5 companies out of 6). This sector also makes significant use of commodity hedging. Indeed, groups such as AB InBev, Heineken or Unilever depend on raw materials for their production.

The Healthcare and Biotech sector appears to be the least hedged within the sample, partly due to the small size of the sub-sample (3 companies, including 2 that do not use derivatives). This finding is consistent with the observations made by Mr. Braeckman (appendix 5) during the interview. According to him, companies operating with high profit margins, as is often the case in the pharmaceutical sector, may be more capable of absorbing financial volatility without relying extensively on hedging or hedge accounting. By contrast, sectors characterized by lower margins tend to hedge more actively in order to stabilize their results and reduce their exposure to market fluctuations.

The Services, Media and Information, and Technology and Advanced Manufacturing sectors all show a strong concentration on FX hedging reflecting mainly currency-related exposure. The complete absence of commodity hedging in the Services sector can be explained by the nature of these activities, which do not depend on the transformation of raw materials.

3.3.2 Implementation of IFRS 9 Hedge Accounting

However, these types of hedging do not necessarily qualify for hedge accounting under IFRS 9. Turning to hedge accounting specifically, 6 out of 32 companies do not apply it and 5 of these 6 are listed on the BEL 20. Of the 28 companies that use derivatives, 26 apply hedge accounting. The two exceptions are Melexis and Azelis. Neither company explicitly explains in its financial statements why it chooses to use derivatives without applying hedge accounting. In the case of Azelis, the company enters into forward exchange contracts to hedge part of its foreign currency balance sheet exposure, with a fair value of € -228,348 in 2024 and € -259,214 in 2023. Given the limited magnitude of these amounts relative to the size of the group, this may suggest that the costs and administrative burden associated with hedge accounting documentation and effectiveness testing outweigh the financial reporting benefits. This represents a pragmatic but undisclosed choice.

Cash flow hedge is the most prevalent, adopted by 84.62% of companies (22 out of 26). It is not surprising that the most commonly used method is cash flow hedge because it is mainly used to reduce the impact of future cash flow volatility, which is a major source of risk for most companies, especially in relation to foreign exchange, interest rates and commodity price fluctuations. Net investment hedge is used by 61.54% of companies (16 out of 26), reflecting the widespread international presence of the sampled groups and their need to protect the carrying value of foreign subsidiaries. Fair value hedge is the least common, applied by 46.15% of companies (12 out of 26) and is typically associated with the hedging of fixed-rate debt instruments against interest rate movements. One notable observation concerns Shell, which still carries a net investment reserve in its Other Comprehensive Income (OCI) from historical net investment hedging relationships, despite not having designated any new net investment hedges in 2024. This illustrates how the effects of past hedging relationships can persist in the financial statements long after the underlying instruments have matured.

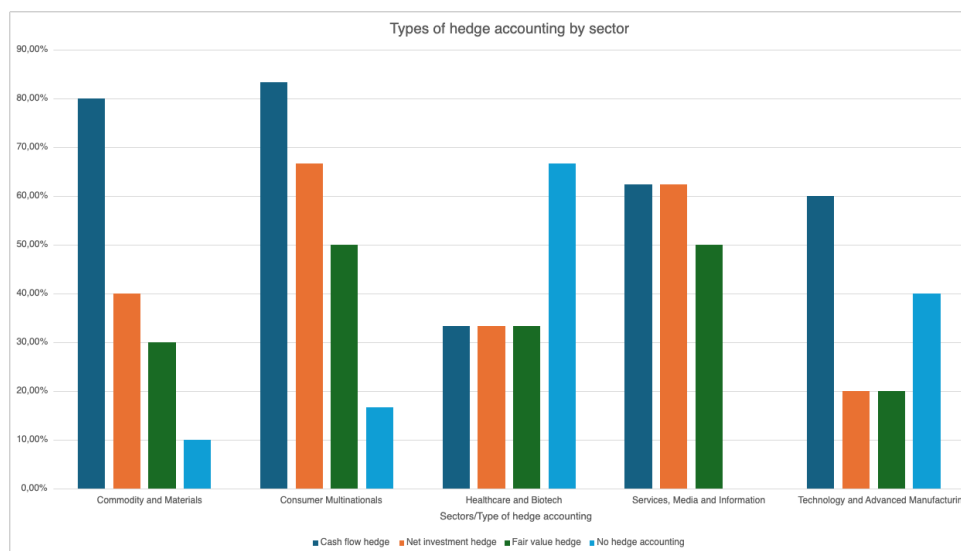


Figure 4: Hedge accounting types by sector

In Figure 4, clear sectoral differences can be observed in the application of hedge accounting categories. Across all sectors, cash flow hedges represent the most predominant types of hedge accounting, which is consistent with companies' exposure to uncertain future cash flows. The only exception is the Healthcare and Biotech sector, where the most common outcome is the non-application of hedge accounting. However, this finding should be interpreted with caution, as this sector is represented by only three companies in the

sample, two of which do not use hedging and therefore do not apply hedge accounting (ArgenX and Galapagos).

Beyond this general pattern, some additional differences can be noted. The Services, Media and Information sector appears to display a relatively higher use of net investment hedges compared to other sectors. The Consumer Multinationals sector also appears to employ a broader range of types of hedge accounting, with significant levels of cash flow, fair value and net investment hedges, suggesting more diversified exposure to financial risks and a more extensive use of hedge accounting.

Unilever provides a relevant example of how companies in the Consumer Multinationals sector may apply extensive and sophisticated hedge accounting practices. The company uses net investment hedges to hedge its investments in foreign subsidiaries. In its 2024 financial statements, Unilever discloses a broad network of subsidiaries, partnerships, associates, and joint ventures across multiple regions, including Canada, Brazil, Australia, Bangladesh, Bolivia, China, and Egypt, among others. This geographical diversification helps explain the importance of net investment hedging for the company. In addition, Unilever uses fair value hedges primarily to hedge its exposure to interest rate risk, while cash flow hedges are mainly used to hedge commodity price risk and foreign currency risk. An overview of hedge accounting application and the types of hedging instruments used by each company is provided in appendix 9.

3.4 Hedging instruments and hedge accounting relationships observed

Across the sample, all companies applying hedge accounting (26 companies) use standard derivative instruments for their hedging activities, mainly forwards, swaps and options. Every company uses at least one of these instruments, suggesting that firms generally rely on relatively simple derivatives. This observation is consistent with the literature review and with Mr. Braeckman’s view (appendix 5), according to which companies are generally highly risk-averse in their hedging decisions, thereby favoring straightforward and well-understood instruments. A detailed mapping of hedged items, hedging instruments is provided in appendix 10.

More complex derivatives, such as futures, caps and floors are used less frequently and are concentrated within a limited number of companies, namely AB InBev, D’Ieteren, Solvay, Syensqo, ArcelorMittal, Heineken, Philips, Shell and Unilever. Among these nine companies, four belong to the Commodity and Materials sector and four to the Consumer Multinationals sector, suggesting that companies operating in these sectors are more likely to use sophisticated derivative instruments for hedging purposes.

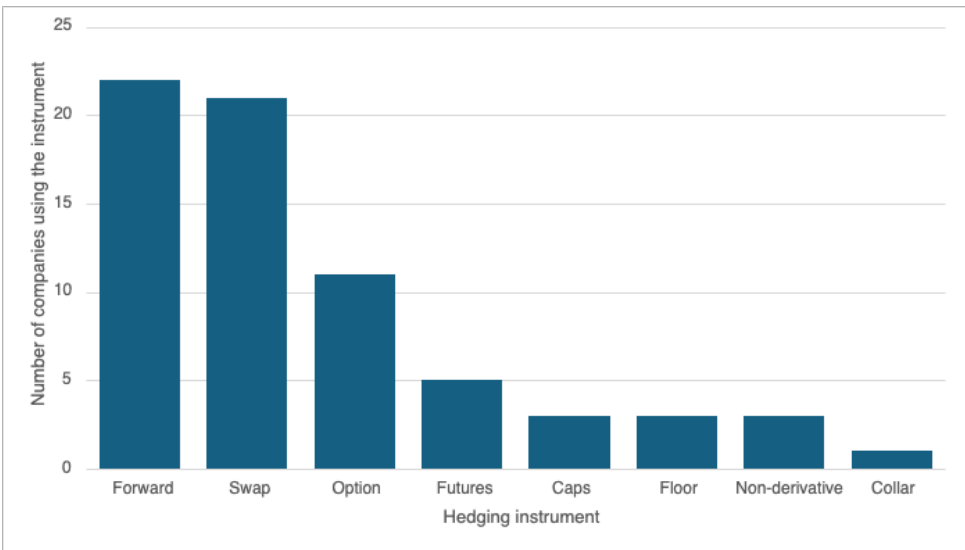


Figure 5: Distribution of hedging instruments across the sample

In addition to derivatives, a limited number of companies use non-derivative instruments for hedging purposes, exclusively within the context of net investment hedges. More specifically, ArcelorMittal, Randstad and SES use foreign currency-denominated debt instruments, such as loans or bonds, to hedge their net investments in foreign operations.

A relevant example of a diversified use of hedging instruments and a sophisticated application of hedge accounting is Unilever. The company uses swaps to hedge interest rate risk, while commodity risk is hedged through commodity forwards, futures, swaps and option contracts. In addition, foreign exchange risk is mainly hedged through forward contracts, whereas net investment hedges are achieved through local currency borrowings, as discussed previously.

Regarding the hedged items designated in formal hedge accounting relationships, the analysis confirms the predominance of foreign currency risk as the most commonly hedged item, with 22 out of 26 companies (84.62%) designating it as a hedged item under IFRS 9. Interest rate risk follows as the second most frequently hedged item, designated by 17 companies (65.38%), consistent with the widespread preference for fixed-rate financing observed across the sample. Net investment in foreign operations is designated as a hedged item by 12 companies (46.15%). Finally, commodity price risk is designated as a hedged item by 10 companies (38.46%), concentrated primarily in the Commodity and Materials and Consumer Multinationals sectors. These findings are broadly consistent with the hedging strategies identified in Section 3.3.1, suggesting that formal hedge accounting relationships largely reflect the underlying economic risk management objectives pursued by the sampled companies.

An example of an extensive application of hedge accounting across multiple risk categories is ArcelorMittal. The company applies hedge accounting not only to foreign exchange risk but also to net investment hedges, emission rights, base metals, freight and energy exposures. The use of hedge accounting for emission rights is particularly noteworthy. The company hedges its exposure to fluctuations in CO₂ emission allowance prices. Due to its industrial activities, ArcelorMittal must cover any shortfall between its actual CO₂ emissions and the emission allowances allocated under environmental regulations. To manage this exposure, the company uses derivative financial instruments within cash flow hedge accounting relationships.

To assess the relative complexity of hedge accounting relationships across the sample, a simplified scoring framework was developed. Each company receives one point for every hedged item and one additional point for every hedging instrument used. For example, a company hedging FX risk and interest rate risk using swaps and options would score 4. Indeed, the more instruments a company uses and the more types of risk it hedges, the more complex its hedge accounting becomes. Companies scoring between 1 and 3 are classified as low complexity, scores between 4 and 6 as medium complexity, and scores of 7 or above as high complexity.

Out of 26 companies, seven apply a high level of complexity in hedge accounting. It is noteworthy that only companies from the Commodity and Materials sector (four companies) and the Consumer Multinationals sector (three companies) fall into the high-complexity category, which is consistent with the findings presented above. In the Commodity and Materials sector, five companies in total apply hedge accounting; among them, four are classified as highly complex, while the remaining company is rated as medium complexity. This indicates that most companies in this sector implement relatively elaborate hedge accounting practices. Overall, 14 companies are classified as medium complexity and five as low complexity. Among the low-complexity group, three companies belong to the Technology and Advanced Manufacturing sector.

SES provides a good example of a limited use of hedge accounting, primarily focused on net investment hedges through US dollar-denominated bonds. Overall, its application of hedge accounting appears relatively marginal and does not constitute a major component of its risk mitigation strategy. As a result, the company provides limited disclosure and communication on this aspect in its financial reporting. Another relevant example is Universal Music Group, which enters into net investment hedges but does not disclose the specific derivative instruments used, referring instead generally to “derivatives” in its financial

statements. This lack of communication will be further discussed in Chapter 3.6 “Transparency and disclosure practices under IFRS 7.”

Overall, the findings of this section suggest that the complexity of hedge accounting relationships is not evenly distributed across the sample and appears to follow a certain sectoral pattern. Companies operating in the Commodity and Materials and Consumer Multinationals sectors generally display more elaborate hedging structures, both in terms of the number of hedged items and the diversity of instruments used. By contrast, companies in the Technology and Advanced Manufacturing and Services sectors tend to apply hedge accounting in a more limited and standardised way, with a primary focus on foreign exchange risk.

3.5 Impact of hedge accounting on financial statements

One of the objectives of hedge accounting is to reduce the volatility in financial statements that may be caused by hedging activities. Cash flow hedges allow changes in the fair value of the hedging instrument to be recognised in a reserve within OCI. Among the companies in the sample, the value of the effective portion of cash flow hedges varies significantly from one company to another.

The top five companies with the largest effective cash flow hedge movements, measured in absolute value, are AB InBev, with an increase in its cash flow hedge reserve of €676.76 million, followed by ArcelorMittal, with a decrease of €298.54 million. The Unilever with an increase of €253 million, Shell with an increase of €202.55 million and finally Heineken with an increase of €166 million. These companies all belong to either the Commodity and Materials or Consumer Multinationals sectors. Furthermore, all of them were classified as “highly complex” in Section 3.4. By contrast, the companies with the smallest variations are IMCD, Ahold Delhaize and Prosus, all reporting movements below €6 million. This highlights the strong heterogeneity of hedge accounting impacts within the sample.

Another very important aspect of hedge accounting compatibility is that the amounts recognised in OCI will subsequently be recycled into profit or loss. For example, although AB InBev recorded an increase of €676.76 million in its OCI reserve, this amount was partially offset by a decrease of €364.78 million recycled into the income statement. In the case of Solvay, the company recognised €18 million in OCI while recycling €55 million into profit or loss, meaning that past hedging relationships continued to affect the income statement beyond the current period.

However, hedge accounting is not always fully effective. Within the sample, the vast majority of companies reported no significant hedge ineffectiveness. This high proportion of firms disclosing no material ineffectiveness suggests that hedging relationships are generally closely aligned with economic risk management objectives, as encouraged by IFRS 9. Only 4 out of 26 companies (15.38%) recognised hedge ineffectiveness. No sectoral relationship could be identified among these four firms, indicating that hedge ineffectiveness appears to be company-specific rather than sector-driven. The companies concerned are UCB, BE Semiconductor, KPN and Prosus. Three out of the four cases relate to cash flow hedges, while the remaining case concerns a net investment hedge.

BE Semiconductor recognised hedge ineffectiveness of €0.022 million, while UCB recognised €1 million. Neither company provided explanations for the origin of this ineffectiveness. KPN recognised hedge ineffectiveness of €7 million. The ineffectiveness mainly resulted from valuation differences between the hedging instruments and the hedged items, caused by credit risk and valuation curves, combined with the fact that the cumulative fair value change of the hedging instrument exceeded that of the hedged item. This explanation highlights that even well-designed hedging relationships may generate ineffectiveness due to technical valuation asymmetries that are difficult to anticipate or control.

The most significant case is Prosus, which recognised €9.60 million of hedge ineffectiveness in profit or loss related to its net investment hedge. Unlike the other three companies, the origin of the ineffectiveness was economic rather than technical. The hedge of the group’s net investment in Delivery Hero SE became ineffective due to an impairment of the investment, which reduced its carrying amount and therefore lowered the group’s foreign currency exposure. As a result, the hedging instrument no longer matched the hedged item, and Prosus was unable to apply hedge accounting for this relationship in 2024. Consequently,

no amount was recognised in OCI during the financial year. This case is particularly insightful because it demonstrates how a non-financial event, namely the impairment of an asset, can directly undermine an existing hedge accounting relationship, with tangible consequences for financial reporting.

Many companies choose not to apply hedge accounting and instead accept the resulting volatility. This decision may be explained by several factors. One reason is that certain hedging relationships do not qualify for hedge accounting under IFRS 9, which can lead to significant volatility in financial statements. AB InBev provides a strong example of this situation. As previously discussed, the company hedges its share price risk (as explained in Section 3.3.1), but this hedge does not meet the requirements for hedge accounting. Consequently, fair value changes are recognised directly in profit or loss. As a result, a loss of \$1,211 million (€1,162.5 million) was recognised in net income.

To a lesser extent, Aperam is also unable to apply hedge accounting to certain hedging operations, as some of its derivatives are not eligible under IFRS 9. Consequently, the company recognised unrealised gains on derivatives amounting to €2 million. The company explains that this variation is *“mainly related to the fair value adjustments of raw material financial instruments and foreign exchange instruments which do not qualify for hedge accounting.”*

As mentioned previously, Azelis does not apply hedge accounting at all. The company does not explain the reasons behind this choice. The impact of not using hedge accounting for Azelis was a loss on changes in the fair value of derivatives of €4.657 million. It can reasonably be assumed that this amount relates entirely to hedging activities, as the company states in its financial statements that its derivatives are used exclusively for economic hedging purposes and not for speculative investment activities.

Another reason why companies may choose not to apply hedge accounting despite the associated volatility is that hedge accounting can be complex and costly to implement. For example, RELX states in its financial statements *“Where the impact of derivatives on the income statement and the statement of financial position could be significant, hedge accounting is applied (subject to satisfying the required criteria) ...”* RELX reported €9.65 million of liabilities and €12.06 million of assets related to derivatives not designated as hedging instruments. The company therefore preferred to accept a net volatility impact of approximately €2.41 million.

The reason may also be more company-specific. For instance, RTL Group does not apply hedge accounting to recognised foreign currency monetary assets and liabilities because there is a natural offset in profit or loss between the revaluation of the derivatives and the revaluation of the underlying exposures. Therefore, without applying hedge accounting, no volatility arises in the financial statements. This demonstrates that companies can use alternative methods to avoid volatility without bearing the complexity and administrative burden associated with hedge accounting.

Turning now to fair value hedges, the accounting mechanisms differ from those applied to cash flow hedges. When a fair value hedge is effective, the gain or loss on both the hedging instrument and the hedged item is recognised simultaneously in profit or loss, resulting in a net zero impact on the income statement. For example, Ahold Delhaize reports no net impact on profit or loss from its fair value hedges. Similarly, Randstad indicates that the fair value change of both the hedging instrument and the hedged item amounted to €10 million, thereby fully offsetting each other.

Nevertheless, the value of the derivative may not always perfectly offset the value of the hedged item. RELX provides a clear illustration of this situation. The company reported a net loss on borrowings and related derivatives of £2 million (€2.41 million), because the fair value of its USD-denominated debt increased by £14 million while the related interest rate swap decreased by £16 million.

Some companies also disclose the fair value of financial instruments designated in fair value hedges. For example, at UCB, these derivatives recorded a net decrease in value of €7 million between 2023 and 2024. However, the net impact is not visible in profit or loss because this decrease is directly offset by the opposite revaluation of the hedged item.

Finally, regarding net investment hedges, companies do not always disclose them separately. In some cases, they are included within the currency translation reserve. This is the case for Akzo Nobel NV and Randstad, which do not isolate these hedges. However, certain companies disclose the exact amounts. Among them is AB InBev, which reports an effective portion of changes in fair value of net investment hedges amounting to €897.55 million. For Heineken, the amount is lower, with changes in fair value of net investment hedges amounting to €14 million. UMG, which applies hedge accounting exclusively for net investment hedges, reports that its net investment hedge reserve increased from €8 million to €11 million, representing a €3 million increase. At Wolters Kluwer, a loss on net investment hedges of €12 million was recognised.

3.6 Transparency and disclosure practices under IFRS 7

All companies in the sample comply with the disclosure requirements imposed by IFRS 7. As listed companies subject to external audit, they all provide the mandatory disclosures required under the standard. In particular, all companies disclose sensitivity analyses by type of risk, structure their disclosures according to risk categories, present the impact of cash flow hedges on OCI and disclose hedge ineffectiveness where applicable. However, beyond these mandatory requirements, some companies adopt additional disclosure practices that help users understand both their application of hedge accounting and their broader risk management strategy. The real differentiation therefore lies in voluntary disclosures and in the way information is structured and presented to the reader. From a user perspective, these voluntary practices are important.

