UNIVERSITY OF LJUBLJANA

SCHOOL OF ECONOMICS AND BUSINESS

MASTER'S THESIS

The Implication of IFRS 17 on Key Performance Indicators of European Insurance Companies

Ljubljana, March 2025 RIJAD JULARĐIJA

AUTHORSHIP STATEMENT

The undersigned Rijad Julardija, a student at the University of Ljubljana, School of Economics and Business, (hereafter: UL SEB), author of this written final work of studies with the title The Implication of IFRS 17 on Key Performance Indicators of European Insurance Companies, prepared in collaboration with mentor Aljoša Valnetinčič.

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ABSTRACT

This thesis explores the impact of IFRS 17 implementation on the financial statements and performance of selected insurance companies. The study aims to evaluate changes in key financial indicators, including assets, liabilities, equity, revenue, EBITDA, and profitability ratios, through a comparative analysis of pre- and post-implementation data. A mixed-methods approach combining content analysis of annual reports and statistical testing was adopted. Findings indicate significant shifts in equity and revenue recognition due to new measurement and disclosure requirements, with a notable decline in EBITDA for domestic companies. The results contribute to understanding IFRS 17's implications for financial reporting and its broader effect on the insurance sector's transparency and comparability.

KEY WORDS: IFRS 17, financial statements, insurance companies, Key performance indicators, revenue recognition.

SUSTAINABLE DEVELOPMENT GOALS

POVZETEK

Ta magistrska naloga raziskuje vpliv implementacije standarda MSRP 17 na računovodske izkaze in uspešnost izbranih zavarovalnic. Študija si prizadeva oceniti spremembe ključnih finančnih kazalnikov, vključno s sredstvi, obveznostmi, kapitalom, prihodki, EBITDA in kazalniki dobičkonosnosti, s primerjalno analizo podatkov pred in po uvedbi standarda. Uporabljen je bil kombiniran pristop, ki vključuje analizo vsebine letnih poročil in statistično testiranje. Ugotovitve kažejo na pomembne spremembe v kapitalu in priznavanju prihodkov zaradi novih merilnih in razkritvenih zahtev, pri čemer je zaznati izrazit upad EBITDA pri domačih podjetjih. Rezultati prispevajo k razumevanju vpliva MSRP 17 na finančno poročanje in širših učinkov na preglednost in primerljivost v zavarovalnem sektorju.

KLJUČNE BESEDE: MSRP 17, računovodski izkazi, zavarovalnice, priznavanje prihodkov, preglednost

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LIST OF ABBREVIATIONS

AOP - Adjusted Operating Profit

BBA - Building Block Approach

CSM - Contractual Service Margin

EBA - European Banking Authority

EFRAG - European Financial Reporting Advisory Group

EIOPA - European Insurance and Occupational Pensions Authority

ESMA - European Securities and Market Authority

EY - Ernst & Young

GAAP - Generally Accepted Accounting Principles

GDP – Gross domestic product

IASB - International Accounting Standard Board

IASC - The International Accounting Standards Committee

IFRS - International Financial Reporting Standard

KPI – Key Performance Indicators

LC – Loss component

LRC - Liability Remaining Coverage

MD&A - Management Discussion and Analysis

OCI - Other Comprehensive Income**P&L** - Profit & Loss statement

PAA - Premium-Allocation Approach

PwC – PricewaterhouseCoopers

ROE – Return on Equity

VFA - Variable Fee Approach

VNB - The Value of New Business

1 INTRODUCTION

The issuance of International Financial Reporting Standard 17 (IFRS 17) represents a transformative step in global accounting, designed to improve the transparency, comparability, and usefulness of financial statements for insurance companies. Finalized by the International Accounting Standards Board (IASB) in May 2017, IFRS 17 became mandatory for annual reporting periods beginning on or after January 1, 2023. It replaces the less consistent IFRS 4 and introduces a robust framework for the recognition, measurement, and presentation of insurance contracts. At this moment, 159 countries around the world have adopted IFRS to some extent, with 146 countries requiring use of standards for majority of listed companies and financial institution (IFRS Foundation, 2023b). Slovenia, for instance, mandates IFRS compliance for insurance companies under its local law (ZGD-1).