A first notable voluntary practice concerns the structuring of the notes to the financial statements. Although IFRS 7 does not impose a specific format, 50% of companies applying hedge accounting (13 out of 26) create a dedicated subsection exclusively for it, either as a separate note or as a specific sub-point within each risk section. This significantly improves readability and spares the reader from having to cross-reference information scattered across multiple notes. The fact that even companies with limited use of hedge accounting, such as SES, adopt this presentation method reflects how widespread it is and the value it provides to users of the financial statements.

A second commonly observed practice consists of distinguishing, within derivative instrument tables, those designated in a hedge accounting relationship from those that are not. Some companies go even further by specifying, for each derivative, which type of hedge accounting relationship it belongs to. This information is provided by 57.69% of companies in the sample that apply hedge accounting (15 out of 26) and gives investors a clearer picture of where earnings volatility originates by identifying which positions benefit from hedge accounting treatment and which flow directly through profit or loss.

One particularly meaningful disclosure in the context of cash flow hedges is the amount expected to be recycled into profit or loss. 18 of the 22 companies using cash flow hedges explicitly disclose the amount recycled during the period. The remaining 4 companies limit themselves to reporting the net movement in their hedging reserve without detailing what was actually reclassified into profit or loss. Even rarer is the practice of indicating in which future period the amounts still held in reserve will be recycled. Only RELX and Aperam publish this type of forward-looking schedule, which gives investors a concrete basis for anticipating the future earnings impact of ongoing hedging relationships.

The analysis of the sample reveals a clear spectrum stretching from best-in-class disclosures to the bare minimum. AB InBev stands out as one of the most transparent companies in the sample. It uses all three types of hedge accounting and is classified as high complexity in section 3.4, reflecting its intensive and deeply embedded use of hedge accounting. It discloses the exact effective portion of cash flow hedges, the amounts recycled into profit or loss and the hedged and unhedged positions broken down by foreign currency (Appendix 11). It applies the same level of granularity to its exposure to net foreign exchange results (Appendix 12) and presents a sensitivity analysis before and after hedging for each interest rate (Appendix 13), an approach that is unique in the sample. It also provides a breakdown of its most significant commodity hedges with individual amounts for each position (Appendix 14). Throughout its disclosures AB InBev is explicit about which exposures it hedges and which it does not, reinforcing the impression that hedge accounting is a genuinely central element of its financial reporting and beyond purely mandatory

disclosure requirements. Unilever and ArcelorMittal are also notable examples of companies that maintain a consistently high level of disclosure quality.

At the other end of the spectrum, some companies provide more limited disclosures. UMG, which applies hedge accounting solely for net investment hedges, discloses neither the derivative instruments used nor the hedge ratios. This materially limits the ability of users to assess how risk management actually influences the company's reported performance.

Beyond individual differences, the analysis highlights a striking heterogeneity in disclosure practices across the sample, which makes meaningful comparison between companies particularly difficult as discussed in section 3.5. Some companies precisely isolate the amounts attributable to net investment hedges within OCI while others fold them into the translation reserve without any distinction.

More broadly, the analysis points to a positive correlation between the intensity of hedge accounting use and the overall quality of disclosures. Companies classified as highly complex in section 3.4, namely AB InBev, Unilever, Heineken, DSM-Firmenich and ArcelorMittal, consistently provide more detailed and better structured information than those whose use of hedge accounting is limited or peripheral. This is not entirely surprising. Companies that rely heavily on hedge accounting have a stronger incentive to explain their practices clearly, both to help investors interpret movements in OCI and profit or loss and to demonstrate that their risk management strategy and their accounting treatment are genuinely coherent.

4. Qualitative analysis: insights from professionals

4.1 Objectives of the interviews

The objective of the interviews was to complement and enrich the quantitative findings by capturing practical realities of hedge accounting implementation that cannot be observed through financial statements alone. More specifically, the purpose was to validate and contextualise the empirical results from the perspective of professionals who deal with hedge accounting on a daily basis, whether as auditors, treasury professionals or standard-setters.

The interviews were conducted as follows. A set of initial questions was prepared around the ten criteria used in the quantitative analysis. However, the questions evolved naturally throughout each conversation depending on the profile of the interviewee and the direction of the discussion. Findings gathered from previous interviews and from the quantitative analysis were also raised with the professionals to gather their interpretations and practical experience, in order to compare their different points of view. This helped enrich the exchanges considerably.

4.2 Key insights from practitioners

All interviewees confirm that the three financial risks most frequently hedged by industrial and commercial companies are foreign exchange risk, interest rate risk, and commodity price risk. This finding is consistent with the results of the quantitative analysis presented in Chapter 3.

About the reasons for applying hedge accounting, all interviewees confirm that the main reason companies apply it is to reduce volatility in financial statements. Mr Braeckman explains that companies want to protect their margins and show stable results to their investors. Volatility can negatively affect share prices. This explains why, according to him, listed companies apply hedge accounting much more than non-listed Belgian family-owned companies. These companies are not subject to the same investor pressure and are therefore less interested in reducing volatility in their financial statements.

But on top of this well-established reason, Mr Verhofstede raises a particularly interesting point. He explains that certain companies also use hedge accounting to improve the presentation of their financial statements. By aligning the accounting treatment of the hedging instrument with that of the hedged item, it becomes possible to present both elements in the same line of the income statement. This practice is not formally codified. He describes it as “something that is under the radar.” According to him, this approach improves the readability of financial performance and provides a more faithful representation of economic reality. This insight is particularly significant because it reveals that hedge accounting serves purposes beyond its official objective as defined in IFRS 9, and that companies use its presentational flexibility in ways that are implicitly accepted but not explicitly required by the standard.

The margin of the company also has an influence on whether the company will apply hedge accounting or not. Mr Braeckman explains that companies with low margins have a stronger incentive to hedge, since a movement in currency or interest rates can be sufficient to reduce or even eliminate their profit entirely. In contrast, companies with high margins may be able to absorb a certain degree of financial volatility without using hedge accounting. For example, companies in the pharmaceutical sector, which are well known for their high margins, tend to use less hedge accounting. This observation is consistent with the findings of Chapter 3, where two out of the three Healthcare and Biotech companies do not use hedge accounting.

It is also worth noting that the decision to hedge is not always entirely voluntary. Mr Braeckman points out that, for interest rate risk, it is sometimes the banks themselves that push companies to switch from floating interest rates to fixed interest rates. This nuances the assumption that hedging strategies are always the result of an autonomous internal decision. Indeed, external factors such as bank requirements can also influence hedging choices.

The three auditors interviewed confirm that cash flow hedge is the most widely used type of hedge accounting in practice. This is confirmed by the quantitative analysis, which shows that 84.62% of

companies applying hedge accounting use it. This is naturally explained by the fact that the majority of risks hedged (foreign exchange, interest rate and commodity risks) are linked to uncertain future cash flows.

Regarding instruments, industrial and commercial companies prefer simple and well-understood tools. Mr Vinogradov explains that companies use hedge accounting with a protective rather than a speculative logic, and that certain highly dynamic or sophisticated strategies do exist, but they quickly become difficult to manage under IFRS 9. Mr De Ridder confirms this by explaining that when the choice arises between two similar instruments, companies will systematically opt for the simpler one. This preference for simplicity is consistent with the findings of Chapter 3, which show that forwards, swaps, and options dominate across the sample.

Even if IFRS 9 simplified the application of hedge accounting it is still considered as being a difficult norm. Indeed, several interviewees highlight practical difficulties in applying hedge accounting. Mr. Braeckman identifies the main challenge as obtaining sufficiently precise data to demonstrate hedge effectiveness.

Mr. Laame raises a more structural criticism that the quantitative analysis alone could not reveal. According to him, the standard was designed for companies managing a limited number of contracts, whereas in reality treasury professionals manage dynamic portfolios of ten to fifty simultaneous contracts. Mr. Vinogradov shares this analysis and specifies that dynamic hedging strategies, particularly for metals or currencies, are "really very difficult" to manage within the current IFRS 9 framework. The norm remains fundamentally designed for relatively static hedging relationships. This point is important because, even if IFRS 9 represents an improvement, there are still some aspects that need further enhancement.

Mr De Ridder at Umicore explains another reason that can prevent companies from applying hedge accounting, the lack of time to analyse the associated accounting constraints. Indeed, the company uses derivatives to hedge its foreign investments but has never implemented net investment hedge accounting. They have never done so because they did not have the time to analyse the associated accounting constraints. This confirms that, for some companies, the obstacle is not the complexity of the standard itself but the human resources and time required for its implementation. This is an important finding because it shows that the non-application of hedge accounting does not necessarily reflect a strategic choice or a lack of eligibility but can instead result from purely organisational constraints.

Beyond IFRS 9 constraints, Mr Laame highlights the existence of external regulatory barriers such as the European Market Infrastructure Regulation (EMIR), which imposes reporting obligations and, in some cases, margin call requirements. These can create a trade-off between reducing market risk and increasing liquidity risk. He illustrates this with the example of the Turkish lira, where the cost of hedging reached 30% per year, leading UCB to hedge only half of its exposure in that currency.

On the quality of disclosures, the interviewees have different opinions. Indeed, for example, Mr Verhofstede considers that disclosures do not always allow an external reader to genuinely understand the hedging strategy. He explains that companies should ideally dedicate a specific section to hedge accounting in their financial statements. In Chapter 3.6, it has been shown that 50% of the companies applying hedge accounting adopt this practice. He also notes that some companies are reluctant to disclose too much information, fearing that it might reveal their risk management strategies to competitors.

Mr Poesen adopts a more nuanced position. The quality of disclosures varies from one company to another. Some companies are considered "best in class," while others do "the strict minimum," but in general the disclosures remain broadly acceptable. He also raises a particularly interesting forward-looking point: artificial intelligence could help companies improve their hedge accounting documentation and presentation. AI could also help readers better understand a standard as complex as hedge accounting. Mr Vinogradov goes further, estimating that IFRS 7 requirements are sometimes "excessive" for non-financial companies, to the point of drowning useful information in an excessive volume of data.

These different points of view clearly reflect the heterogeneity observed in the quantitative analysis, where a significant gap exists between companies that provide very detailed and well-structured disclosures (AB InBev, Unilever, and ArcelorMittal) and those that limit themselves to the strict minimum required by IFRS 7.

Mr Poesen confirms the observation from Chapter 3 that the complexity of hedging structures depends closely on the sector and the commercial environment: as soon as derivatives are linked to raw material purchases, the level of communication required becomes much more important than for a simple interest rate swap on debt.

5. Limitations of the empirical study

The first limitation of this empirical study relates to the number of companies included per sector. Indeed, the original sample consists of 32 companies in total. In certain sectors, such as the healthcare and biotechnology sector, the number of observations is particularly low, with only three companies represented. Among these, two do not use hedging instruments and therefore do not apply hedge accounting. As a result, the analysis within this sector remains limited and may not be fully representative. A larger and more balanced sample across sectors would allow for more robust conclusions.

The second important limitation of this study lies in the difficulty of comparing companies. Firms do not always disclose the same level of detail or present information in a consistent manner, which makes cross-company comparisons, particularly of quantitative data, more challenging. For instance, some companies report the exact amount of net investment hedges recognised in Other Comprehensive Income, while others include these amounts within the currency translation reserve without isolating them. In addition, the level of detail provided varies significantly, some firms offer extensive disclosures on hedging instruments, others focus more on hedged items and others provide more information on the types of hedge accounting applied. As a result, ensuring fully comparable data across companies was not always possible. This heterogeneity in disclosure practices creates an additional challenge.

III. Conclusion

The purpose of this thesis was to analyze how industrial and commercial companies listed on the BEL 20, the AEX 25 and the LuxX Price Index apply hedge accounting under IFRS as part of their financial risk management strategies. Through a mixed-method approach combining a quantitative analysis of 2024 financial statements and qualitative interviews with professionals from Deloitte, KPMG, PwC, Umicore, UCB, and EFRAG, this thesis identified several findings.

First, the results show that financial risk management occupies a central role across all companies in the sample. All companies are exposed to foreign exchange risk, interest rate risk, credit risk and liquidity risk, while commodity price risk more specifically affects industrial sectors exposed to volatile raw material prices. The majority of companies (87.5%) use derivative instruments to hedge their exposures and 81.25% formally apply hedge accounting under IFRS 9.

Second, cash flow hedges are the most commonly used type of hedging relationship (84.62% of companies applying hedge accounting), which can naturally be explained by the predominance of risks related to future cash flows. These mainly concern foreign exchange risk on commercial transactions, interest rate risk on debt and commodity price risk. Net investment hedges are also widely used (61.54%), reflecting the international presence of the groups studied, which is logical given that these are listed companies. Fair value hedges, on the other hand, remain less common (46.15%) and are primarily associated with managing interest rate risk on fixed-rate debt.

In terms of instruments, companies favor simple and well-understood derivatives rather than complex derivative products. These mainly include forwards, swaps and options. This preference is also confirmed by the professionals interviewed. It reflects a strong aversion to risk and a desire to maintain hedging strategies that are clear and manageable. The more complex instruments such as caps, floors, futures and collars are concentrated within a limited number of companies, mainly in the Commodity and Materials and Consumer Multinationals sectors.

Furthermore, the sectoral analysis reveals significant differences in hedging practices. Companies operating in the commodities and materials sector display the most complex and diversified strategies, whereas companies in the services and technology sectors mainly focus on hedging foreign exchange risk. The healthcare and biotechnology sector, characterized by high profit margins, makes limited use of hedge accounting. This is consistent with the observations made by the practitioners interviewed. They noted that companies with high margins feel less pressured to invest in formal hedging arrangements.

Regarding the quality of disclosures published under IFRS 7, the analysis highlights considerable heterogeneity within the sample. While all companies comply with the minimum requirements of the standard, as they are audited entities, voluntary disclosure practices vary significantly. Some companies, such as AB InBev, Unilever and ArcelorMittal demonstrate exemplary levels of transparency through detailed tables, sensitivity analyses before and after hedging and structured presentations by risk category. In contrast, other companies limit themselves to the strict regulatory minimum.

From a practical perspective, the interviews revealed that hedge accounting, although simpler than IAS 39, remains a hard discipline. Professionals emphasized the administrative burden associated with initial documentation, the difficulty of managing dynamic portfolios of contracts within the current regulatory framework (which is designed more for static hedging relationships) and the organizational obstacles that sometimes prevent the application of hedge accounting, regardless of the theoretical simplicity of the standard.

In response to the central research question, *“How do industrial and commercial companies apply hedge accounting under IFRS as part of their risk management strategies, and what are the current market practices ?”*, this study concludes that hedge accounting is widely integrated into the financial practices of large listed groups in the Benelux region. However, it is applied in a heterogeneous manner. Its adoption is influenced by the sector of activity, the company’s structure, the nature of the risks to which it is exposed, as well as organizational and cost-benefit considerations.

However, this research has certain limitations. The sample, limited to 32 companies and three stock market indices, does not allow for generalization to the entire European economy. Moreover, the disparity in disclosure practices sometimes makes quantitative comparisons difficult.

Future research could usefully extend the geographical scope to other European markets or analyze the evolution of practices over time, particularly in light of the Post-Implementation Review of IFRS 9 recently launched by the IASB. It would also be interesting to examine the impact of artificial intelligence on the quality of documentation and published disclosures, an avenue suggested by Mr. Posen during the interviews conducted for this study.

Appendices

Appendix 1: Illustrative disclosure of the effects of hedge accounting on the financial position and performance

The impact of hedging instruments designated in hedging relationships as of 31 December 20x0 on the statement of financial position of Alpha Beta Coffee Group (the Group) is, as follows:

Cash flow hedges	Notional amount	Carrying amount	Line item in the statement of financial position	Change in fair value used for measuring ineffectiveness for the period
Coffee price risk				
Arabica coffee futures	16,275lbs (thousands)	(4.5)	Short-term derivative financial liabilities	(1.0)
Interest rate risk				
Pay fixed/receive variable interest rate swap	EUR50m	4.0	Long-term derivative financial assets	1.0

Fair value hedges	Notional amount	Carrying amount	Line item in the statement of financial position	Change in fair value used for measuring ineffectiveness for the period
Interest rate risk				
Receive fixed/pay variable interest rate swap	EUR200m	(10.0)	Long-term derivative financial liabilities	(2.0)

The impact of hedged items designated in hedging relationships as of 31 December 20x0 on the statement of financial position of the Group is, as follows:

Cash flow hedges	Change in value used for measuring ineffectiveness	Cash flow hedge reserve
Coffee price risk		
Coffee purchases	1.0	4.5
Interest rate risk		
Forecast interest payments	(0.9)	(3.9)

Fair value hedges	Carrying amount	Thereof accumulated fair value adjustments	Line item in the statement of financial position	Change in fair value used for measuring ineffectiveness for the period
Interest rate risk				
Fixed rate borrowings	211.0	11.0	Long-term borrowings	2.1

The above hedging relationships affected profit or loss and other comprehensive income, as follows:

Cash flow hedges	Hedging gain or loss recognised in OCI	Ineffectiveness recognised in profit or loss	Line item in the statement of profit or loss	Amount reclassified from OCI to profit or loss	Line item in the statement of profit or loss
Coffee price risk					
Hedges of forecast coffee purchases	(1.0)	–	–	–	–
Interest rate risk					
Forecast interest payments	0.9	0.1	Other financial income	0.5	Interest expense

Fair value hedges	Ineffectiveness recognised in profit or loss	Line item in the statement of profit or loss
Interest rate risk		
Hedge of fixed rate borrowings	(0.1)	Other financial expenses

Source: EY (2014), Hedge Accounting under IFRS 9

Appendix 2: Interview with Mr Serge Vinogradov (Senior IFRS Technical Manager at EFRAG), translated from French into English

Youssra Zihmed: Hello! Sorry for the delay I had an issue with the application it would not work.

Serge Vinogradov: No worries it happens. First if you could introduce yourself and explain what your thesis is about? You already explained it in the email but if you could go into a bit more detail. I could then introduce myself meaning who I am. I know Sammy Hofmans because we worked together at PwC. And now I work at EFRAG. That way I could explain how I can help you.

Youssra Zihmed: The objective of my dissertation is to analyze the financial statements of companies in the BEL20 the AEX25 and the listed Luxembourg companies but only the industrial and commercial companies so not the financial companies.

Serge Vinogradov: Let me interrupt you for a moment. I understand it is not financial companies. But is it really only industrial companies as you say or is it more broadly non-financial companies? For example does it also include energy companies?

Youssra Zihmed: It is non-financial companies. So everything in the energy sector yes pharmaceutical companies as well. I take them into account. I analyze them and then the objective is to compare by sector what is common meaning the common points or the differences that may exist by sector. I have finished analyzing the BEL20 and I am about to start the AEX25.

Serge Vinogradov: It is interesting to see the comparison by sector. And what parameters do you generally try to compare? Do they use IAS 39 or IFRS 9 or are there other parameters?

Youssra Zihmed: My supervisor asked me to base myself solely on IFRS 9. So I do not look at IAS 39 at all. And I base myself on 10 criteria. First the sector so I look at which sector the company belongs to. I look at the risks the company faces in general not only those it hedges but in general. The objective of its risk management whether it uses hedging. If it uses hedging does it use hedge accounting? The type of hedge accounting used the risks hedged the instruments used. And then I also look at the information published by the company. Does it properly apply IFRS 7? Does it go into enough detail and in practice what is actually done by the companies? So I analyze 10 criteria in total.

Serge Vinogradov: I see. And why do you focus solely on IFRS 9? Because I have not really been involved in hedge accounting for a few years since leaving PwC. But I recall that among the companies I followed there were quite a few that still applied IAS 39.

Youssra Zihmed: It was simply my supervisor. I had asked him whether in my dissertation I should compare IAS 39 and IFRS 9 because there are still significant differences with the introduction of IFRS 9. And he told me that fewer and fewer companies were using IAS 39. So I did not need to develop that point.