The primary objective of IFRS 17 aligns with the IASB Conceptual Framework for Financial Reporting: to provide relevant and reliable financial information, thereby enhancing economic decision-making by financial statement users (IASB, 2010). Relevance supports the forecasting of future cash flows and investor decision-making, while reliability ensures that financial information is complete, neutral, and free from material error (Tsuji, 2006; Lorson & Gattung, 2007). These qualities are particularly crucial in the insurance industry, where the complexity and long-term nature of contracts often pose challenges for accurate reporting. According to the EIOPA (2018), improvements in transparency and comparability which IFRS 17 brings with it have the potential to strengthen overall financial stability across European area. On the other side there is a concern, that IFRS 17 solutions may not be perfectly designed and may lead to complexity of financial statements. Furthermore, it is almost certain that the implementation of IFRS 17 will result in some operational implications. Insurance companies will be required to develop systems capable of reflecting the diverse complex risks associated with various types of insurance contracts, which will result in increased costs (IFRS, 2014).

IFRS 17 brings noticeable changes that can immediately be seen in the layout and structure of financial statements. One of the most visible differences is how insurance contract liabilities and related items are presented. Instead of showing gross premiums written and claims as separate line items, as was common under the previous standard, IFRS 17 focuses on summarizing these into the "insurance service result". This includes insurance revenue, service expenses, and the gradual release of the Contractual Service Margin (CSM) a key concept representing the profit insurers expect to earn over the life of the contract.
For readers, this means the financial statements will look different, with new line items and formats that better reflect the actual services provided by insurers. The specifics of concepts like the CSM and other technical terms will be explored in detail in the theoretical section of this thesis, but their impact is already clear: IFRS 17 provides a more streamlined and service-oriented view of insurance performance.

In addition to the visual changes in financial statement line items under IFRS 17, one of the most significant and intriguing aspects of the new standard is its impact on the reported amounts. The transition to IFRS 17 is expected to bring substantial changes to key financial metrics and balances, which will undoubtedly draw the attention of financial statement users.

For example, insurance companies may observe decreases in reported assets or liabilities due to the new measurement approach, which focuses on expected future cash flows and incorporates discounting and risk adjustments. These adjustments can result in a revaluation of reserves and provisions, fundamentally altering the presentation of the company's financial position. Similarly, other comprehensive income (OCI) may exhibit fluctuations, as IFRS 17 introduces new rules for recognizing and presenting changes in assumptions and remeasurement effects.

Revenue is another area likely to see significant shifts. Instead of reflecting total premiums written, IFRS 17 introduces a more service-driven revenue recognition model. As a result, revenue may appear lower than before, particularly for companies heavily reliant on long-term contracts where income is spread over the duration of the policy.

These changes naturally flow into key performance indicators (KPIs), which are critical for assessing company performance. Metrics such as EBITDA and net income may experience either declines or increases depending on the company's contract portfolio and the underlying assumptions applied (Deloitte, 2023). Crucially, the actuary department within insurance companies will be responsible for many of these changes. The transition to IFRS 17 requires sophisticated actuarial calculations to measure insurance liabilities accurately, assess future cash flows, and determine discount rates and risk adjustments. This highlights the pivotal role of actuaries in ensuring that financial statements reflect the new standard's requirements.

Understanding these changes and their broader implications is one of the key reasons for writing this thesis. Hence, the objective of this thesis is to examine the impact of the new accounting standard, IFRS 17, on the financial statements and KPIs of the largest European insurance companies. IFRS 17 represents a major shift in accounting standards, and its recent application to financial statements for the year ending December 31, 2023, makes it an especially relevant and timely topic for research. Considering that the vast majority of European insurance companies and groups have aligned their financial statements for the year 2023 with the directives and methodologies outlined in IFRS 17, this thesis endeavors to leverage this compliance to gain genuine insights into the actual outcomes of its implementation. Unlike prior research and literature, which have been conjectural in nature, this study aims to provide empirical evidence regarding the effects of adopting IFRS 17 within the insurance sector.

I hope this thesis will serve as a foundation for future research and comparative analyses on the impact of IFRS 17 on financial reporting and performance. Smaller insurance companies can also use this thesis to assess the efficiency of their IFRS 17 implementation by comparing the effects on their financial statements with the effects demonstrated by leading companies in the insurance sector within the European and Slovenian market.

Additionally, writing this thesis offers personal value to the author as an auditing professional. Leading audit firms typically work with clients who widely use IFRS standards, making a deep understanding of IFRS crucial. Consequently, expertise in IFRS will be highly advantageous. Moreover, the chosen topic aligns closely with the author's personal interests, further enhancing the relevance and engagement in the subject matter.
The goals include the following:

- To examine the overall benefits and challenges of implementing IFRS 17.
- To analyze effect of the IFRS 17 on the balance sheet and the income statement
- To analyze effect of the IFRS 17 on the Key performance indicators (KPIs) of insurance companies.
- To examine the implication of IFRS 17 on the operational performance of insurance companies.