Serge Vinogradov: That point already interests me. As I said I have not really analyzed what the current situation is. But when I was practically involved in it a few years ago I had the impression that quite a few companies in the non-financial sector continued to apply IAS 39 simply because they did not see the advantages of IFRS 9 in their case. They had built their way of accounting for hedges under IAS 39 and told themselves: if we use IFRS 9 we do not see any advantages because we have already found our way of doing things sometimes with proxy hedging sometimes without. And what is the point of updating the documentation if we are going to do the same thing anyway. So it was not because of the conceptual advantages of IAS 39. It was simply because there was work to be done if they suddenly made the transition to IFRS 9. I had the impression that there were still quite a few companies applying IAS 39. But I agree with you: first I have not been practically involved in it for a few years and then yes inevitably there is a transition and a process so more and more should really make that transition.

Youssra Zihmed: I think I have explained everything.

Serge Vinogradov: Perfect. In that case I can explain who I am and how I can help you. Before PwC I worked at Société Générale and at other firms but that was a long time ago. There I was not particularly working on hedge accounting but more generally on IFRS standards. I worked for 7 to 8 years at PwC here in Belgium and there I dealt with many things related to IFRS generally focused on financial instruments and insurance instruments. But in particular among the questions I dealt with were those relating to financial instruments including hedge accounting for non-financial sectors. That is how I worked a bit with Kevin and also with Samir. It has been about two and a half years since I left PwC. And now at EFRAG I work on almost all projects related to financial instruments. I could explain to you how things are seen from EFRAG's side now. This is not the day-to-day practical application. As a disclaimer here I am speaking for myself in the sense that if I start developing views on a particular subject it is more or less how I see it. I will try to make as many references as possible to publicly available documents so that you can use them if necessary. So that is where things stand at the IASB level regarding everything related to hedge accounting. I think you are aware that there is such a project currently called RMA Risk Mitigation Accounting which was previously called Dynamic Risk Management and before that Macro Hedge Accounting. At least you probably know this because the reason IAS 39 is still used is that there is a transitional provision allowing companies to use IAS 39 until Macro Hedge Accounting then DRM then RMA comes into effect. Which is not yet the case and for your information it is still very far from being the case. I think it will take several more years before that happens. So generally the logic of this transitional exception was aimed more at the financial sectors. But in reality it is not written that way. So any company including non-financial sectors can continue to apply IAS 39. So the project that is currently most active at the IASB level and consequently at the EFRAG level is this RMA Risk Mitigation Accounting project. It is a project that in theory should also have impacted the non-financial sectors. But currently it is focused on instruments not even on financial companies in general but very focused on banks and very focused on interest rate risk. In theory as I told you in a second phase it should cover other types of risks and other companies. And I know that quite a few companies in non-financial sectors apply what we call Dynamic Risk Management strategies dynamic hedging. I know for example that this applies to foreign exchange risk or commodity risk or something like that. Practically even though in theory it should have been the case this project for now only covers interest rate risk and even under a fairly particular angle. And the way the Exposure Draft published at the end of 2025 is written it clearly describes banking practices. This is why even insurers are not happy. So as far as hedge accounting more generally is concerned if we talk about new topics we are working on that is the topic that occupies 95% of our time from that perspective. And there is still the other project called Post-Implementation Review IFRS 9 hedge accounting. The Post-Implementation Review I do not know if you are aware of this IASB practice.

What is the Post-Implementation Review? Generally it is a project that must be launched for all standards 3 to 5 years after these standards come into effect. It is more or less analyzing recent practice seeing how the standard is currently applied. And generally it is not for an amendment or anything like that for that you need a standard project. IFRS 9 as you well know is a fairly particular standard that is clearly composed of three parts that were implemented one by one. And for this reason the Post-Implementation Reviews are also divided into three parts. Currently in February 2026 so just two months ago the IASB launched the Post-Implementation Review project for IFRS 9 part hedge accounting. And that is perhaps where I could help you a little bit. We are analyzing what the objective is for now given that this project was launched two months ago. It is just the very first phase. What they are trying to do now and how the project is generally structured: first there are the periods during which the IASB tries to accumulate information by launching the document called Request for Information. It is more or less a request to everyone saying here is what we see in terms of IFRS 9 hedge accounting here are the questions we have identified here are very general considerations such as whether IFRS 9 is working well and whether the implementation costs are not excessive for auditors and preparers. So for now the level of discussion on their part is very general. If I understood correctly it will last until roughly the end of May. So that is their official timeline. Until the end of May they will accumulate feedback. And then on the basis of this feedback they will publish the document called Request for Information. That will happen in the second half of the year they say H2. We do not know precisely when that is it could be July it could be December. I would say it should be rather toward the end of the year because they need time to analyze all of this. And the questions that will be addressed concern everything related to IFRS 9 hedge accounting financial sector non-financial sector all

combined. On our side since we anticipated that such a project was to be launched at the beginning of 2026 that is why within EFRAG through our cooperation with various expert groups we made a list of questions that we believe should be analyzed within this Post-Implementation Review. As for EFRAG we have several expert groups at different levels. And it is a document that is ultimately approved by the Board which becomes an official position. Until that point they are discussions. Some of these discussions are confidential and non-public. Another part is public and the documents for these discussions are published on our resources. What I could send you is a link to a completely public document that contains among other things all the questions that we believe are most important for this Post-Implementation Review. In the document you will see there is an introduction that generally discusses the status of the project it is a document from the end of March so fairly recent. Then there is an annex where we mention the list of questions that we consider interesting in the context of this project the technical questions the rules of course. And then there is still a part of the document called Appendix 2 in which you will see the summary of the discussions we have had on this subject since roughly mid-2021. So as an introduction that is the document I was thinking of that could be useful to you. And there you can make your references because it is a public document. I will send you the link afterwards.

Youssra Zihmed: Thank you very much. That is kind. You have answered my first question so that is perfect. I wanted to ask you whether in your view hedge accounting as it is currently set out in IFRS 9 properly reflects companies' risk management strategies?

Serge Vinogradov: Here I am speaking for myself on the basis of my experience not for EFRAG and this is not EFRAG's position. First a bit like what I have heard in all the discussions including the public discussions at the IASB level. As I told you they have launched the process. The first question I invite you to look at the document. There is such an expert group at the IASB level called ASAF those are the National Standard Setters who have discussed. They already had a discussion at the end of March where we were able to discuss these questions at a very general level exactly the level of questions I am going to mention to you: whether IFRS 9 works well whether broadly it reflects reality well whether there are logical questions. And EFRAG contributed that is a link I can also send you. What I think: I have never heard that IFRS 9 would work less well than IAS 39. I have never heard anyone say something along the lines of: ah yes we should not have written IFRS 9 part hedge accounting IAS 39 was already working fine. That I have never heard. At least it works at the same level or even better. Clearly there are improvements that were introduced by IFRS 9 that were useful for some. I am not sure they were useful for everyone. In the fairly basic case of hedge accounting on foreign exchange risk I have seen quite a few companies that applied hedge accounting under IAS 39 and did not use IFRS 9 simply because they did not find anything additional. They were not unhappy with IAS 39 but IFRS 9 did not solve their problems. So to summarize it clearly works relatively well at least for non-financial sectors. I completely set aside everything concerning the financial sectors. I have not heard too many complaints saying that conceptually it is completely wrong or that the costs are extremely high. You will see the type of questions the IASB staff asks. At a fundamental level I do not think there are major problems. Of course we always have more specific issues but it is not really a question of functioning. Generally yes it clearly works better than IAS 39. And there another question you rightly mentioned is IFRS 9 but there is also IFRS 7 that must apply. But that may be another question you have.

Youssra Zihmed: That is more a question based on your experience I think more from PwC. But what types of risks are most often hedged? I have mainly seen foreign exchange rate interest rate and commodities.

Serge Vinogradov: Absolutely that is correct. So foreign exchange risk was in fact what I saw. If I saw other types of risks or if I saw many generally yes that is it. As for foreign exchange rate it was mainly something like: we have a company in a country that sells or has positions in a different currency. And generally it applies hedge accounting on positions based on future sales or purchases for so many months or years based on the budget they consider highly probable. That is an extremely common topic. I would say I could not give you the proportion but at least a third or even half of all the questions we had at PwC were in this area. Interest rate risk yes of course. Generally it involved hedge accounting in a fairly specific context: it was the time of Covid or just post-Covid. There were quite a few bond instruments that were going to be issued in the near future with a certain probability. And there were questions about how hedge accounting could be applied to interest rate risk in that situation for example. Generally yes there were quite a few questions concerning cash flow hedges. I would say the questions were fairly standard. And coming back to

your third question commodities I saw those too. And I would say that among these three it was perhaps the most interesting experience because it involved truly dynamic models. The model for foreign exchange risk was more or less: we have the budget for sales and purchases we update it from time to time we update these hedging relationships simply because we see at the same time that the budget has been updated. And that was more or less it. Interest rate risk was mainly a fairly typical hedge frankly not too interesting. As for this third risk commodities there were more interesting examples because very often it involved truly dynamic hedging. In the sense that their position in metal X for example they update it in a truly dynamic way because there are purchases sales and all of that. And there it was really very interesting. I genuinely thought that for such companies this dynamic hedging project so the current RMA project should be quite interesting even if currently this RMA is only for banks and interest rate risk. Theoretically it should cover this area dynamic hedging. For now it is very far from being the case but I think it is a fairly significant gap for them because it is clearly very difficult to do that within the current hedge accounting framework. Generally hedge accounting as written is designed for fairly static hedging relationships or let us say not frequently updated. What I saw was something that truly resembles a dynamic position. And that is where I think the clarifications and possibly the improvements would be most relevant for the non-financial sector.

Youssra Zihmed: And I noticed that the rebalancing principle had been introduced by IFRS 9. Is it a technique that is fairly widely used by companies when they hedge commodities to be able to adapt their coverage? Or in practice is it not very widely used because they spoke of it as a good innovation that did not impact the P&L?

Serge Vinogradov: I would say that yes it was broadly used. Was it used frequently? Honestly I do not remember too well. But I do remember that yes it is an interesting point for them. I can mention other IFRS 9 principles that were used in a dynamic sense. Everything relating to rollover and you will see in our document that the rollover of hedge accounting was really a central question. Briefly yes rebalancing was used. I do not remember whether it was really very frequent. Conceptually yes they were aware that such a possibility exists and clearly some used it. But whether it was really omnipresent whether they necessarily refer to rebalancing or whether they do something similar without formally invoking rebalancing honestly I do not really remember in detail.

Youssra Zihmed: And what instruments are most commonly used for hedging when companies hedge? I have seen swaps I have seen options very often.

Serge Vinogradov: So when the sector is non-financial the instruments are generally basic. You said it correctly: forwards futures swaps sometimes options. I would say that in most cases the instruments are fairly basic so not too sophisticated. With the exception of a few companies that hedged in a truly dynamic way generally the instruments were fairly simple. For foreign exchange risk I would say just a fairly simple forward or something like that. Sometimes options but I have not seen many using instruments more sophisticated than that.

Youssra Zihmed: And do some hedging strategies get limited or avoided due to accounting constraints? Are there companies that will not use hedge accounting because it is too complex or too costly?

Serge Vinogradov: I would say that yes in theory it was possible that some instead of using hedge accounting simply used an economic hedge without hedge accounting. But for me honestly that was quite a rare situation if it was the case at all. We had a few questions on this subject. If I remember correctly it was either because the level was not too material and therefore they did not do it. If I can give you an example of a company that had significant economic hedging activities and then did not apply hedge accounting because it was too operationally difficult or too costly I could not find one in my experience unless it was a very small company or the level of activity was not too significant. For a large company whose level of instrument use is significant I have never seen anyone say: ah no I am not applying it because it is too difficult.

Youssra Zihmed: For example Mr. Brackman explained to me that companies with a smaller margin will be more tempted to use hedge accounting because volatility would have a real impact on the financial

statements whereas a company with a large margin will tell itself: it does not matter I can afford not to use hedge accounting?

Serge Vinogradov: Yes I would agree with him but you see that is also the question. Yes large margin or not that also has to be compared with the level of its hedging activities. So yes indeed if it is generally a large company with a large margin and a very small amount of hedge accounting yes very often one might say: it is not worth it because of all this documentation this proxy hedging. Was that really the case for the company with a high level of hedging activities? In any case you are focusing on companies that are part of stock market indices so these are large companies. Briefly if we turn the question around a bit I find it difficult to imagine a BEL20 company with a fairly high level of hedging activities that would have said: ah no it is too difficult I am not going to use hedge accounting for that reason. I am not excluding that there might be an exceptional case. But broadly no I cannot imagine it. Maybe they were looking for a simple way to use it so yes it might have been costly and difficult for them. But not applying it at all simply because it is too difficult or costly at the level of such a company no. I find it hard to imagine.

Youssra Zihmed: So it is not a question of difficulty. It is more a question of: is it really useful or not to do it?

Serge Vinogradov: It is difficult of course especially for a large company even more so for a large group. If you have a large group with an enormous number of transactions say with a group treasury that manages hedge accounting within the group yes of course it is not easy and operationally it can be costly. But generally hedge accounting reflects what already exists. So now we need to resolve the mismatches in our income statement we will apply hedge accounting. For that we need to do something. Generally the economic activities are already there it is just a question of how to account for these operations. At the level of companies belonging to stock market indices I find it hard to imagine en masse companies that would have said it is too costly or too difficult. Rather they would look for somewhat simplified methods they would seek a compromise with the auditor: is this possible can we say that here it is not too material. Or apply hedge accounting in a slightly more straightforward way. But not apply it at all simply because it is too difficult or costly. At the level of such a company no I find it hard to imagine.

Youssra Zihmed: And can it happen that a company will adapt its hedging to be able to meet the criteria for hedge accounting? So use a different instrument etc.

Serge Vinogradov: Yes briefly it is quite a relevant topic because the purpose of the standard is true it is not really that you change what you do in economic reality. The purpose is that you reflect it well. I can tell you that this is not the topic for the non-financial segment at the moment. But I can tell you that now we are discussing this for RMA. What concerns interest rate risk. There are enormous discussions concerning the objective. Right at the beginning of a standard it is written for a reason. And there are quite a few discussions along the lines of: what is the real main objective of what we are doing is it really to properly reflect what we do in economic reality or is it just to fix what is in the accounts or both. And believe me it is a very important subject that is being discussed I would say surprisingly important. Briefly coming back to this question yes it is a fairly typical concern. Would companies have actually modified their current practice? I can imagine it fairly easily. In most cases I would say they look of course for how to do best within the constraints. In the sense that instead of simply writing the order of their documentation slightly differently they will just designate the hedged item differently or something like that apply what is called proxy hedging more or less. So just instead of literally reflecting what is done by Risk Management modifying the way all of this is explained in their documentation. But the question is quite valid because it happens too often. If I understood correctly the IASB's goal in this case is really to eliminate as much as possible this practice of proxy hedging.

Youssra Zihmed: And do you observe significant differences between sectors in the use of hedge accounting? Are some sectors more advanced or more structured than others?

Serge Vinogradov: Yes I see. I honestly never thought about hedge accounting from that perspective at PwC and obviously I think about it even less now. I would say not really. I would say it is much more a question of other factors. Compare for example what the structure of the consolidated group is. So if you are present in many countries then regardless of your sector you will inevitably have to apply some form of hedge accounting on foreign exchange rates. That is not a question of sector. It is much more a question of

presence in so many markets. I would find it difficult to give you examples. Perhaps I could say that yes there are sectors for which certain hedge accounting questions become more important. Compare for example the PPA project which became NDE so the contracts for electricity which became a separate project entirely. So for the energy sectors yes indeed this type of hedge accounting has become really very important. Companies involved in commodity hedging generally have fairly advanced and dynamic strategies. And if we talk about typical cases of interest rate or foreign exchange hedging there I would say that other factors seemed more important to me. Just the structure of the group. To give you an example was there a big difference between a company that sold fruit and vegetables and a pharmaceutical company? The differences related to their geography were much more important than the industry.

Youssra Zihmed: So the geographical reach of the company how many countries it is in is more important than the sector it is in?

Serge Vinogradov: Yes absolutely. I would say it is much more the currency used or the interest rate used. You can be present in several EU countries always using the same euro so that changes nothing for you. And you can be present in 5 different countries but if it is on several continents then obviously you have the problem. I would say that for me the link with presence on different markets was much more important than the sector. But note that here I was speaking from my experience in the sense that I only worked on the questions that came to me or that I occasionally developed myself. It was not the only subject I worked on. Kevin for example works on a main subject and there his perspective may well be quite different especially regarding statistics. I just shared my impressions.

Youssra Zihmed: Of course. In your view do the disclosures published by companies on hedge accounting truly allow one to understand their hedging strategy in practice? Because the people who will read the financial statements are not specialists they are not auditors. Is it enough for them to understand?

Serge Vinogradov: There I do not entirely agree with you. Do you think the general public regularly reads the financial statements of companies all the way to the notes on hedge accounting? I would say that for a specialist what is written and we are talking about companies at the BEL20 to CAC 40 level it is understandable. I would say there is another question one could ask: is it sometimes excessive information? In the sense that sometimes for example I think the notes required by IFRS 7 paragraph 21 and following are a bit too detailed for a non-financial company. Is there not information that is incomprehensible because of that? Honestly I had that experience in the sense that yes we must still do this and that because there is such a requirement in such a paragraph of IFRS 7. But honestly would anyone really use it? So it is mainly not a question of comprehension. But when certain pieces of information are there what is the real purpose? That is the kind of question I was asking myself. But as a question of comprehension I would say that for investors for auditors for regulators possibly for companies at the BEL20 to CAC 40 level no I do not think it is a question of comprehension.

Youssra Zihmed: That is very interesting because that point of view is very different depending on the people I interview because some will say it is completely sufficient or even too much detail and not useful. And others will say no it is not enough detail it is not clear enough it is not understandable etc.

Serge Vinogradov: It is a point of view that is very divisive. If you think about investors they will always tell you it is not enough that is normal. But I would say it is understandable and it is not bad. Sometimes it is too much not in the sense that it is not comprehensible for the reader but in the questions one could ask about the usefulness of the information. There are things that were clearly written I would say for the financial sector and that others must still apply as well because it is the standard for everyone not just for banks. And it loses a bit of meaning when talking about the non-financial sector. I would say rather that yes it is understandable yes broadly it is sufficient because we are talking about companies in the non-financial sector after all. If the disclosures are well done then this information should be sufficient. But sometimes excessive in certain cases too much qualitative information that does not really explain what the company does. I can understand that sometimes the information is a bit boilerplate meaning someone found the disclosure template from a PwC or equivalent and did copy-paste with minimal modifications. And then they publish that and you read the same thing concerning the strategy for many companies. It is true that boilerplate disclosures are a known problem but generally at least at the CAC 40 level I think that even if the

disclosures are boilerplate they more or less reflect what they do. Because they more or less do the same hedges interest rate or foreign exchange. Honestly they are not doing completely different things. So yes it gives the impression that everyone is simply copy-pasting and there is not too much added value. But in reality it can still reflect what they do well.

Youssra Zihmed: Yes because I noticed that there were companies that gave a lot of detail whereas others would give the bare minimum and would not go into much detail. And even from a comparative perspective it is difficult to compare the hedges that companies do.

Serge Vinogradov: There I agree with you. But hedge accounting and the disclosures related to hedge accounting are not a unique case. I would say it fortunately reflects the general rule. It is always like that with IFRS accounts. There are always those who do the bare minimum and there is always someone who explains it well in detail in a slightly too abundant way. I could give you many other examples of the same thing. So hedge accounting is not something particular. With any more or less sophisticated topic you will always have the same thing. Let us take the example of revenue: the notes on revenue can be just three lines and two sentences or perhaps a detailed explanation concerning each type of product each way of recognizing revenue especially over time sometimes with a table. Hedge accounting is not an exception. It is just a relatively difficult topic at the non-financial sector level and that is why it is more visible. But generally it is just a difference in approach.

Youssra Zihmed: And in your view are there areas for improvement in IFRS 7 or IFRS 9 something that could be improved in the standard?