I intend to achieve stated goals and purpose of the master's thesis based on the confirmation or rejection of the three research questions posed:
Question 1: The transition to IFRS 17 will affect the decrease in the book value of assets and liabilities and the increase of the company's capital. In addition, the transition to IFRS 17 will have a greater impact on the decrease in liabilities than on the decrease in assets.
Question 2: The transition to IFRS 17 will affect the decrease in insurance revenue as well as decrease in net result.
Question 3: After the implementation of IRS 17, the ROE indicator for insurance companies will improve, while the Combined ratio indicator will be lower.

I plan to use a variety of methodological approaches to answer the study questions. My master's thesis will consist of both theoretical and practical components. In the first part of the assignment, I will analyze the IFRS 17 and IFRS 4 standards using the description method. In this part, I will review the key aspects of the standards from the point of view of insurance contracts and insurance revenue. I will help myself with this with professional literature and articles with an emphasis on foreign authors. I will also use different interpretations of the standards published by the largest auditing companies, such as Ernst & Young (EY), PricewaterhouseCoopers (PwC), Deloitte and KPMG. Deductive and inductive approaches will be used to learn about the research topic.

In the practical part, I will conduct an empirical analysis based on publicly available data from annual reports of selected companies. This analysis will focus on the effect of the transition to IFRS 17 on the financial statements and performance indicators of insurance

companies. I will perform statistical analysis on the data, interpret the results, and compare them with the expected outcomes derived from the theoretical part. This will allow me to evaluate my findings and place them in an appropriate context.

In the first three chapters, I will present the accounting standards IFRS 17 and IFRS 4. I will begin with the old IFRS 4, which was valid until the end of 2021, highlighting its shortcomings. I will then continue with the new IFRS 17, explaining its key features and the effects on insurance companies that will implement this standard. Specifically, I will present the impacts on the balance sheet, profit and loss statement, and key performance indicators (KPIs). In the fourth chapter, I will describe the research framework and methodology of this thesis.

In the fourth chapter, I will present the empirical research, examining the practical effects of IFRS 17. This will include the presentation of data, methodology, and assumptions on which the research questions are based, and the statistical hypothesis tests are performed. Following this, I will present the results in chapter five, determining whether the research questions can be confirmed or rejected.

Finally, the thesis will conclude with a summary of findings and recommendations for further research.

2 INSURANCE INDUSTRY

The insurance industry is critical to the economy because it provides a mechanism for risk management and transfer. Insurance allows individuals and businesses to pursue opportunities and engage in economic activity with greater confidence by protecting them against potential financial losses. Also, through the creation of jobs, financial market investments and tax revenue generation the insurance business makes major contributions to the economy. Furthermore, insurance companies contribute significantly to disaster response and recovery activities by paying out the damages and supporting community reconstruction (George E. Rejda and Michael McNamara, 2018). As the eurozone's largest institutional investor, insurance companies had 8,266 billion in total assets and invested 10,627 billion in the European economy, equivalent to 61% of GDP (Insurane Europe, 2021).

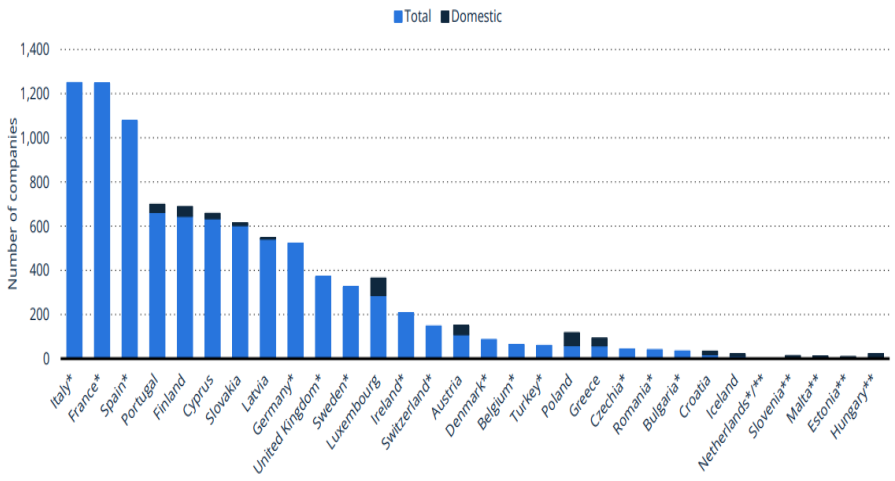
In the realm of insurance, there are many types of insurance companies, each with distinct structures, operational models, and strategic objectives. These entities can be broadly categorized into several types depending on the nature and scope of their business, the products and services they offer, and the regulations they follow. Firstly, there are life insurance companies that primarily offer policies designed to protect individuals and their beneficiaries against financial risks associated with mortality or critical illness. Conversely, property and casualty insurance companies focus on safeguarding policyholders against losses and damage to property, as well as liability exposures. Within this category, there are

general insurers, who provide a wide range of insurance products, and specialty insurers, which specialize in niche areas such as marine, aviation, or cyber insurance. Additionally, reinsurance companies play a pivotal role in the industry by offering coverage to primary insurers, thereby spreading risk and ensuring the stability of the insurance market (Pearson and Yoneyama 2015). Furthermore, in recent years, the emergence of "insur-tech" startups has disrupted traditional insurance practices through the application of cutting-edge technology and innovative business models, ushering in a new era of digital insurance. These various types of insurance companies contribute to the dynamic landscape of the insurance industry, serving the needs of individuals and businesses while constantly evolving in response to changing market dynamics and consumer preferences. Understanding the characteristics and interplay of these insurance entities is crucial for a comprehensive examination of the insurance industry, as it provides critical insights into the evolving dynamics and challenges facing this vital sector of the financial services industry.

2.1 Overview of the European insurance market

The European insurance market is highly fragmented, with significant variations across different countries. Major markets include Germany, the United Kingdom, France, Italy, and Spain, each with its unique regulatory environment and market dynamics where application of IFRS is a significant aspect of that. Key players in the industry often operate across multiple countries, leveraging economies of scale and diversifying their risk portfolios. In 2023, the market reached an estimated value of EUR 1.3 trillion in premiums, and it is projected to continue growing in line with the global economy at an annual rate of 5.5% (Allianz, 2024). Additionally, the insurance sector in Europe represents a significant portion of GDP. In some countries, the insurance market's total premiums are equal to or exceed 10% of national GDP, reflecting its importance in maintaining economic resilience and stability.

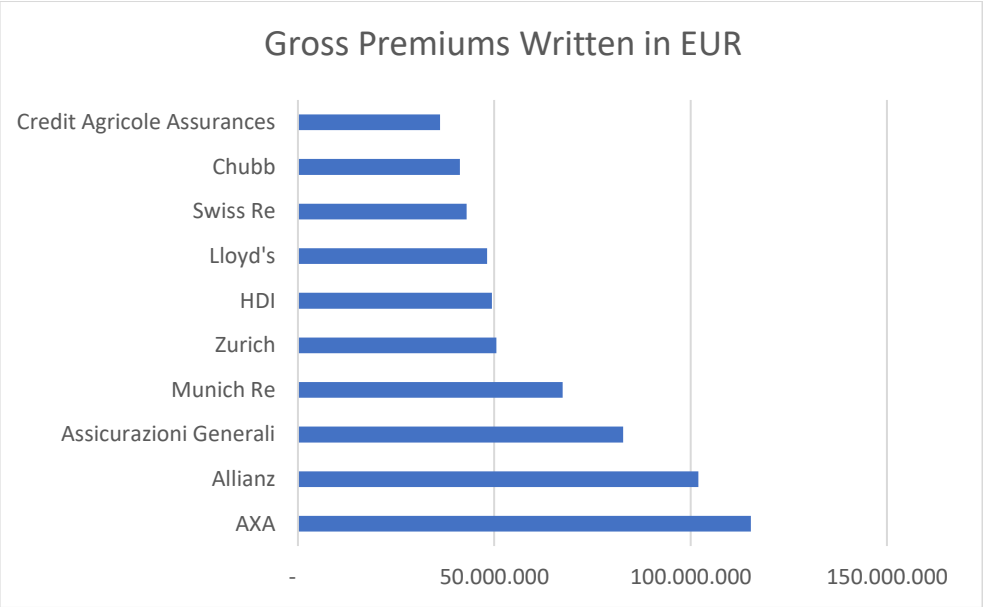
Figure 1: Total number of companies on the European insurance market



Source: Statista (2023).