Serge Vinogradov: Ah yes clearly. And generally that is why I told you I would send you the document. There this is not the official position. And that is where we talk exactly about that about improvements or rather about questions where improvements might be desirable. And honestly it is hard to find a standard as complex as IFRS 9 hedge accounting or IFRS 17 where someone would tell you: no there is nothing to improve. Certainly there are things to improve. There is also a fairly well-known phenomenon. Every standard is written for its time. IFRS 9 was written in a particular context it is already more than 15 years old. It was not written to reflect today's realities. It reflects certain problems that were accentuated by the 2007-2008 crisis. So obviously the standard was written for its time. The same applies to hedge accounting. 15 years later obviously there has been an evolution while the standards we apply are still the same. IFRS 9 from that perspective is a fairly recent standard so this effect is not too important. But to give you a comparison you know there is a standard like Intangible Assets which reflects imagine Intangible Assets in today's technological world a standard that was written to reflect investments and calculate what the development stage of a product was. Imagine the same thing today the concept is completely different. Briefly of course there are areas for improvement and in the document I will send you there are a few examples. I would still say that the subject with which I began this conversation concerns Risk Mitigation Accounting and this IASB project. I would say that a real improvement would be for this project to also cover the activities of the non-financial sector including other types of risks that are managed in a dynamic way such as not so much interest rate risk but rather foreign exchange risk and commodity risk. That would be a real area for improvement. And then the questions I mentioned in the document I am going to send you. The IASB started their post-implementation with very general questions: does the standard broadly work well according to its intentions. There the majority of what I have heard so far is yes in the sense that we do not see a critical problem. But not yes in the sense that there is no possible improvement.

Youssra Zihmed: And finally the last question I have is: is there anything more you could tell me that might be useful for my dissertation that we have not covered today?

Serge Vinogradov: I would say I have touched on this topic of RMA and why it is important. I understand that for now it is for banks and for interest rate risk which are well outside the scope of your dissertation. But it is a topic that in my view should or could and even should address other subjects concerning dynamic hedge accounting. Unfortunately what we see now is not the case at the moment. Clearly there is potentially the intention to do so later. But I would say that everything concerning the dynamic regime is in my view one of the main gaps. I have the impression that IFRS 9 as currently designed reflects a relatively static vision. That does not mean you cannot do things like rebalancing. But it still reflects a relatively static

vision. And it is not very natural when you start applying it to hedging relationships that are truly dynamic meaning daily or even more dynamic still. I would say that is something that is perhaps missing. And honestly this gap should have been addressed by this RMA project which for now focuses solely on one type of risk and is written in such a way that it speaks only of the banking industry. There you go. I would say that is perhaps the most important thing.

Youssra Zihmed: So if I understood correctly it is possible that in the future this project will also take into account industrial and commercial companies. But that is not the case just yet.

Serge Vinogradov: It is not the case at all. And it is rather a question that is mentioned from time to time by certain companies in the non-financial sector. In the sense of: why is it only banks and only interest rate risk do not forget us more or less that type of message. But what is even more interesting if I understood correctly for companies in the non-financial sector is mainly not the interest rate risk that is currently being addressed by this project. Because generally they have micro-hedging relationships. Yes a non-financial company can have an enormous amount of loans for example. But broadly will they really hedge them as a global net position? No of course. Generally they will hedge them either one by one or not in a too dynamic way in any case. For them generally it is commodity risk and foreign exchange risk that would be most interesting from that perspective I think. But unfortunately for now there is no clearly expressed willingness by the IASB for the project to continue in that direction. I would say this would be a very good moment for expansion because honestly I know companies that apply this truly very dynamic model. And honestly I see how they do it and it is really so difficult in my view with IFRS 9. Yes they manage it but it is difficult it is complicated.

Youssra Zihmed: Well I have no more questions.

Serge Vinogradov: What are your plans? When will your dissertation be finished? What are your plans?

Youssra Zihmed: I have to finish it by the 29th of May so in roughly one month. As I told you I have normally finished the theory I have finished the BEL20 and it will be defended on the 19th of June. I will analyze the AEX25 and the listed companies in Luxembourg. And I will use your interview and the ones I did with other people. I interviewed Mr. Braeckman but also an auditor at Deloitte and an auditor at KPMG. When I have finished it and it has been validated I will send it to you.

Serge Vinogradov: Perfect thank you very much.

Youssra Zihmed: Thank you have a good day.

Serge Vinogradov: Goodbye have a good day.

Appendix 3: Interview with Mr Carl Verhofstede (Director at Deloitte)

Carl Verhofstede: Good morning.

Youssra Zihmed: Hello, Mr. Carl.

Carl Verhofstede: Nice to meet you.

Youssra Zihmed: Nice to meet you.

Carl Verhofstede: I hope everything is okay. Yes. Okay so I don't know what you want to discuss exactly but just tell me and I'll see if I can be of any assistance.

Youssra Zihmed: I just wanted to start by thanking you for your time and for your help. It's really a great input for my master thesis. Thank you very much for your help. It's really nice from you.

So just to give you a little bit of context my master thesis is about how industrial and commercial companies use hedge accounting under IFRS as part of their risk management strategy. So what I will do basically is analyze the financial statements, the 2024 financial statements of industrial and commercial companies that are part of the CAC40, the BEL20, the DAX40 and the AEX25.

And to do so I will use 10 criteria and this is what I want to talk about today. I created my questions around these 10 criteria. Just for you to have an idea the first one is the industry. So in which industry the company is because I want to disclose my results as a comparison between the sectors because my teacher, well the teacher that helps me, his name is Mr. Schumesh, he told me that he knows you. He works at PwC.

Carl Verhofstede: I think I must have met him but I'm very bad at recalling.

Youssra Zihmed: No problem. Well he told me that comparing my results across industries is the best way to present my findings. Then excuse me I took the wrong paper.

All right so the second point is the type of risks that the company faces. In general, not only the ones that they hedge but in general the type of risks that the company faces. And then the risk management policy and its objective. Then obviously the type of hedges that they do, the type of hedge accounting, hedged items, hedging instruments, the impact on the financial statements so on the OCI and the impact with or without hedge accounting, the disclosures and finally the impact on financial communication. So this is what I will analyze.

So my first question before starting anything is: could you briefly describe your role and your experience with hedge accounting?

Carl Verhofstede: Yes so I'm part of what we call the IFRS desk, so IFRS, that's also IPSAS by the way, so public sector accounting. We have a team that is led by Thomas Carlier and my role in this is focusing specifically on financial instruments. So we support both the audit teams. Deloitte as an audit firm has to review of course these financial statements and provide an opinion on them. So it's support for the audit teams as part of the review of the financial statements but we also offer support to non-audit clients with their accounting issues. What I'm focusing on is financial instruments and related issues because you always have for instance aspects of consolidation, impacts, how does it affect the consolidated financial statements, currency elements, foreign currency elements, so foreign currency accounting. That's my job. In doing that I've reviewed a lot of hedging documentation because as you know hedge accounting is I think the only accounting, some special accounting that is subject to formal documentation. That is something that is of course not reflected as such in the financial statements but if you have to really review hedge accounting you could always or should always ask for the hedging documentation if you can have access to that and that's really the basis where all these elements that you described, the type of risks and how they are managed, the designated hedging instruments, should be lined up and described. But of course you have no access to that.

What we also do, but I've been doing that less lately, is reviewing the disclosures in the financial statements to see whether there are any inconsistencies in how accounting for financial instruments is reflected in the financial statements and in the disclosures. And then of course hedge accounting is one of the most complex and quite significant elements of those financial statements.

So in that context because my background is the financial services industry, I was involved in accounting for a bank before I came to Deloitte, my focus has mainly been on the financial sector. But of course corporates and especially large industrial clients have significant application of hedge accounting and issues with designating effective hedge relationships, and that's indeed what I've been looking at in the past. And I must say that one of my frustrations is that generally speaking my feeling is that the disclosures on hedge accounting are quite often very difficult to get a real feeling or a good idea of what is actually occurring.

That's my general feeling. That's because I come from the details and then I see how it is reflected. You are coming from this, you will be looking at the published financial statements and I think nevertheless that will be useful. I think you can ask indeed pertinent questions and come to presumably interesting conclusions on that but that's a different point of view in addressing these issues from my point of view compared to your point of view.

Yousra Zihmed: Yes I don't have access to all the documents and I can't ask because I have to analyse 101 companies, I can't ask information from all the companies.

Carl Verhofstede: No but I think it's a good exercise because you will be summarizing and comparing so that will be I think a good topic.

Yousra Zihmed: Thank you. So my first question is based on your experience: how is hedge accounting applied in practice across different types of companies or industries? For example are there sectors that use more hedge accounting or others that use more one specific type of hedge accounting? Industry-wise what can you say?

Carl Verhofstede: So of course the financial sector, the banking sector and I think also the insurance sector is a bit apart because you will be including some of them.

Yousra Zihmed: No I have to exclude them, only industrial and commercial.

Carl Verhofstede: Because that is really in terms of hedge accounting a different world because they are managing interest rate risk and you are probably aware of the exposure draft on risk mitigation accounting, dynamic risk management, just for your background. But that's really not a concern of yours so I would not go further into it. Banks are having a lot of issues accounting for basically how they are hedging their interest rate margin.

There has been no good solution for that and that's why you may know that parts of IAS 39, the old standard before IFRS 9, are still in force and that is mainly to allow banks to apply hedge accounting in a viable way for their interest rate margin hedges, so ALM, asset and liability management hedges. But we can set that aside.

If you look at the industrial companies I think there are two types of hedges that are quite frequent. One type is commodity hedges and that's a very general term but that's where you basically hedge the price risk of either your sales or your inputs in your production process. In commodities for instance you have companies that are specializing in extracting and refining metals from scrap or whatever, mining companies or companies that have important inputs of metals, and these can be precious metals, non-precious metals. Even for plastics they have to manage the price of their inputs. So they often lock in the price for certain commodities and these commodities generate something that is not a financial instrument. It can be the price of electricity, the price of power or gasoline if that's an input or metals they purchase because these can be quite volatile.

So these are typically the hedges that these companies apply and that's mostly cash flow hedges where they basically want to lock in the price they will be paying for their inputs and the price they will be getting from their sales. It can be a chocolate manufacturer for instance for which cocoa is an important and volatile input. Generally speaking that's commodity hedges, that's hedging the price risk of inputs and sales for certain commodities where these commodities are priced in the markets and where you can find derivatives to hedge them.

Another important type of hedge that is also not confined to the financial sector is basically hedging interest rates on financing. That's actually quite prevalent. Many industrial companies for instance have interest rate swaps. Hedging basically is either converting funding they have at a fixed rate where they want to convert it into a floating rate, a floating interest expense, or when they have a floating rate. Are you familiar with floating rate interest?

Yousra Zihmed: Not floating rate no.

Carl Verhofstede: I'll just give you an example. You may be familiar with the term Euribor. Basically you have a debt outstanding and you pay an interest on that to the bank and the contract with the bank says we will revise your interest rate every three months, every six months or every year. We will then look at the benchmark interest rate that is published in the market and we will adjust the interest rate for the next period based on that benchmark interest rate which in Europe would typically be Euribor. That's the interbank offered rate quoted on a daily basis. So at the beginning of each new period of six months for example you look at the quoted interest rate for that six-month period and that rate will be payable for the next six-month period of your let's say five-year loan. Each six months you will be updating the interest you pay to the current market level. And typically you have a floating interest rate plus a fixed spread that is paid.

So these are interest rate hedges where you basically lock in the interest that you as an industrial company are paying on your funding, your financing with the banks, and where you either want to convert a floating rate into a fixed rate or vice versa depending on how you manage your interest rate risk. I think these are the two main types of hedges.

Because these interest rate hedges are either fair value hedges or cash flow hedges depending on the situation. Simplifying a bit, a fair value hedge is where you convert a fixed rate into a floating rate. And a cash flow hedge is where you convert a floating rate, which has variable cash flows, into a fixed rate. Are you familiar with the basic mechanics of the difference between fair value hedging and cash flow hedging?

Yousra Zihmed: Yes yes.

Carl Verhofstede: So that's a different impact on the balance sheet and on equity. You have to have detailed disclosures on how your hedge accounting is affecting your equity or the comprehensive income. And then you have what is called the cash flow hedge reserve in case of a cash flow hedge where you temporarily remeasure your derivative. All derivatives are always remeasured at fair value in the balance sheet but the changes in fair value in a fair value hedge go directly to P&L and you adjust your hedged item also for changes in the hedged risk. So you make an adjustment to the hedged item that also goes to P&L and then in a fair value hedge the offsetting or the compensation occurs in P&L.

In a cash flow hedge your hedged item is for instance future interest payments at the variable rate. There the change in fair value of your derivative is not sent immediately to P&L but is temporarily kept in other comprehensive income, in equity, and then recycled basically as your hedged item, which would be floating rate debt where you recognize interest pro rata temporis. Then it would be recycled insofar as your hedge is effective also to interest rate expense and there is a compensation there over time. But I don't know if this is helpful for you but these are the main types. So interest rate hedging, basically hedging the interest rate on their debt. Commodity hedging and there is a lot of that but that's mostly cash flow hedges. But there can be really anything, the cost of electricity, the cost of metals, the cost of plastic.

For instance in the food industry you have companies that are processing wheat or different food commodities in their process. So they can then find in the market futures, so derivatives over wheat or whatever. These are quite complex and often difficult to designate as hedges.

I'm thinking of another one in terms of energy. Are you familiar with PPAs, so Power Purchase Agreements? That's long-term, you know with the evolution in terms of green in our environment, a lot of companies want to lock in the price of electricity they are using in their production process and sometimes they are quite intensive in terms of electricity use. So they need a long-term provisioning contract where they want to purchase electricity from for instance a power plant which could be a solar plant or a wind turbine plant. For the electricity that is produced by all these electricity plants there are often long-term contracts in place. And then you have actually a question whether these contracts, in some cases contracts for the delivery of a commodity, are required to be treated and accounted for as derivatives.

So if you have a practice of settling net for instance or entering into a net settling contract or if you have just net settlements under the contract, in some cases you have electricity or power purchase contracts that are derivatives. And then the question arises whether these contracts can be designated as hedging instruments using hedge accounting because of course you are locking in the cost of electricity over a period that can be very long, 5 years, 10 years, 20 years or even longer.

And the question is do you apply hedge accounting and how does it affect the income statement? Power purchase agreements is a very live topic, a very complex topic. And sometimes there are some evolutions to be expected because the guidance on accounting for power purchase agreements and potentially designating hedges has been modified by the IASB recently. So there are more possibilities to apply hedge accounting specifically for certain kinds of power purchase agreements, so electricity contracts, long-term electricity contracts within very narrow limits. Normally if an entity uses that it could generate quite a lot of volatility because you have long-term contracts that could expose you, the longer the term of a contract that fixes a price the more it is subject to change in fair value if the market price changes.

What I think will be less common but you see from time to time is that you have derivatives related to basically share options. Sometimes companies want to invest in but that's normally not really the business of industrial companies but sometimes they take participations and they want to lock in the price for certain participations where they enter into options over shares. And share options also are known derivatives but especially if the shares are not quoted in an active market you have important measurement issues because how do you determine the fair value of a non-quoted entity? And then a derivative, an option is quite complex, how do you measure the fair value in accordance with IFRS 13 of a derivative over an unquoted share? I was thinking of something else. I forgot, sorry.

Yousra Zihmed: No problem. I've also heard a lot about companies that hedge exchange rates. I don't know if it's really used a lot or not.

Carl Verhofstede: Yeah sorry and it's linked to mostly commodities. So the FX hedging where you basically use FX forward contracts. So that's a contract where basically you say within six months or within a year I will be buying an amount of X, exchanging an amount of X dollars against euros. So that's currency risk hedging. Obviously that's quite an important one.

You can have FX forwards but you can also have a mixture where it mixes with interest rate risk, which is where you have cross-currency interest rate swaps, also called CCIRS. So that's where you have basically you exchange amounts of currency at the beginning and at the end but also you exchange the interest on the notional amounts of that currency in two currencies. For instance if a company has obtained funding in a foreign currency, in dollars let's say, a euro-functional currency entity has funding in dollars. So they are paying interest also in dollars and at the end they have to repay an amount of principal in dollars. So they could hedge that with a cross-currency interest rate swap where basically at the beginning they swap the notional amount of the debt into euros. So they take up the loan, they receive it in dollars but they swap that immediately into a euro amount. And then under the cross-currency interest rate swap at the end of the maturity of the loan they will exchange back that nominal amount so that they can repay their debt. And in the meantime they will be swapping the difference between an interest in dollars on the notional amount in dollars against an interest in euros on the notional amount in euros. So basically the synthetic

effect of having a loan in dollars combined with a cross-currency interest rate swap is as if you had a loan funding in euros. So for that you also apply hedge accounting. But then basically if it's funding in foreign currencies you are hedging both the interest rate risk in two currencies and the currency risk itself.

But of course let's say more frequent for entities that process commodities is that you also say okay we have purchases and sales in foreign currency and we want to lock in our cost of sales if it's purchases, and we want to lock in our sales amounts in these foreign currencies into our functional currency, the euro. And so indeed you can and that's typically cash flow hedges where you say for instance for the month of October I expect to have sales in dollars for that amount and you would then sell those dollars forward against euros. If you have sales in dollars you receive dollars, you want to ultimately have euros, you can have a forward sale where you say I will already sell my sales revenue in dollars and convert it into euros. That's a cash flow hedge and that's obviously quite an important and very basic risk management, currency risk hedging.

And within Europe of course there is a bit less of an issue but obviously in international trade many companies have sales or purchases in many currencies. So typically you would be using FX forwards or it could be options, currency options where you say okay I want to cover a one-sided risk where if the currency goes down I will take that as a positive but if the foreign currency goes up I want to have the possibility to purchase that currency at a locked in rate under the option. So you can have two types of hedges. One where you have a forward type derivative where you just lock in a price and if the price or the rate goes up or down you compensate. It's an option type instrument that's more complex and then you typically pay a premium for the protection and there you only hedge against movements typically in one direction or within what is called a collar. So it's only if the price goes beyond that level or below that level that your option would of course kick in. And you can have that for all types of hedges but obviously currencies are quite pervasive, actually any company operating outside the eurozone.

Yousra Zihmed: Okay so you already answered my third question which was what type of financial risks do companies most commonly hedge, we talked about it. And my fourth question is: could you talk about the different types of hedge accounting and how they are used in practice including the hedged items and the hedging instruments? We also talked about it a little bit but maybe talking about what are the hedging instruments that are the most commonly used, the easiest ones to use or maybe the ones that companies don't want to use because they are too difficult?

Carl Verhofstede: Yeah there are so as a general comment options are used less and that's basically because you have the distinction between forward type contracts where you say you're locking the price in the future, and whether it goes up or down the two parties will be compensating one another for both movements up or down. So if it goes up one party makes a payment if it goes down the other party makes a payment. For forwards typically you have no upfront payment to make because they are normally at market as it is called. So an at-market transaction has an initial fair value of zero because the forward price is calibrated so that it balances in the market. That means that your derivative starts at a fair value of zero and then of course it can get a positive or a negative value and that's how it compensates for changes in price levels.

But in an option it's different because if you purchase an option you have to pay a premium and that premium is the price you pay for the one-sided risk protection that you receive. If the price moves in an unfavorable way for you you are protected and if it becomes favorable then you don't have to exercise your option and you take the benefit of what the market price did. So that's why you have to pay a premium. That's the initial fair value and that actually complicates the hedge accounting and the hedge designation rules quite a lot because from a technical point of view you would normally have to split the time value from the intrinsic value of the derivative.

I don't know if you're familiar with option pricing but an option has a fair value and you use a certain model, you can have Black-Scholes but also Monte Carlo simulation. So basically you have techniques for measuring the fair value of an option but you cannot directly measure the intrinsic value of an option or the time value of an option separately though for measurement and accounting purposes you can typically make that split. In some cases you have to do that for instance where you are hedging a hedged item that is not an option and that could be your dollar purchases and you want to buy an option so that you can protect yourself

against an unexpected rise in the dollar. Then for accounting purposes you have to split your derivative into two components: the intrinsic value and the time value.

The time value is something that you determine as a residual between the full fair value of the option and the intrinsic value of the option. For a share option for instance the intrinsic value is very simple, it's based on the spot price of the share and then the difference between the full fair value and the intrinsic value gives you the time value. The time value is in principle the premium you pay at the beginning and it disappears over time but not on a linear basis. The time value can go up or down during the life of the option and you have to measure that separately.

If you have looked at the guidance on hedging with options in IFRS 9 you will see that you can either designate for the full fair value or only the intrinsic value. And then you have quite complex rules for what you do with the time value. You can now under IFRS 9 account for it as a cost of hedging meaning that it goes also to OCI and you can then amortize it over the period of the hedge if it's a time period based hedge or recycle it when the transaction occurs if it's a transaction based hedge. So there's quite a lot of complexity and often companies would try to avoid options because the accounting is so complex, the measurement is complex and they have to put up money upfront to cash the initial premium. That upfront amount is often hidden a bit in the sense that typically when an entity wants to purchase an option they will actually be buying an option and writing an option at the same time, typically in a collar structure. That says basically you have at one level I'm purchasing an option that if the price goes above that level I'll be able to purchase at the capped amount but if the price would go below the floor in the collar then I'll be compensating the bank. So this is actually buying an option and selling an option and the premiums for the two options will cancel out at the beginning but the time values at the beginning canceling out does not mean that after three months they are still canceling out. For accounting purposes you have to trace the intrinsic value separately from these time values and that can be quite a headache.

So in short that's why options are less popular. Generally speaking mostly you have forward type transactions, so FX forwards where you just say to the bank I want to buy 10 million dollars within seven months and just give me a fixed rate. Then there can be FX swaps but that's basically the same, you do a spot transaction in one direction and then have a forward in the other but that's actually a forward contract. And then interest rate swaps are typically also forward type contracts. So if you swap a floating rate into a fixed rate or vice versa the interest rate and currency swaps are typically also forward types with an initial fair value of zero. For power purchase agreements it's a bit more complex but in principle these are also forward type contracts. So options are relatively rare and forward contracts are mostly the types of contracts that are used.

Youssra Zihmed: Okay and I've seen that the difference between IFRS 9 and IAS 39 is that now we can use non-derivatives as hedging instruments. Are they really used in practice or not?

Carl Verhofstede: That's typically for currency risks and basically companies managing currency risk with forwards sometimes also keep deposits in a foreign currency. I think that's the most common example of where you would be designating if needed a non-derivative as a hedging instrument for currency risk because that currency deposit is remeasured under IAS 21. You remeasure the amount of the deposit at the closing spot rate and that's an FX impact. So you can use that in combination with the FX forwards to say okay I'm hedging for instance these future purchases in dollars but I also have a deposit in dollars. So I'm what they call long in dollars and that might be used in your hedge designation to say that dollar deposit is part of my hedge together with FX forwards in order to hedge my highly probable forecast purchases in dollars. But to be honest that is something that occurs only infrequently, it's not very visible and it's not really a big difference. So in practice designating non-derivatives as hedging instruments is not the big thing that changed that much.

In some cases now under IFRS 9 you are allowed to designate the combination of a hedged item and a derivative as being hedged in another hedging relationship but that's quite complex and occurs in certain specific situations and it's certainly not the standard approach. If you're looking at the high level and the really relevant hedges for companies I think you will find these sophisticated combinations less relevant.

In practice it's indeed currency hedges, interest rate hedges and commodity price risk hedges that occur the most and mainly using derivatives, sometimes options. And in terms of FX risk what is not that frequent but we still have regularly is hedging an investment, so a business combination where you will be paying the price in a foreign currency. That's a highly probable forecast business combination where you say we will be acquiring a subsidiary but we will be paying the price in foreign currency and we want to lock that purchase price in. So basically you're hedging the amount of goodwill that you will be recognizing because the goodwill is actually the difference between the purchase price and the value of the net assets you acquired to put it simply. If you're purchasing an investment in the states and paying the price in dollars and your accounting is in euros, if the dollar rate goes up you will actually have a larger purchase price in euros meaning that your goodwill as a residual will be for a different amount. And so you can hedge that with an FX forward and when you lock that in.

There is a special aspect of that because often they will use for that deal contingent FX forwards and deal contingent means that the bank is offering you that if the deal does not go through, so the business combination is not occurring, you can just forget about the deal and you don't have to pay anything. But there's actually a conflict with the normal rules of hedge accounting where you can only hedge a highly probable forecast transaction but if you are hedging actually for the non-occurrence of the transaction that is a conflict with the requirement. So just be aware that you might come across that as a hedge because the amounts involved can be quite important. Business combinations are not an everyday occurrence for businesses so I wouldn't count that as something you see very often but it's something that we regularly run into and have to analyze and review.

Youssra Zihmed: My other question is: in your experience how does hedge accounting affect the financial statements particularly profit or loss volatility and OCI compared to situations where hedge accounting is not applied? So obviously more volatility?

Carl Verhofstede: Yeah indeed and that's of course the primary purpose of being able to apply hedge accounting because if you would enter into a hedge by entering into a derivative especially in cash flow hedges you would see the accounting mismatch. The default accounting for a derivative, a hedging instrument, is at fair value through P&L. So you get an accounting mismatch because your hedged item is not being remeasured normally. It's future purchases or future cost of sales or it's a loan at amortized cost on your liability side. So the hedged item is not being remeasured for changing fair value for the risk factor you're hedging against, whether that's interest rates or commodity prices or whatever. But your derivative is. So that's the basic mismatch that creates volatility from day one because if you enter into a derivative you have to measure it at fair value through P&L. Typically initially you have a zero value because as we said non-option forward contracts have typically an initial fair value of zero and then it begins, and the longer the term and the more volatile the underlying risk factor the more volatility it creates.

You have the two mechanisms. Either in the cash flow hedge you take the change in fair value of your derivative that is an effective hedge and these changes go temporarily into other comprehensive income. So it creates volatility in equity but for most companies that's not really an issue. Then because the fair value changes are absorbed in equity in the cash flow hedge reserve they are only subsequently over the term of the hedge recycled to P&L in line with the hedged item.

And an important aspect of hedge accounting that is not actually mentioned in the standard is that you are permitted to present the P&L impact of your hedging instrument in the same line item as the P&L impact of your hedged item. To give a simple example if you have a floating rate debt your interest expense every six months could change significantly if the benchmark interest rate goes up or down. But under hedge accounting your interest rate swap is exchanging the variable rate into a fixed rate. Normally derivatives are measured at fair value through P&L and that's one line item, changes in fair value of your derivatives. But if you're applying hedge accounting you may then say okay I will recycle the fair value of my swap which has an initial fair value of zero and ultimately when it is settled it will also have a final fair value of zero, so it's only temporarily that you get these movements in equity. Then everything gets recycled and basically you are allowed to show your interest expense as the net of the floating rate interest payments, the floating rate interest payment you receive on the swap and the fixed rate payment that you also pay on the swap. And that gives you an interest expense for the period that is actually a fixed rate. That is an important aspect of

hedge accounting that many companies really want, it's not only the volatility that you avoid it is also how you can present the impact of your hedging instrument in the income statement. Because normally if you do not apply hedge accounting you get the financial results in the change in fair value of your derivative and that has nothing to do with your interest expense.

Carl Verhofstede: Now you can present by applying hedge accounting for the effective part. You can actually adjust and present the net effect of hedge accounting and the hedged item. So the hedged interest rate or the hedged cost of sales or your hedged sales rate is actually then included in your accounting through hedge accounting. You have to go through equity and then recycling but the effect is indeed that you may present that ultimately in the same line item in your income statement as your hedged item. And that's an important consideration that is actually not stated anywhere explicitly in the standards.

Youssra Zihmed: Yes I've read about it. I haven't seen it anywhere.

Carl Verhofstede: No. And some entities are not even interested in that and they do not present it that way because it's an accounting policy choice you can make. So either you say we just present the impact of our hedging in a separate line item or it may adjust the hedged item.

Youssra Zihmed: Okay and from all that you said I feel like companies or at least industrial and commercial companies use more cash flow hedge accounting than fair value hedge accounting because you gave me more examples with cash flow.

Carl Verhofstede: Yeah indeed. So I would say if they are hedging the interest rate expense it would be 50-50, it can be either a fair value hedge or a cash flow hedge. And a fair value hedge is basically the same but that's where you adjust the hedged item for the changes in fair value due to the hedged risk. So it's not a fair value measurement but it's a very specific measurement. And then the P&L changes, the change in fair value of your hedging instrument, the derivative, go immediately to P&L but they are immediately offset by the adjustments you make to the carrying amount of your fixed rate debt for instance and these go also to P&L. So there the P&L impact is neutral because you have two balance sheet items that are remeasured for changing fair value to P&L. That's the difference between a cash flow hedge and a fair value hedge.

But in the disclosures there's a requirement in IFRS 7 requiring entities to have full disclosures on the hedged items, the hedging instruments and the effect on the income statement and on equity of these hedges by type of hedge. So normally looking for the disclosures on hedge accounting there should be one disclosure section and it should be transparent in discussing the notional amounts of the hedging instruments and the different types. So you have cash flow hedges, fair value hedges. And what's the other one?

Youssra Zihmed: I think it's the exchange rate, something like that. It's in my notes.

Carl Verhofstede: Yeah the net investment hedge. But that's a type of currency hedge, that's where you are hedging a net investment in a foreign operation. It's a separate requirement but it's a variation. Because the hedged item, which is an investment in a foreign currency, is actually remeasured through the currency translation adjustment which goes to equity. The currency translation of an investment, the net assets in a foreign entity go to, if the closing rate goes up or down that does not go to P&L like other monetary assets that you remeasure under IAS 21 for currency changes. That goes to equity, to CTA. And that's why it requires a sort of treatment somewhere between a fair value hedge and a cash flow hedge. Because the hedged item is remeasured through equity you also send the change in fair value of your hedging instrument to CTA, to equity. So it's a currency risk and it's somewhere between fair value hedge and cash flow hedge.

But that's indeed something that entities apply as well because they often have investments in foreign operations and they basically want to hedge well typically the dividends they are receiving from that entity. But that's not possible because the dividends paid between a subsidiary and the parent in foreign currency are eliminated on consolidation. But that's what they want to hedge in terms of cash flow. If they are expecting dividends in a foreign currency they want to lock in the dividend cash amount in the presentation

currency, the currency of the parent. But technically you can only designate that as a net investment hedge and so you have to say formally I'm hedging an amount of net assets in a foreign currency through that derivative and everything goes basically to CTA. So it does not impact P&L immediately but it allows let's say the hedging of the dividend cash flows or the distribution cash flows in foreign currency to lock in the euro counter value of these distributions that will come up to the parent company. But that's indeed the net investment hedge. We see that on a regular basis and these should also be separately disclosed. It's a type of hedge and it's currency related as well.

Youssra Zihmed: So you talked about disclosures, that brings me to my next question. You also talked about the quality of disclosures which you think is not really that great but how would you assess the quality of hedge accounting disclosures under IFRS 7 and their impact on financial communication with users of financial statements?

Carl Verhofstede: Well I think the test would be if you're broadly familiar maybe with the activities of the company but not familiar with the details of their operations and the accounting and as an outsider you look at these financial statements, can you really understand what they are doing based on their disclosures? And I think because the IFRS 7 disclosures on hedge accounting are actually quite demanding, but often materiality is invoked. But of course that should be no problem because it should not really be immaterial in terms of the impact on the balance sheet or the income statement.

But in some cases you could have transactions that have little financial impact but have a great potential impact in the future or are quite significant. So materiality is not always about the absolute amount of the figures because it can be sensitive to know that certain risks are managed or are not managed by the company. But often companies are quite hesitant to provide clear disclosures because it might give away specific strategies they are pursuing and that's often deemed to be sensitive information. It might give away how they are actually seeing risks and what they are managing. So there is quite a heavy reluctance to speak so to provide clear disclosures. But some companies really try to make an effort to give clear and detailed disclosures. And then still it's a struggle often because hedge accounting is quite complex. It's really about derivatives and how they function and it's quite hard to understand even for those who are involved in that on a daily basis. So therefore it's doubly hard to talk about this in disclosures in a way that is really understandable by the readers.

I think what you can say is you look at the disclosure requirements in IFRS 7 and you can hold that against what they are doing. And I think you can say is it complete and is it clear? Is information missing for instance about the different hedging instruments or the level of detail? But on the other hand there's also the question is it possible that you might be buried in detail and say oh yeah they're quite transparent but you don't understand a lot of what they are actually doing. So burying in detail is often a risk. There should also be a clear explanation of what the risk management policy is and how they are pursuing that in terms that are understandable.

And there's often a link with the management commentary, the discussion of what the management is saying about how they've been running the business and what the performance has been. That's formally not part of the financial statements themselves but sometimes elements of risk management are discussed there and some of these elements can be incorporated by reference into the financial statements themselves so that some disclosures are not physically in the annexes but are referred to. And that's often how they typically manage the description of risks and what they are doing.

So I think from a quality point of view the key question is: is there a coherent discussion? Is there consistency between what they're saying in one part and in the actual disclosures? Sometimes you get totally different levels of detail and that's a more qualitative assessment you could make apart from the completeness test. Because not every requirement means that everything that should be disclosed is enumerated in IFRS 7. You have to also take into account whether it is material and whether it really helps understanding. But if it's material and significant that level of detail should in principle be there for material hedges.

Youssra Zihmed: Okay and from your perspective what are the main practical challenges? We already talked a little bit about some challenges but what are the practical challenges and areas for improvement in hedge

accounting under IFRS? For example there is a lot of talk about the effectiveness assessment, there is a big change between IAS 39 and IFRS 9. Just in general are there for example companies that don't want to use hedge accounting because it's just too complicated and they prefer using another strategy to minimize their risks?

Carl Verhofstede: Yeah hedge accounting can be quite a pain in the neck because first they have to go through the hedge documentation part which involves describing your hedge and saying specifically what you are designating and how you will calculate the effectiveness for instance. What are your hedging instruments and what are your hedged items, your hedged positions, and if any changes occur to that you have to document at least at every closing the effectiveness, measuring the effectiveness that's reflected in the income statement but also testing whether you can continue with your hedge accounting for the next period. And sometimes you may have to discontinue that.

So the documentation and the follow-up, the administrative and accounting follow-up of the hedges is a big piece of work. The setup of the hedge documentation is often the biggest part of the work and then the periodic updates and measurements are in some cases not that complicated for plain vanilla cases, like a simple interest rate swap hedging a debt. But still it's a lot of work.

So often companies just don't bother and then they have two choices: either not hedging at all or still hedging but accepting the volatility coming from their hedging instruments. And I think you will see a bit of everything. Sometimes companies have never been able to apply hedge accounting in the past and sometimes they try if something new comes out but they still enter into derivatives and they accept the volatility and try to explain it for instance.

That's a perfectly acceptable alternative. It's just that hedge accounting is about the timing, let's say the cutoff when you show the P&L impact and so potentially avoiding volatility. But it's also about presentation of the impacts of your hedges because an in-between way is when you have no formal hedge documentation but you still have derivatives, you can talk about what is called economic hedges. So you have accounting hedges which are formally designated and you can have economic hedges. And there you can sometimes even if you get the P&L volatility still have the presentation advantage.

And let's say because it's not the almost invisible offsetting that you get under hedge accounting but still you can present under IFRS 18 on the presentation of the income statement, which I think is the new standard you might want to have a look at, the impact of hedge accounting and of derivatives particularly the geography between operating, financing and investing results. That's quite sensitive for many companies. And now you should have a look at the rules on how the impact of hedge accounting is presented.

There now you have some more flexible guidance for what is called economic hedges. The idea is that at the level of the geography between operating, investing and financing you may align the P&L impact if you are hedging for instance FX risk on your operations. Typically in the past if you had sales in foreign currency that's operating but FX forwards if they are not designated should be presented as financing. And that's a mismatch in terms of geography. The rules have changed so that in principle if you have an economic hedging relationship, which is not formally defined but where basically you have a sufficiently acceptable offsetting even if you do not or cannot apply hedge accounting, you should present the P&L impact in the same geography and that's mostly operating of course. But that's I think an interesting subject of how IFRS 18 has affected the representation of accounting hedges and of economic hedges.

Youssra Zihmed: I will look at this. Thank you. My last question is at the end: is there anything important regarding hedge accounting that we haven't discussed and that you think will be useful for my research, that I haven't thought about or haven't asked about?

Carl Verhofstede: Well I think IFRS 18 is something I didn't mention initially alongside FX hedging which is actually quite important. But I think you have the direct impact on the balance sheet where you see for instance fair value hedge adjustments on the balance sheet or amounts in OCI for cash flow hedges where you have amounts in equity. You have the P&L impact. So I think you can usefully distinguish, that does not

mean you will get much information on that, but for instance the change in OCI and how the recycling occurs in terms of cash flow hedges should be disclosed at least the total amounts and normally by type of hedge. So you have what you would call the volatility, that's what's called the cutoff where you have a different timing for your hedged item when it impacts P&L and when your derivative impacts P&L which in the absence of hedge accounting would be immediately for all changes.

But it's also about presentation which is in some cases also quite important. Some companies for instance in the biotech sector that are burning cash are sometimes entering into hedges but they are not really interested in the detailed presentation of their P&L because they are more interested in showing what they are doing with the cash they are receiving and how that gets turned over into useful products and projects. And therefore the presentation aspect and how IFRS 18 has changed the metrics and requirements is relevant.

And some aspects of hedge accounting I would take note of the fact that one important aspect of hedge accounting is not detailed in the standard itself. It's an existing practice but it has been confirmed that in case of hedge accounting you get the right to present on a net basis in exactly the same line item. And that is something that is under the radar. Where you actually often don't know what the accounting policy of the company is, where are they actually presenting in the P&L statement the cash flow hedge results, where do they actually end. And in principle IFRS 7 requires you to disclose that in detail but I think it would be interesting to see whether you can find any of that in many published financial statements.

Now I may be a bit pessimistic but it's because it's been quite a while that I've actively been reviewing disclosures but it's not that long ago and it was always a challenge to say what is sufficient, what can we live with. And that was often a bit disappointing.

Youssra Zihmed: Okay well I have no other questions. Thank you very much for your time and it was really helpful. Thank you very much.

Carl Verhofstede: It's a pleasure and so I wish you success with your thesis.

Youssra Zihmed: Thank you.

Carl Verhofstede: Let me know, if you have additional questions don't hesitate to contact me.

Youssra Zihmed: Thank you it's really nice.

Carl Verhofstede: Let's say this is a time investment, I think it's investing in the future. So an occasional question if you have something and you're really stuck just ask and if I can help I'll help. Let me know.

Youssra Zihmed: Okay thank you very much. It's really nice.

Carl Verhofstede: Have a nice day.

Youssra Zihmed: You too. Goodbye.

Appendix 4: Interview with Mr Frédéric Poesen (Partner at KPMG)

Frédéric Poesen: Good morning.

Youssra Zihmed: Hello. How are you?

Frédéric Poesen: I'm good, and you?

Youssra Zihmed: Fine, fine, thank you.

Frédéric Poesen: Sorry for the late cancellation on Friday.

Youssra Zihmed: No problem.

Frédéric Poesen: I was stuck in another meeting, it took too long. No problem at all. Thank you very much for your time and for this opportunity. I hope that it doesn't bother you too much and that it's alright.

Youssra Zihmed: No problem at all. Well, I just wanted to give you a little bit of context before starting, so that you will know what we will discuss about today. So the objective of my master thesis is to do a market research on how industrial and commercial companies in the Bel 20, CAC 40, DAX 40 and AEX 25 use hedge accounting in practice. And to analyze that, I use 10 criterias. So, the first is the industry, because I will compare how different industries use hedge accounting. The second criteria is the types of risks that those companies have and the risks that they hedge and the risks that they don't hedge. The third one is the risk management policy and objective. Fourth, types of hedges. Fifth, types of hedge accounting. Then, hedged items, hedging instruments, impact on financial statements. So, the impact on the income statements, OCI, with or without hedge accounting. Then, disclosure and the last one is the impact on financial communications. And, I created my questions around these 10 criterias.

So, the first question that I wanted to ask you is, could you briefly describe your role and your experience with hedge accounting under IFRS?

Frédéric Poesen: Okay. So, I'm an auditor of a number of listed entities, but also non-listed entities, of which a number of those entities, first of all, have financial instruments, because that's the basic starting point. And I must say that the majority of those apply hedge accounting in practice. Why is that? Because in the most cases, those instruments have a hedging nature. They enter into this instrument to hedge a certain risk exposure and by applying hedge accounting, they reduce the volatility on their profit and loss statements. Because typically, for those financial instruments, especially the ones which are a little bit longer in time, depending on market fluctuations, their value can go up and down and can create a lot of volatility on the P&L, which you can avoid when you apply hedge accounting. So, the majority of companies that I'm working on apply hedge accounting. The ones who don't do that are most of the time because it's not a material instrument. And secondly, because they want to avoid the burden of having to prepare hedge documentation. So, that's a bit my background. So, I'm an auditor of companies that potentially apply hedge accounting.

Youssra Zihmed: And based on your experience, how is hedge accounting applied in practice across different types of companies or industries? For example, are there sectors where hedge accounting is more commonly applied, where it's more standard than in other industries? And, for example, are there hedging instruments that are more used in certain industries than in others or across the industry?

Frédéric Poesen: Well, I think in general, hedge accounting is applied by the majority of companies that have derivative financial instruments. The type of hedge instruments heavily depending on the type of industry that you're in. You have the typical type of instruments like interest rate swaps or foreign exchange instruments. Those are quite common and used by a lot of companies. Then you have the more exotic ones like hedging, for example, for raw material prices, hedging for aluminum, those kinds of things.

Those are, of course, more company-specific and also more business-driven to hedge an exposure to a certain business-related item. I think everything which has to do with interest rate swap, every company or the majority of companies has financial debts and exposed to interest rate fluctuations. But raw material, that's very specific for an industry.

I'm not a bank auditor, so I'm not working on financial institutions which obviously also have a lot of these financial instruments. But I think the majority of my clients have one or the other financial instruments, but typically it's an interest rate swap or a foreign exchange swap.

Youssra Zihmed: I just wanted to ask you, do you audit one of the BEL 20 companies?

Frédéric Poesen: In terms of listed entities, I audit VGP which is a real estate entity, Immoel as well, so it's majority real estate. VGP does not have financial instruments. Immoel does have interest rate swaps. Those are the quite common ones. Historically, I used to audit Achva Gevaert. Achva Gevaert was also active in industries where raw material was important, so they also had some raw material hedges as well, raw material financial instruments like aluminum purchases for example.

Youssra Zihmed: What financial risks do companies most commonly hedge? You talked about the debt, so the interest rate. You also talked about the exchange rate and raw materials. Are they risks that they hedge a lot or these three are the ones that are the most hedged?

Frédéric Poesen: I think those three are, from my perspective, the most common ones. Those are quite common in the industry as well. The more exotic an instrument is, the more expensive it also becomes. The more difficult it becomes to hedge those types of risks. So those are the most common. Interest rate swap is very common. Foreign exchange swaps is also very common. Then raw material swaps, that's more specific already. It's really depending on the type of industry that you're active in.

Youssra Zihmed: Could you talk about the different types of hedge accounting, so fair value hedge accounting, etc. and how they are used in practice? Which one of them are the most commonly used and what can you tell about that?

Frédéric Poesen: The most common are the cash flow hedges whereby you hedge a future exposure and then the fair value changes in OCI within other comprehensive income, not through P&L. You also have fair value hedge, which are a little bit less common, but then you hedge the exposure to the fair value movement of an underlying instrument. Then this instrument, this underlying instrument, fair value movements go to P&L and your instruments also go to P&L and then you get a P&L hedge, which is quite offsetting by nature. But the most common are cash flow hedges, like an interest rate swap. There you hedge the future exposure to changes in interest rates. The fair value that is being determined is also for the future exposure and that is being booked in other comprehensive income, so not through P&L. That's a cash flow hedge.

Youssra Zihmed: Yes, obviously, because the risks that are the most hedged are raw materials, interest rates and exchange rates. Well, obviously, cash flow hedge is the one that is going to be the most commonly used by companies. Yes, it's quite logical.

In your experience, how does hedge accounting affect the financial statements, particularly profit or loss, volatility and OCI, compared to a situation where hedge accounting is not applied?

Frédéric Poesen: Obviously, the volatility will lower in the P&L, but there is another external auditor who talked to me about the fact that there are some companies who use hedge accounting to be able to show the risk, well, the hedged item in the same line as the hedging instrument, and so it's clearer for the person that will read the financial statements. Well, the majority of companies apply hedge accounting to avoid this P&L fluctuations, because the fair value, if interest rates go up significantly or they drop significantly, you get big fair value movements on this instrument.

If you don't have hedge accounting, this goes directly to P&L, so the one year you can have a big profit, the other one you could have a big loss, whereas in the end you just want to hedge your exposure to the future interest rate. So, it does not really make sense to have this in your P&L. Why do certain companies do hedge accounting? I think the majority applies hedge accounting to avoid volatility.

Not sure exactly what you mean with being able to book it in the same line. That is the case for a fair value hedger. For a fair value hedge, then you have a fair value movement of the underlying element and you have your hedging instrument, both have a fair value that can offset each other.

For the majority of cash flow hedges, you are hedging future exposure to certain elements and then there is no compensating element yet. This compensating element will come in the future when you pay interest or when you incur a foreign exchange result and then you offset it with the release of your hedging instrument.

Youssra Zihmed: It was another auditor who told me that it was not written particularly norm, but that some companies like the fact that they can clearly link the financial instrument to the hedged item and that it was easier for the reader to really link these two, and so some companies liked that. That can be one of the reasons why they use hedge accounting, but obviously the volatility is the main reason why companies use that.

The next question is, do you think hedge accounting under IFRS 9 generally reflects companies' actual risk management strategy? Why or why not? Because we know that IFRS 9 is quite hard, even if they made it a bit easier than IAS 39, it's still quite difficult. Are there, for example, companies that don't want to implement hedge accounting because it's too complicated and then they end up with a high volatility and thus it doesn't represent really how the company is doing really in practice.

Frédéric Poesen: I think with IFRS 9, the administrative burden of applying hedge accounting has somewhat dropped compared to the previous structure of IAS 39, so it is a little bit more easy than it was before. You still have companies that don't bother in entering into hedge documentation and doing these tests and just book into P&L for making their lives a little bit easier, but then you get big, potentially, you get big movements in your P&L, which they then need to normalize in their external communication by stating the P&L is impacted by a fair value movement, which is not really a current period event.

You can also normalize your result, but then it becomes also a bit burdensome to explain to the market why your results are fluctuating from one period to the other. In my experience, the majority of companies that have important financial instruments, they document hedge effectiveness and they apply hedge accounting. So, I don't see a lot of companies that are not doing that. In practice, they do it and it's aligned with their strategies when they don't do it.

Youssra Zihmed: Okay, and how would you assess the quality of hedge accounting disclosure under IFRS 7 and their impact on financial communication with users of financial statements?

Frédéric Poesen: I think, in general, the disclosures are appropriate. The quality of the disclosure, that is, some companies are best in class, others are doing the bare minimum within certain acceptable ranges of what you can accept.

IFRS 7 has quite a big number of disclosure requirements. The extent of disclosure is also depending on the complexity of the entity and the type of information that you need to transmit to your reader to allow them to really understand the entity. That will also depend on the complexity of the business environment, the complexity of the client and also the complexity of the financial instrument.

If it's purely an interest rate swap, I think the type of disclosure that you need to explain that to a reader can be quite limited because, in the end, what do you want to tell them is your exposure to interest rate risk in the future. If you have an instrument whereby you now have a fixed rate and you don't have any exposure to future volatility on the interest rate and you just tell that. The same, in fact, for foreign exchange.

It becomes a bit more difficult if you have quite exotic instruments with gaps in floors and all these types of difficult elements. Then you probably need to add more information. Also, depending on the quantum of those instruments, how important are they for the entity, how much of that is integrated into their overall business.

In the majority of cases, I think it's also more and more important if it's also linked to your business. For example, if it's linked to purchases of raw material, then it becomes much more relevant than when it's only a simple interest rate swap, for example. If you have more instruments which are directly linked to your business environment, then it becomes more important to also tell a clear story to the reader as well, how you work on those.

Youssra Zihmed: From your perspective, what are the main practical challenges and areas for improvement in hedge accounting under IFRS?

Frédéric Poesen: The quality of the hedge accounting documentation sometimes can be a bit improved. You have companies that do that best in class and you have companies that draft a simple one-pager. AI can probably help as well, I think, in doing that. In general, there is hedge documentation supporting the treatment. The quality of that is a bit dependent on the quality of the financial department as well. But then again, I think if you use nowadays AI, it's not that difficult to write hedge accounting based on a contract and based on your business environment. That will help as well in improving the documentation process of these kinds of things.

Youssra Zihmed: I think I went through all of my questions. The last one is, is there anything important regarding hedge accounting that we haven't discussed and that you think would be useful for my research?

Frédéric Poesen: Anything else! No, I think it can be useful. You do some research as well, I think, of listed entities and what types of instruments that they use, the type of disclosures.

I think that's definitely useful to do some specific things. The link between industries can be interesting as well to see what type of instruments are being used by which type of industries, especially the ones that are using raw material hedges and those kinds of things and the level of disclosure that they use. That's probably interesting to read as well.

To avoid that you just have a thesis focusing on interest rates because that can be a bit boring, I think. Those are the most difficult to analyze. The ones with raw materials are the ones that are the most difficult because they can use different hedging instruments according to the material and it can become a little bit complex.

But hedge accounting can be quite difficult, especially with the more exotic type of elements. I noticed. But then again, I don't think you need to understand every type of financial instrument.

If your thesis is focused on what type of instruments do they use, how do they disclose those elements, how does it fit into their risk management perspective. It's also a bit on the quality of what they tell in their financial accounts as well. Well I don't have any other questions.

Youssra Zihmed: Thank you very much for your time.

Frédéric Poesen: No problem. Good luck with your thesis.

Good luck with your completion of your studies. If there's anything else, just reach out. I'm happy to help you.

Youssra Zihmed: Thank you a lot. Have a nice day. Goodbye.

Frédéric Poesen: Bye-bye.

Appendix 5: Interview with Mr Kevin Braeckman (Director at PwC)

Youssra Zihmed: Hello, how are you?

Kevin Braeckman: I'm doing good.

Youssra Zihmed: Thank you very much for your time and for this opportunity. It's a great input for my master thesis, so thank you very much. I wanted to start by that. Before starting and asking you the questions, I just wanted to give you a little bit of context on what I'm doing in my master thesis. So I'm doing a research on how big companies that are in the BEL 20, the DAX 40, the AEX 25 and the CAC 40 use hedge accounting in practice as part of their risk management strategy. So this is what I'm doing and I'm analyzing their 2024 financial statements based on 10 criteria: the industry, the type of risks that they face, the risk management policy and objectives, types of hedges, types of hedge accounting if they are using them because sometimes they don't use hedge accounting, hedged items, hedging instruments, impact on financial statements, disclosures and the impact on financial communication. So this is what I wanted us to talk a little bit about today. My first question is, could you briefly describe your role and your experience with hedge accounting under IFRS?

Kevin Braeckman: My name is Kevin Braeckman. I am now 15 years at PwC. I have always been doing what we call corporate treasury advisory. So we provide advice to treasury centers of international companies. We focus only on corporates. We don't do any sort of financial services. My experience with hedge accounting is twofold. First of all, I have been involved in the financial audit of a number of treasury centers of multinationals where we basically reviewed compliance with IFRS rules for quite some corporates. Then on the other side, more from an advisory role, we have helped a few clients with first of all identifying what their exposures are, putting in place the processes and systems to mitigate them and also the supporting accounting setup. So it's both from an audit perspective and an advisory perspective.

And have you worked with any company that is in the BEL 20? Yes. I'm just thinking because I don't know the BEL 20 by heart. Let me just quickly look up who is in the BEL 20. But at least three come to mind directly. Wait, just give me a second. I'll check the latest list of who is actually in there. So AB InBev, I have experience with UCB, I have experience with Ageas, I have experience with Lotus Bakeries, I know Proximus, I know Umicore. Six or seven.

Youssra Zihmed: And based on your experience, how is hedge accounting applied in practice across different types of companies or industries? For example, are there sectors where hedge accounting is more commonly applied?

Kevin Braeckman: I would say it has less to do with industries and more with the type of company and their international footprint. Honestly, there are three main types of financial exposures we look at: foreign exchange risk, interest rate risk and commodity risk. Those are the three ones we mostly focus on. Commodity risk within Belgium is actually managed by only a very limited number of corporates, especially using financial products. So mostly it is operational management. FX only becomes important when you of course have a lot of foreign exchange flows in foreign currencies. So where we see active hedging is first of all for FX when there are a lot of international flows and when the margins are smaller. Typically for example the pharmaceutical sector has quite big margins. We see them less actively hedging, potentially taking more positions, while if you go to the construction sector for example, which is going through quite a difficult time and where the margins are quite small, they will hedge more actively. Also whether they apply hedging or not really depends. There is a big difference between listed companies versus family-owned companies. Listed companies publish their results on a quarterly basis. They want stable results. So they will be more actively investing in hedging and hedge accounting. In Belgium we also have quite a lot of big multinationals which are still fully family-owned. Those ones typically don't invest in hedge accounting. The families don't care if there is a bit of volatility in the P&L because they understand the underlying reasons. And then when it comes to interest rate hedging, that depends on the debt portfolios of the company. There are certain companies which are quite cash-rich. They have a very limited amount of debt so they don't hedge because

they don't have anything to hedge. You have other companies which have very big amounts of debt and they actively hedge it. So essentially I would say it's more the type of company than the industry.

Youssra Zihmed: And so you talked about the fact that if a company has smaller margins, they will be more tempted to hedge so that the financial statements look less volatile.

Kevin Braeckman: Basically imagine you have a margin of around 5%. If FX moves by 5 or 6% in the negative direction, you basically lose money. Well if you have a profit margin of 40 or 50% it's not nice to lose 5 or 6% but you're not going to go bankrupt for that. So that's why it's a bit more important when you get lower margins. It's less worth the time and the money.

Youssra Zihmed: And what types of financial risks do companies most commonly hedge?

Kevin Braeckman: So we talked about it mostly: exchange rate risk and interest rate risk. Interest rate risk is probably the highest priority but a lot of corporates actually go for fixed-rate debt. So if they have floating-rate debt they quite often hedge it. Often it's even their banks forcing them to lock it in. Then I would say FX. Commodity risk honestly quite little. Typically they try to push the risk to their suppliers by being on fixed-rate contracts and they only use financial derivatives occasionally.

Youssra Zihmed: Could you talk about the different types of hedge accounting and how they are used in practice including the hedged items and the instruments?

Kevin Braeckman: Maybe first on the actual instruments, corporates are very risk-averse. So 95% is very straightforward. The only thing we sometimes saw when interest rates were still negative in euro were swaps with a floor. Priority number one for most corporates is to hedge the balance sheet risk, basically the valuation of monetary assets, liabilities, intercompany loans and cash balances. And then you apply hedge accounting because both the underlying item and the hedging item are being revalued through P&L so they compensate each other. The second thing most commonly hedged are forecasted committed transactions, basically future sales or purchases, and then they apply cash flow hedge accounting. There are very few corporates, I would say less than 5%, who hedge net investments. So that's net investment hedging. We see very little of it. It's only done because it's also very complex and the amounts are quite big so the cost can potentially be quite big. And then fair value hedge accounting I don't see it too much.

So it's mostly cash flow hedge accounting. Yes, in all the companies that I analyzed I didn't come across fair value hedges. It's always cash flow hedges that I see. There are some very little cases but mostly cash flow hedges.

Youssra Zihmed: In your experience how does hedge accounting affect the financial statements particularly profit or loss volatility and OCI compared to situations where hedge accounting is not applied? So obviously volatility is the main reason why hedge accounting is used. But are there other reasons that can push a company to use it? And I mean the difference, is it worth it? Because it's a lot of money, it's a lot of time and some companies consider that it's not worth it.

Kevin Braeckman: It's a lot of efforts, that's for sure. Most companies go for a pretty straightforward approach which can be highly automated and don't go for very complex strategies. We only see it basically in listed companies because they need to actively communicate the results. They need to communicate results to people who are not involved in day-to-day operations. If you buy a share on the stock market you don't actually know how the company operates so they are investing in it because it saves them time and the need to otherwise explain the P&L volatility. So it's a bit of cost-benefit. But a company that is not listed, it's too much effort.

Is it worth it? Yes, if you are hedging items which are not yet on the balance sheet. So a forecasted sale or forecasted purchase. If you would not apply hedge accounting you basically have a derivative which is being revalued every month end creating a profit or loss. Well you don't have an underlying item which is being revalued and compensating it. For some corporates it can be very big amounts going up and down and very difficult to explain to somebody who is not a treasury professional. So yes it's worth it for listed companies. Otherwise the thing is as well you know volatility reduces the confidence of investors which reduces the

value of the company. So investors like predictable results, they like stable dividend income, they value that higher. So the idea is as well if you can have stable results it will also increase the value of the company stock-wise. So that's why it's much more worth it for companies that are in the BEL 20 or the CAC 40.

Youssra Zihmed: And do you think hedge accounting under IFRS 9 generally reflects companies' actual risk management strategies? Why or why not?

Kevin Braeckman: I think for some kind of relationships it's very simple. For the typical corporate they're very risk-averse. They are selling a product or a service, they have a certain cost base, they have a price to it, they have a certain margin and they will protect that margin. It is not the idea with hedging to make a profit or a loss. They just want to make sure that they can make the margin because the strategies they apply are fairly simple. It's one-to-one relationships.

Youssra Zihmed: And how would you assess the quality of hedge accounting disclosures under IFRS 7 and their impact on financial communications with users of financial statements? Because I had other interviews and some people told me that it wasn't clear enough, that there wasn't enough description and that for someone that doesn't know hedge accounting well they can't understand anything. So what's your opinion on it?

Kevin Braeckman: I need to say I'm more of an operational person so I'm not a technical accounting person. So I look at it from basically the corporate point of view. It's a lot of work, all of these disclosures. It is my personal opinion, not a PwC opinion. It's a lot of work. Typically if you look at the hedging portfolio versus the total size of the company it's marginal. So we need to always be a bit pragmatic. They should be focusing on what is driving the revenue, what is driving the cost base. You normally have the notion of odds, a sensitivity of plus 10% minus 10%. You have an overview of which types of products are used, they need to disclose which kind of derivatives they use. That's already enough. It's not talking about new products that they put in the market but it's not talking about fundamental things either. Typically their portfolio of derivatives is marginal versus the total size of the company so if you stay a little bit pragmatic I find there's no need to really go deep into a topic that is already hard enough.

I understand, you are between brackets hiding a bit the results especially if you like hedge accounting. But you need to clearly explain what you're doing, you need to explain the hedging strategy and you need to put the notion of odds because plus you can do a sensitivity analysis: if hedge rates go up with 5 or 10% or minus, what is the impact?

Youssra Zihmed: And from your perspective what are the main practical challenges and areas for improvement in hedge accounting under IFRS?

Kevin Braeckman: The challenge is to basically ensure that your forecast of the exposure is correct. You basically make a forecast of what you're gonna sell, what you're gonna buy, then things change. Nobody can perfectly forecast the future. So the challenge is that typically most of our clients have like a monthly cycle. They typically at the beginning of the year hedge their budgets in monthly buckets. But then every month they do a review of actual versus forecast, are they off and they adjust the hedges going forward. But that's quite a heavy exercise and they're very dependent on the input they're getting from all the people in the firm, basically the commercial department, the procurement department, to know what the upcoming sales and projects are. The challenge is to just get accurate data. That's for them the most difficult because they need to adjust their hedging positions and because if they are not able to show that there is a good relation between the hedge and the underlying item they risk losing hedge accounting.

Youssra Zihmed: I asked all of my questions but is there anything important regarding hedge accounting that we haven't discussed and that you think would be useful for my research?

Kevin Braeckman: For international listed companies which are not in the financial sector the stress is already about protecting their margins and reducing volatility. So typically their strategies are very simple and the hedge accounting is just a way to not be punished for the fact that you're applying that strategy because if you were not applying hedge accounting it would create volatility which doesn't make sense from

an economic perspective. They're trying to reduce volatility. So accounting was made for this. Accounting is an instrument to basically reflect economic reality in the figures which is the whole point of IFRS: to show the reality of the company.

Appendix 6: Interview with Alexandre De Ridder (Senior Treasury Manager of Umicore) and Ms Delphine Vanhuyse (Senior Consolidation Manager of Umicore), translated from French into English

Youssra Zihmed: Hello. How are you?

Alexandre De Ridder: Good, good, and you?

Youssra Zihmed: Yes, very well, thank you. I first wanted to thank you for the time you are taking to answer my questions. It's very kind of you, I know you are very busy so thank you very much.

Alexandre De Ridder: With pleasure, when we can help. We've been in your position so it's good to give back sometimes.

Youssra Zihmed: That's kind. Before asking my questions I first wanted to give you a little bit of context about my thesis. The objective is to analyze how industrial and commercial companies use hedge accounting in practice. I analyze the 2024 financial statements of industrial and commercial companies listed on the BEL20, the AEX 25 and companies listed in Luxembourg. I base myself on ten criteria. I will first look at the sector the company is in, the risks it faces. I also look at whether it uses hedging or not. If so, does it use hedge accounting? The type of hedge accounting that is used. I also look at the impact it has on the P&L and the OCI. And I finally look at how the company discloses this information in its financial statements and therefore how it applies IFRS 7 and the impact it has on those financial statements. I wanted to ask you for my first question, can you briefly explain your role at Umicore?

Alexandre De Ridder: Good timing, we can do the introductions at the same time. Delphine, do you want to start? Ladies first.

Delphine Vanhuyse: So Delphine, I am in the Consolidation department so in charge of preparing the annual accounts, the financial report with other contributors. The application of the standard is partly with us but it is also mostly everything that is operational and the decisions are within the same department. I will try to help you as best I can.

Alexandre De Ridder: And I am Alexandre, I am the group Treasury director at Umicore so in charge notably of all hedging activities. It is in that capacity that I will be able to help the most. Within the treasury role it is risk hedging, FX risk, interest rate risk notably. And it is perhaps in that context that I could help you.

Youssra Zihmed: Based on the 2024 accounts, Umicore was exposed to several risks notably commodity risk, FX risk, interest rate risk, liquidity risk, etc. Which ones are the most critical in practice?

Alexandre De Ridder: Very clearly, we are an industrial company, we do metal recycling and industrial applications with precious metals. I would say commodity risk is the most important. On that front it's not me who is in charge, we have metal trading desks by business unit. These are really people specialized in the metals specific to the business units they serve. The idea is to take no risk. We do not do, maybe slightly at the margin, but speculation on metals.

Delphine Vanhuyse: The idea is rather to ensure perfect coverage of the production process. We cannot take positions in metals. We always do a squaring at the level of all positions and hedges.

Youssra Zihmed: How do you define your hedging strategy and how do you decide which risk you want to hedge? You said you hedge everything related to commodities, but I also know you hedge your FX exposure. How do you do that?

Alexandre De Ridder: On FX it is directly linked to what I do. We have two types of risks. We have what we call transactional risk. Every time there is an exposure linked to a sales or purchase contract in a currency that is not the local currency of the entity involved in the contract, an exposure is created. What we accept at group level is that the sum of all exposures at any given point in time is 100,000 euro equivalent per currency. Which means that as long as we are talking about the Swiss franc or the dollar, as long as we are

below 100,000 euro equivalent we do not hedge. Otherwise we have an obligation to hedge to obviously protect commercial margins and to avoid having uncontrolled FX results. That is the policy on the transactional side. On the transactional side we do not apply hedge accounting so everything goes through P&L, nothing is recycled through OCI. And then there is the second part which we call strategic hedging. That involves FX hedges on the future budgets of the entities. What we try to do is protect the consolidated EBITDA of the group for the coming year and the year after so year plus one, year plus two. On those deals which we call strategic deals, which are very few in number but much larger in terms of notional, we apply hedge accounting.

Youssra Zihmed: You say that for transactions you do not use hedge accounting. Is it because the amounts are not very large or because it is too complicated to use hedge accounting?

Alexandre De Ridder: No the amounts are actually enormous. If you look over a year it is several billions. But there are several reasons. The first is that all amounts are aggregated and netted. So if entity A is long in a currency and entity B is short in a currency the resulting position is what we will hedge. And all of this happens through systems obviously, we do not do this manually on a piece of paper. We do this by currency and for all group entities several times a day. As a result there is no unique and easily identifiable relationship between the exposure and the hedge. And also it turns out that this is something that is well understood by the market. The starting assumption is that there is a perfect offset between the sum of the contracts and the sum of the hedges and therefore this P&L volatility neutralizes itself.

Youssra Zihmed: You also use hedging for your interest rate risk and also for energy. That is what I had seen in your financial statements, right?

Alexandre De Ridder: Absolutely. For interest rates it is mainly when we have debt in foreign currency. There we use instruments called cross currency swaps which allow us to lock in a euro equivalent interest rate for any debt we would have issued in a foreign currency notably the dollar, which was the case in 2024. In the past we have also done fixed rate/floating rate arbitrage with interest rate swaps. At the moment we have debt at fixed rates almost exclusively and therefore we no longer have instruments in our books. But it is something we could do again tomorrow or the day after depending on the debt mix we want. It is more of a strategic reflection. Does it make sense to have all your debt at fixed rates or do you want to keep a portion of the debt at floating rates, knowing that we always look at things in a balanced way. If we have floating rate debt on the other side we have cash and cash is always at floating rates in terms of return. That is roughly the reflection we can have on how to manage our debt mix. On these rate hedging instruments whether cross currency swaps or interest rate swaps we apply hedge accounting. Which means that Delphine taps me on the fingers every 6 months to have us explain how our hedging instruments and the debt are evolving.

Youssra Zihmed: Does your hedging strategy evolve depending on market conditions?

Alexandre De Ridder: I would like it not to move anymore. But everything at C-level what they want is stability. It is easier to say we have fixed rate debt at 4% rather than saying one year our debt cost is on average at 3 and the following year at 5. It is not just at Umicore, I have worked for other clients before. In Corporate Treasury departments there is a very deep risk aversion. In general companies try to avoid floating because it generates noise, it generates volatility that is not directly linked to the business. These are macro elements we are not in control of at all and therefore it is often avoided.

Youssra Zihmed: To what extent do hedge accounting constraints influence your hedging decisions? By that I mean the accounting is very complicated, there is a lot of documentation to provide, etc. Has it ever happened that you did not use hedge accounting because it was too complicated? You say it's fine, we will have volatility in our P&L and we will explain it. Or do the difficulties of hedge accounting have no impact on your decisions?

Alexandre De Ridder: They will have an impact when we analyze the instruments we can use. Typically there are many banks that say you could benefit from net investment hedging for example in certain subsidiaries. We have never done it perhaps because we do not understand enough the constraints of hedge accounting,

perhaps because we do not take the time to understand them and put everything into a business case. But I would not say it influences the strategy at all. It is rather once we have done something we ask ourselves how to qualify it. We try to find a match.

Delphine Vanhuyse: If there is a new instrument or something like that we first try to see if it can fit within the criteria. It has already happened that we took instruments that were not in hedge accounting and had unintended volatility. But otherwise I would not say it influences us. There are perhaps as Alexandre said things we could still explore. But it does not stop us specifically. We make efforts to try to apply it and also with the auditors.

Alexandre De Ridder: In general accounting or very high-level or technical considerations should never get in the way of the best possible decision. If we think we need to take a hedging instrument because there is a material risk in collaboration with the different teams involved we will find a way to do it whether in hedge accounting or not.

Youssra Zihmed: How do you choose your instruments? Does the complexity of certain instruments hinder their eligibility for hedge accounting under IFRS 9? Even if it can be complicated, if it is linked to your risk management will you still apply it?

Alexandre De Ridder: Yes absolutely. If on the other hand we have to choose between two extremely similar instruments and one is simpler than the other we are simple people, we prefer the simple instrument.

Youssra Zihmed: To what extent are the hedging strategies defined by treasury easily transposable into hedge accounting under IFRS 9? Is it sometimes complicated to implement what treasury asks you to do?

Delphine Vanhuyse: I am trying to think. I do not really have many examples yet, we do not have very complex instruments either. I would not say we have cases like that. There was one. We tried to hedge CAPEX in a foreign currency. It was additional reflection and extra work. But otherwise we have not had many particular instruments.

Alexandre De Ridder: What we try to do is talk to each other before being faced with a fait accompli.

Youssra Zihmed: You work together so you don't have any bad surprises.

Alexandre De Ridder: We try, yes.

Youssra Zihmed: In your opinion are the information that appear in the financial statements well understood by investors? IFRS 7 can also be quite complicated and demanding. Do you think it is well enough understood by your investors?

Alexandre De Ridder: I cannot answer that question. The fact that we cannot answer it, if I digress, is that the question has never really been asked by investors to the CFO or to the Investor Relations department. Which to me means it is well understood. If it had been a source of questions or problems when reading the annual report I think we would have been informed.

Youssra Zihmed: What are the main difficulties or obstacles in applying hedge accounting? Have you ever had a frustration or perhaps a criticism regarding that? Some people say it is too rigid, others say it is not flexible enough for practical implementation. Do you have anything to say about that?

Alexandre De Ridder: I think it is quite rigid. The underlying idea is good, meaning you can remove P&L volatility so as not to obscure the results in the eyes of investors. I think that is a good idea. The criteria are quite relevant, there needs to be an easy and clear link between the exposure and the hedge. Now in practice it is sometimes complicated. Sometimes we lose sight a little of the underlying idea which is to say that if a company does hedging and the hedging is done on operational exposures for me it should be eligible. In practice it is more complex than that. I don't know what you think about it Delphine?

Delphine Vanhuyse: It is impossible to make it much simpler either. I think they have already simplified compared to the past, with the old standard there have already been improvements. Notably the 80-120, the justification, etc. Now yes, we have already run into certain things we were not able to apply. They took very long I find for everything related to Virtual PPAs. It is an aspect that is not specifically managed by Treasury but it is a point we encounter much more often than what they thought when they made the standard, certainly since these are long-term hedges. Until last year we could not consider it as hedge accounting so they have made efforts. But it still takes very long whenever something needs to change.

Youssra Zihmed: I think I have asked all my questions which we have more or less all covered. I don't know if there is something you think could be interesting for my thesis or a point we have not covered today.

Alexandre De Ridder: For me everything is clear, I don't see any gaps. We have not talked about the differences between cash flow hedges and fair value hedges. I don't know if that is a topic you cover in your thesis.

Youssra Zihmed: Yes I cover it, it is one of the points I analyze.

Alexandre De Ridder: I think we do both Delphine.

Delphine Vanhuyse: Cash flow hedge is only on the strategic side.

Alexandre De Ridder: Yes. And fair value hedge we do not do. We had tried to argue in that direction for the CAPEX I think.

Delphine Vanhuyse: That was the only case we had done, we had hedged the CAPEX. But otherwise it is the strategic side that goes through OCI. And the rest is the fair value hedge.

Youssra Zihmed: So you do use fair value hedge after all.

Delphine Vanhuyse: That is what Alexandre was explaining where we hedge our future margins. That is on cash flow hedge so that it goes through OCI.

Alexandre De Ridder: Yes. The transactional side we do not pass it through OCI.

Youssra Zihmed: Is there perhaps anything else that comes to mind or that we have not covered today?

Delphine Vanhuyse: We have a fairly stable and well-defined risk strategy I would say. And the instruments we use are rarely different from one year to the next. It is quite stable.

Alexandre De Ridder: Once the risks have been identified it is true that there are no upheavals or Copernican revolutions in what we do. Once you have understood it, you are good. I have a question. How did this topic come to you for a thesis? It is very niche after all.

Youssra Zihmed: Yes it is very specific. Actually originally I wanted to work on the impact of IAS 39 on the 2008 financial crisis and what pushed the creation of IFRS 9. And my supervisor told me, he was my IFRS professor last year, he told me it was a topic that had been covered a lot but that if I wanted to work on IFRS 9 I could do it on hedge accounting. He is the one who suggested this topic to me. That is how it came about. It is true that it is very very niche, you don't really think about it.

Alexandre De Ridder: In any case it is good. Thesis topics it is better that they be quite focused rather than spreading yourself too thin. It is a good idea.

Youssra Zihmed: Yes when it is very broad you can quickly struggle to stay on track. Thank you very much for your time. It is very very kind. Thank you very much.

Alexandre De Ridder: With pleasure. Don't hesitate to contact us if you need anything.

Youssra Zihmed: Thank you very much. Goodbye.

Alexandre De Ridder: Good luck. All the best.

Youssra Zihmed: Thank you very much.

Appendix 7: Interview with Mr Benjamin Laame (Head of Treasury Operations at UCB), translated from French into English

Youssra Zihmed: Hello, can you hear me?

Benjamin Laame: Can you hear me now?

Youssra Zihmed: Yes, I can hear you.

Ok, perfect. Thank you very much for taking the time to answer my questions. That is very kind of you. I wanted to start with this before asking my questions. Just to briefly explain what my thesis is about: I am analyzing the financial statements of companies listed in the BEL20, the AEX25 and those listed in the Luxembourg index, and I am analyzing their application of hedge accounting and how they use it in the context of risk management.

Benjamin Laame: Very well, it might eventually be interesting for us if there were a way to get a copy of the thesis once it is finished.

Youssra Zihmed: Of course, I can send it to you. I will send it to you once I am sure it has been successful. You never know. So could you briefly explain your role at UCB and your involvement in financial risk management?

Benjamin Laame: I have been at UCB for 6 years and I am Head of Treasury Operations, so I report to Raf who is himself Head of Treasury for the UCB group. Before that I was treasurer for Puratos, a Belgian company that is not listed.

Youssra Zihmed: According to the 2024 accounts, UCB is exposed to several risks, notably interest rate risk and foreign exchange risk. Which ones are the most critical in practice in your opinion?

Benjamin Laame: Maybe to finish the presentation of my role: Treasury Operations handles everything that is operational. We work with the front office and the middle office, we apply the policy, we apply the hedging decisions, we make the contracts and we handle the back office, the monthly revaluation and the payments at maturity. On the other hand, what is the definition of the policy, the financial risk management policy, determining the amounts to hedge and eventually the adjustments to the amounts and the policy, that is at the corporate Treasury level. We are involved in the discussion and in the decision but my role personally is more in the execution.

For the main risks: UCB is primarily exposed to foreign exchange risks. We have a very large activity in the United States while the main production sites and the main research centers are rather in Europe, in the United Kingdom and in Switzerland. We therefore have a cost base in euros, GBP and Swiss francs and a large part of the revenue in dollars. I believe that more than half of the EBITDA comes from the United States and is expressed in dollars. So regarding market risks there is no question, it is mainly exchange rates.

Youssra Zihmed: Regarding the hedging strategies for foreign exchange risks, how does it work concretely?

Benjamin Laame: We have three types of hedging, three categories. The first is balance sheet hedging: we cover everything that is transactional risk, everything we can extract and everything we see as risk in the balance sheet. So the loans, the cash, the receivables, the payables. This foreign exchange risk comes primarily from intercompany flows even if there are some purchases and sales with third parties. We have concentrated the foreign exchange risk in a few key companies which are distribution companies. The subsidiaries normally do not have foreign exchange risk or a minimal foreign exchange risk that does not need to be monitored. The large foreign exchange risks are within a few companies that are themselves managed and hedged directly by treasury.

Every day we extract the currency positions of these companies. We validate this extract, we check the differences compared to the previous day or the last extract to justify and validate the new exposures, and

we compare these exposures with the hedge portfolio we have in place to see if based on the thresholds there is a need to take a new cover or not. These companies do not hedge directly externally but first go through an internal hedge order with the treasury center which itself makes the contracts externally. We have one company which is the treasury center and it is the only one that deals externally with banks for foreign exchange contracts. It is the same for IRS. It is a daily process and it is the main mass of contracts. These are contracts that are taken for a maximum of one month and each month we roll the contracts based on what has not been paid during the netting. There is no hedge accounting for the balance sheet hedge because it is not necessary: when you have the underlying in your books you will revalue it through the P&L and your hedges too, so there is no need to defer the result.

We have a second portfolio which is the cash flow hedge. There we hedge the following year on forecasted transactions, meaning future flows. It is mainly in dollars and based on the budget amounts which serve as a proxy for the forecasts. We do apply cash flow hedge accounting for this category. The objective is to secure the conversion rate for the margin of the following year. Until recently UCB was giving guidance to investors at actual rates so we had internal pressure to secure the conversion of this margin, which explains why we had a fairly rigid and fairly significant cash flow hedge plan. Now we have moved towards a constant rate guidance which removes the pressure on the need to do cash flow hedging. But we have not stopped doing it for all that: the contracts taken last year are reaching maturity this year and we are rolling them over for the following year in the form of swaps. Only when there is a need to adjust the amounts do we take an additional layer of forwards.

Alongside this there is also a large part of the external debt that was consciously subscribed in dollars because the best hedge is sometimes not the hedge. If you can align your future expenses with the currency of your future revenues that is ideal. It is like a private person who receives a salary in euros and is better off borrowing in euros to pay for their house. Many companies do this. However when you have both a cash flow hedge plan and debt in dollars you end up relatively overexposed on the dollar. What we did is take back part of it with a hedging plan in the other direction that brings us back to a level of dollar exposure that we desire. This is what we call the net investment hedge.

For everything related to interest rates it is linked to external debt and to the extent that we borrowed in dollars at a variable rate we want to fix the interest rate of this debt.

Youssra Zihmed: What are the main objectives of your hedging? I suppose it is to reduce the volatility of the financial statements.

Benjamin Laame: The balance sheet hedge is clearly to avoid any foreign exchange result and to have an offset between the revaluation of receivables and payables and the contracts. The cash flow hedge is clearly to protect the margin of the following year. And the fact of applying hedge accounting on the cash flow hedge is to align the result of the contracts with the underlying which will only be realized the following year, and to avoid recognizing the valuation of the contracts this year when it will only be realized next year.

Youssra Zihmed: Does your hedging strategy evolve based on market conditions?

Benjamin Laame: Not really. We are not there to beat the market or make money, we want to work at zero and avoid foreign exchange results. At the balance sheet hedge level we have the exposure and we will hedge it. What could influence us is the cost of hedging. Currencies like the Turkish lira with a cost of 30% per year led us to slow down the hedging a bit and to analyze the costs, the benefits and the risks. We made the decision to only hedge half of the exposure in that case. For the cash flow hedge we are in swaps so the contracts reach maturity and we have to roll them regardless of the rate. If we need to add a layer for the following year we will look at what rate it would be at, and we could defer the decision to execute the hedges or spread it over time if it is not the best moment. But ultimately there is no major speculation on this.

Youssra Zihmed: We know that the application of hedge accounting is quite complicated and requires a lot of documentation. Does that hold you back?

Benjamin Laame: When it is routine it is done and the documentation is not a very big concern. But it is clear that when it comes to doing something more complex or with less vanilla instruments it can delay the decision-making process and influence the choice of instruments. If it is an instrument we would want to use to cover results next year but that we cannot put into cash flow hedge it risks creating a problem.

Youssra Zihmed: How do you choose your instruments? Does the complexity of certain instruments hinder their eligibility for hedge accounting under IFRS 9?

Benjamin Laame: It can influence it indeed. There is also the way of being able to value them, not just for hedge accounting but for accounting in general, it is not always straightforward.

Youssra Zihmed: What is the concrete impact of hedge accounting on the profit or loss and the other comprehensive income?

Benjamin Laame: For the cash flow hedge we have a result that is deferred in the OCI for the year and that will be recycled in the right year with the underlying. For the precise figures it will be necessary to look at what is in the annual accounts.

Youssra Zihmed: How do you approach the disclosures related to hedge accounting in the annual report? Do you try to give as much detail as possible so that investors can understand or do you give the strict minimum required by IFRS 7?

Benjamin Laame: It was established quite some time ago now. We set the disclosures to provide accurate information that allows for a fairly reliable understanding of the policy within UCB.

Youssra Zihmed: Do you think your investors understand this part well enough given that it is quite a complicated standard?

Benjamin Laame: I would have difficulty answering that. I do not know if it is the priority or the main focus of investors. If they have questions there are always calls organized where they have every opportunity to ask them. It is my manager who participates in these calls but I think there are rarely questions at the hedge accounting level.

Youssra Zihmed: What are the main difficulties or obstacles in the application of hedge accounting? Is there something you find too complicated or unnecessary in the standard?

Benjamin Laame: Often we get the impression that those who wrote the standard were thinking that companies make one contract per month and do the documentation for that contract in three copies. It does not work like that in a company. We make 10, 50 contracts, we really have a portfolio of contracts. The standard was not designed with volume in mind. It is not pragmatic or operational enough to account for the fact that we have volume.

Youssra Zihmed: Do you think that hedge accounting under IFRS 9 faithfully reflects your risk management?

Benjamin Laame: Yes. There are certain companies that can be frustrated by the fact that the hedge accounting rules do not allow them to cover certain risks they have. They then use hedging without hedge accounting and it creates volatility. On our side we may have limited ourselves in terms of instruments but with the use we make of hedge accounting we still manage to reflect the results in the relevant accounting year. We do not have a discordance between the instrument and the underlying. It can influence the decision on instruments and sometimes delay the hedging decision but until now we have not had to choose between hedge accounting and hedging.

Youssra Zihmed: I have asked all my questions. Is there perhaps something you would like to add that could help me with my thesis?

Benjamin Laame: Everything related to EMIR and such, are you looking at that? It is the regulations on derivatives and derivatives reporting. It indirectly impacts the decision to hedge. As soon as you have a derivative contract you are subject to a series of other rules outside of hedge accounting. EMIR is the European adaptation and in the United States it is Dodd-Frank. For example all companies must have a LEI which is a global registration number, you are required to confirm contracts within 48 hours and there is a reporting obligation for all derivatives. This obligation is now on the banks who do it on our behalf but for example for intercompany derivatives as we have here we are supposed to report them too even though you can request an exemption. There are also obligations to reconcile the derivatives portfolio with the banks depending on how you are classified, either quarterly or annually. So there is a whole series of obligations that come as soon as you enter into a derivative contract and that can indirectly play into the decisions to enter into derivative contracts. If you want to go a bit further in your research it would be interesting to look into that side of things.

Youssra Zihmed: Thank you very much for answering my questions. I will send you my thesis once it is finished.

Benjamin Laame: Perfect. Good luck.

Youssra Zihmed: Thank you. Goodbye.

Appendix 8: Classification of companies by sector

Company	Sector
AB InBev	Consumer Multinationals
Ahold Delhaize	Consumer Multinationals
Akzo Nobel NV	Commodity and Materials
Aperam	Commodity and Materials
ArcelorMittal	Commodity and Materials
Argenx	Healthcare and Biotech
ASM International	Technology and Advanced Manufacturing
ASML Holding	Technology and Advanced Manufacturing
Azelis Group	Commodity and Materials
BE Semiconductor Industries	Technology and Advanced Manufacturing
D'leteren	Consumer Multinationals
DSM-Firmenich	Commodity and Materials
Galapagos	Healthcare and Biotech
Heineken NV	Consumer Multinationals
IMCD	Commodity and Materials
Koninklijke KPN NV	Services, Media and Information
Lotus Bakeries	Consumer Multinationals
Melexis	Technology and Advanced Manufacturing
Philips	Technology and Advanced Manufacturing
Prosus	Services, Media and Information
Randstad N.V.	Services, Media and Information
RELX	Services, Media and Information
RTLGroup	Services, Media and Information
SES FDR	Services, Media and Information
Shell	Commodity and Materials
Solvay	Commodity and Materials
Syensqo	Commodity and Materials
UCB	Healthcare and Biotech
UMG	Services, Media and Information
Umicore	Commodity and Materials
Unilever	Consumer Multinationals
Wolters Kluwer N.V.	Services, Media and Information

Appendix 9: Summary of hedge accounting practices by company

Company	Types of hedge	Hedge accounting?	Types of hedge accounting
AB InBev	- Foreign exchange hedge - Interest rate hedge - Commodity hedge - Equity hedge	Yes	- cash flow hedge - fair value hedge - net investment hedge
Argenx	- Natural hedge	No	no use of hedge accounting
Azelis Group	- Natural hedge - Foreign currency hedge - interest rate	No	no use of hedge accounting
D'leteren	- Interest rate hedge - Foreign exchange hedge - Natural hedge - Commodity hedge	Yes	- Cash flow hedge
Galapagos	- Natural hedge	No	no use of hedge accounting
Lotus Bakeries	-> Natural hedge for the foreign exchange risk.	No	no use of hedge accounting
Melexis	- Foreign exchange hedge - Natural hedge	No	no use of hedge accounting
Solvay	- foreign exchange hedge - Commodity hedge - Interest rate hedge	Yes	- cash flow hedge - Fair value hedge - Net investment hedge
Syngco	- foreign exchange hedge - Commodity hedge - Interest rate hedge	Yes	- cash flow hedge
UCB	- Foreign exchange hedge - Interest rate hedge - Commodity hedge	Yes	- cash flow hedge - Fair value hedge - Net investment hedge
Umicore	- Commodity hedge - Foreign exchange hedge - interest rate hedge	Yes	- cash flow hedge - Fair value hedge
Ahold Delhaize	- Natural Hedge - Interest Rate Hedge - Foreign Exchange Hedge	Yes	- cash flow hedge - Fair value hedge
Akzo Nobel NV	- Foreign exchange hedge	Yes	- Net investment hedge
ArcelorMittal	- natural hedge - FX hedge - Interest rate hedge - Commodity hedge	Yes	- Cash flow hedge - Net investment hedge
ASM International	No hedge	No	no use of hedge accounting
ASML Holding	- Interest rate hedge - Foreign exchange hedge	Yes	- Cash flow hedge - Fair value hedge
BE Semiconductor Industries	- Foreign exchange hedge	Yes	- Cash flow hedge
DSM-Firmenich	- Natural Hedge - Interest Rate Hedge - Foreign Exchange Hedge - Commodity hedging	Yes	- cash flow hedge - Net investment hedge
Heineken NV	- Natural Hedge - Interest Rate Hedge - Foreign Exchange Hedge - Commodity hedging	Yes	- Cash flow hedge - Net investment hedge
IMCD	- Foreign exchange hedge - Natural hedge - interest rate hedge	Yes	- Cash flow hedge
Koninklijke KPN NV	- foreign exchange hedge - interest rate hedge	Yes	- Cash flow hedge - fair value hedge
Philips	- foreign exchange - commodity hedge	Yes	- cash flow hedge - net investment hedges
Prosus	- foreign exchange hedge - natural hedge - interest rate hedge	Yes	- Fair value hedge - Cash flow hedge
Randstad N.V.	- natural hedge - Foreign exchange hedge - interest rate hedge	Yes	- Net investment hedge - Fair value hedge
RELX	- natural hedge - interest rate hedge - Foreign exchange rate hedge	Yes	- Fair value hedge - Cash flow hedge
Shell	- interest rate hedge - foreign exchange hedge - Commodity price	Yes	- Cash flow hedge - Net investment hedge - Fair value hedge
UMG	- natural hedging - Fx hedging	Yes	- Net investment hedge
Unilever	- commodity price hedge - interest rate hedge - foreign exchange hedge - Natural hedge	Yes	- Cash flow hedge - Net investment - Fair value hedge
Wolters Kluwer N.V.	- natural hedge - FX hedging - interest rate	Yes	- Cash flow hedge - Net investment hedge
RTLGroup	- FX hedging	Yes	- Cash flow hedge
Aperam	- FX hedging - Commodity hedge - Interest rate hedge	Yes	- Cash flow hedge
SES FDR	- FX hedging - Natural hedge	Yes	- Net investment hedge

Appendix 10: Overview of hedged risks and hedging instruments across companies

Company	Hedging instrument	Hedged items	Instrument/risk
AB InBev	- Forwards - Options - Futures - Swaps	- Foreign currency - Interest rates - Net investment in foreign operations - Commodity (Raw material)	- FX risk: FX forwards, currency options, currency futures and cross currency swaps - Interest rate risk: interest rate swaps et cross currency interest rate swaps - Commodity risk: commodity swaps et commodity futures
Argenx	N/A	N/A	N/A
Azelis Group	N/A	N/A	N/A
D'leteren	- Forward - Swaps - Caps - Floors. - Options	- Foreign currency - Interest rates - Commodity (energy)	- Interest rate risk: forward rate agreement, interest rate swaps, caps and floors. - FX risk: forwards swap, plain-vanilla foreign exchange options, when appropriate cross currency swaps.
Galapagos	N/A	N/A	N/A
Lotus Bakeries	N/A	N/A	N/A
Melexis	N/A	N/A	N/A
Solvay	- Forward - Options - Swap - Futurs	- Commodity - interest rate - Foreign currency	- FX: Forward, options - Interest rate: Swap - Commodity: Forward, futurs - CO2: forward sales of CO2 emission rights
Syngro	- Forwards - Options - Futures	- Foreign currency - Energy	- FX risk: forwards, options - Energy risk: forwards energy, futures
UCB	- Forward - Options - Swaps	- Interest rate - Foreign currency - Net investment in foreign operations	- FX risk: forward contracts, foreign exchange options and cross-currency swaps - interest rate risk: IRS => Interest rate swaps - Net investment: Forward foreign exchange contracts
Umicore	- Swaps - Forward	- Commodity (raw material) - Currencies (FX) - Interest rates - Energy	- interest rate risk: interest rate swaps and cross-currency swaps - FX risk: forward contracts - metal: forward - Energy: Forward
Ahold Delhaize	- Swaps - Forward	- Interest rate - Foreign currency (FX) - Net investment in foreign operations	- Interest rate risk: interest rate swaps - FX risk: forward foreign exchange contracts - FX + debt: cross-currency swaps (major instrument)
Akzo Nobel NV	- Forward	- Net investment in foreign subsidiaries	- Forward foreign exchange contracts: net investment hedge
ArcelorMittal	- Options - Forward - Swaps - Portfolio of denominated debt	- Foreign currency - Commodity (metal + energy + emission rights) - net investment	- FX risk: options and forward contracts - FX risk: currency swaps - Commodity risk: forward contracts and commodity options - Emission rights: forward contracts on emission allowances - Net investment: portfolio of denominated debt - Net investment: cross-currency swaps
ASM International	N/A		No hedge
ASML Holding	- Swap - Forward	- FX - Interest rate	- Interest rate: interest rate swap - FX risk: forward foreign exchange contracts.
BE Semiconductor Industries	- Forward	- Foreign currency (FX)	FX risk: Forward foreign currency exchange contracts
DSM-Firmenich	- Forward - Options - Swap	- foreign currency (FX) - interest rate - Net investment in foreign subsidiaries	- FX risk: Forward contracts, spot contracts, average currency forwards and options, currency swap - interest rate : Interest Rate Swaps and Cross-currency interest rate swaps - Net investment: Forward
Heineken NV	- Forward - Swaps - Caps - Floors - Swap	- foreign currency - net investments in foreign operations - commodity - interest rate	- FX risk: forward exchange contracts - interest rate: cross-currency interest rate swaps, forward rate agreements, caps and floors. - Commodity derivatives
IMCD	- Forward - Swap	- foreign currency - interest rate	- FX risk: Forward exchange contracts - Interest rate: interest rate swap contracts
Koninklijke KPN NV	- Swaps - Forward	- foreign currency - interest rate	- Cross-currency swaps (FX + interest combined) - interest rate risk: Interest rate swaps - FX risk: Forward exchange contracts
Philips	- Forwards - Collars - Option - Swap	- foreign currency - Energy	- FX risk: forwards, exchange spot, zero cost collars, option - Net investment => cross interest swap, foreign exchange forward contracts
Prosus	- Forward - Swap	- interest rate - foreign currency risk (transaction)	- foreign risk: forward exchange contracts - interest rate: interest rate swap
Randstad N.V.	- A committed bilateral loan denominated in US dollars. - Swaps	- Net investment - interest rate	- Net investment: A committed bilateral loan denominated in US dollars. - interest rate: interest rate swaps
RELX	- Swap - Forward	- interest rate - FX (transaction)	- interest rate: interest rate swap, Cross-currency interest rate swaps - FX (transaction): Forward
Shell	- Swap - Forwards - Futures - Options	- interest rate - FX risk	- interest rate: interest rate swap, cross currency swap - Commodity price risk: Forwards, futures, swaps, options - FX: Forward foreign exchange contracts and Currency swaps and options
UMG	- Not specified	- Net investment	- Use of derivative
Unilever	- Swap - Forwards - Futures - Option - Local currency borrowings	- interest rate - Commodity price risk (raw material) - Foreign currency - Net investment	- interest rate: interest rate swap - Commodity price: commodity forwards, futures, swaps and option contracts - Currency risk: forward foreign currency exchange contracts. - Net investment: local currency borrowings and foreign exchange derivative contracts. So they use non-derivative as a hedging instrument and apply hedge accounting.
Wolters Kluwer N.V.	- Forward - Swap	- Foreign currency - Net investment - interest rate	- Foreign currency: cross-currency interest rate swap - interest rate: interest rate swap - Net investment: U.S. dollar currency forward contracts
RTLGroup	- Forward - Swap	- Foreign currency	- FX: forward contracts and currency swap
Aperam	- Forward, - Swaps - Options	- Commodity hedge (metal) - Foreign currencies - interest rate	- Raw materials (base metal): Forward, swaps and options - Foreign currency: forward - interest rate: interest rate swap
SES FDR	- US bonds	- net investment	- Net investment: US bonds

Appendix 11: AB InBev FX Risk exposure (Hedged and Open Positions)

Million US dollar	31 December 2024			31 December 2023 ¹		
	Total exposure	Total hedges	Open position	Total exposure	Total hedges	Open position
US dollar/Brazilian real	(1 823)	1 456	(367)	(1 832)	1 833	1
US dollar/Mexican peso	(1 250)	1 092	(158)	(1 229)	1 282	53
US dollar/Colombian peso	(504)	482	(22)	(546)	542	(4)
US dollar/South African rand	(373)	333	(40)	(224)	189	(35)
US dollar/Argentine peso	(326)	-	(326)	(437)	-	(437)
US dollar/Canadian dollar	(286)	243	(43)	(310)	291	(19)
US dollar/Peruvian nuevo sol	(236)	215	(21)	(217)	209	(8)
US dollar/Honduran lempira	(225)	-	(225)	(250)	-	(250)
US dollar/South Korean won	(160)	116	(44)	(146)	135	(11)
Mexican peso/Euro	(153)	132	(21)	(219)	180	(39)
Euro/Peruvian nuevo sol	(152)	-	(152)	(7)	-	(7)
US dollar/Paraguayan guarani	(144)	127	(17)	(157)	152	(5)
US dollar/Chilean peso	(144)	127	(17)	(164)	129	(35)
US dollar/Dominican peso	(129)	-	(129)	(108)	26	(82)
US dollar/Euro	(126)	106	(20)	(90)	100	10
US dollar/Indian rupee	(113)	69	(44)	(89)	46	(43)
Euro/South African rand	(108)	111	3	(99)	86	(13)
US dollar/Bolivian boliviano	(104)	-	(104)	(79)	55	(24)
Euro/Mexican peso	(91)	92	1	(99)	95	(4)
Others	(633)	493	(140)	(622)	438	(184)

Appendix 12: AB InBev net investment exposure (Hedged and Open Positions)

Million US dollar	2024	2023
Hedged (economic hedges)	(186)	70
Not hedged	40	(423)
	(147)	(353)

Appendix 13: AB InBev interest rate sensitivity analysis

31 December 2024 Interest-bearing financial liabilities Million US dollar	Before hedging		After hedging	
	Effective interest rate	Amount	Effective interest rate	Amount
Floating rate				
US dollar	-	-	5.3%	1 792
Other	11.2%	184	11.2%	184
		184		1 975
Fixed rate				
US dollar	5.1%	46 192	5.4%	36 780
Euro	2.5%	22 653	2.5%	23 530
Chinese yuan	3.2%	41	2.6%	2 921
Canadian dollar	4.5%	555	4.4%	2 657
South Korean won	4.9%	40	2.3%	2 200
Mexican peso	15.7%	239	10.8%	1 239
Pound sterling	3.3%	1 154	2.6%	34
Other	8.6%	1 111	10.1%	833
		71 986		70 195
31 December 2023¹ Interest-bearing financial liabilities Million US dollar	Before hedging		After hedging	
	Effective interest rate	Amount	Effective interest rate	Amount
Floating rate				
Euro	4.3%	1 086	4.3%	1 086
US dollar	6.0%	505	6.3%	789
Other	10.5%	299	11.7%	595
		1 889		2 469
Fixed rate				
US dollar	5.0%	50 368	5.2%	43 344
Euro	2.3%	21 233	2.5%	22 072
Chinese yuan	2.9%	57	2.5%	2 437
Canadian dollar	4.5%	625	4.4%	2 988
South Korean won	5.5%	49	1.9%	2 209
Pound sterling	5.4%	2 122	8.2%	827
Mexican peso	15.7%	324	13.5%	624
Other	7.4%	1 501	8.2%	1 196
		76 277		75 697

Appendix 14: AB InBev interest commodity hedges

Million US dollar	31 December 2024	31 December 2023
Aluminum	1 841	1 780
Energy	207	249
Corn	203	289
Plastic	79	95
Sugar	73	91
Wheat	47	163
Rice	46	51
	2 496	2 719

List of resource persons

- Mr Carl Verhofstede (Director at Deloitte)
- Mr Frédéric Poesen (Partner at KPMG)
- Mr Kevin Braeckman (Director at PwC)
- Mr Alexandre De Ridder (Senior Treasury Manager at Umicore)
- Ms Delphine Vanhuyse (Senior Consolidation Manager at Umicore)
- Mr Benjamin Laame (Head of Treasury Operations at UCB)
- Mr Serge Vinogradov (Senior IFRS Technical Manager at EFRAG)

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EXECUTIVE SUMMARY

The objective of this thesis is to analyze how industrial and commercial companies listed on the BEL 20, AEX 25 and LuxX Price Index apply hedge accounting under IFRS as part of their risk management strategies.

The thesis is divided into two parts. The first part focuses on the theoretical framework. The objective is to explain hedge accounting and the requirements of IFRS 7 and IFRS 9. The second part is a market study based on a mixed-method approach, combining a quantitative analysis of 32 companies' 2024 financial statements and qualitative interviews with six professionals from Deloitte, KPMG, PwC, Umicore, UCB and EFRAG.

The findings show that all 32 companies are exposed to foreign exchange, interest rate, credit and liquidity risks, while commodity price risk affects 53% of the sample. 87.5% use derivative instruments to hedge their exposures and 81.25% formally apply hedge accounting under IFRS 9.

Cash flow hedges are the most commonly used type of hedge accounting (84.62%), due to the predominance of risks related to future cash flows. Net investment hedges are also widely used (61.54%). Fair value hedges are the least used (46.15%), primarily applied to fixed-rate debt. In terms of instruments, companies systematically favour simple derivatives, namely forwards, swaps and options, which is consistent with their strong risk aversion.

Some sectoral differences emerge. For example, companies in the commodities and materials sector display the most complex hedging strategies. Healthcare and biotech firms, characterized by high margins, make limited use of hedge accounting.

Finally, disclosure quality under IFRS 7 varies considerably. While all companies meet the minimum requirements due to being audited, voluntary disclosure practices differ significantly.

KEYWORDS: IFRS 9, IFRS 7, Hedge accounting, Derivative instruments, Benelux

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