There is substantial number of insurance companies across the Europe, reflecting the size and diversity of its market. According to Statista, Italy and France have the largest number of registered insurance companies in their market, with 1,250 and 1,247 companies respectively

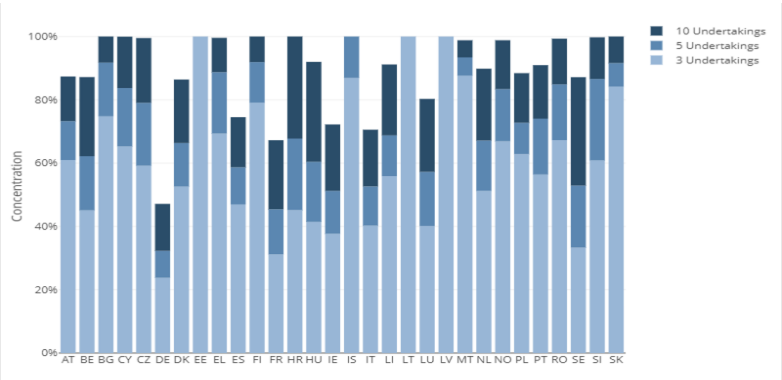
Figure 2: Top 10 Insurers in Europe by gross premium written



Source: Own work

As illustrated in Figure 1, the leading insurance companies in Europe are AXA, Allianz, and Generali. In 2023, these groups achieved gross premiums written exceeding 300 million euros (EUR) and net profits surpassing 15 million EUR (Paraschchak, 2024). Despite the presence of numerous insurance companies across Europe, the market is largely dominated by a small number of major players, who collectively control a substantial share of the gross written premiums (GWP) in most countries.

Figure 3: Market Concentration of Life Insurance Premiums Across European Countries



Source: EIOPA (2023).

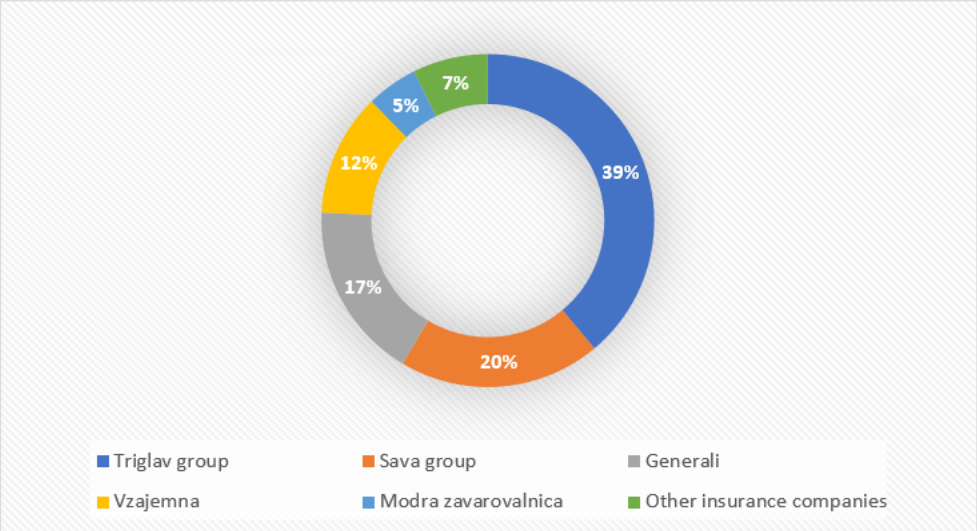
As depicted in Figure 3, the top 3 insurers account for over 80% of the GWP in smaller markets like Estonia, Latvia, and Cyprus, demonstrating high market concentration. Even in larger markets such as Germany and France, the top 5 players hold a commanding position, controlling a majority of the market share. On the other hand, more fragmented markets like Denmark and Netherlands show a slightly lower concentration, with the top 10 insurers sharing the market more equally. This highlights that while there is diversity in the number of insurers across European countries, the dominance of a few key players remains a consistent characteristic, significantly shaping the competitive landscape and influencing the overall performance of the sector. These market leaders are likely to drive the most noticeable changes following the implementation of IFRS 17 due to their dominant market positions. Given their substantial influence on the European insurance market, the largest insurers, such as AXA, Allianz, and Generali, will be the primary focus of the empirical part of this master's thesis.

According to the Insurance Europe (2021) and EIOPA (2023), life insurance represents the largest segment of the European insurance market in terms of gross premiums written. In 2022, the life insurance market accounted for approximately 57% of total GWP across the European Economic Area (EEA), highlighting its central role in the insurance sector. The life insurance sector is followed by the property and casualty (P&C) insurance sector, which includes motor, property, and liability insurance, comprising around 37% of total GWP.
The European insurance companies faces various challenges such as economic uncertainty, inflation, and high-interest rates. Despite these obstacles, in general the sector demonstrates resilience due to robust capital strength and liquidity (S&P, 2023).

2.2 Slovenian insurance industry

Slovenia's insurance industry is well-developed and regulated. It consists of numerous types of insurance, the most common of which are life insurance, property insurance, auto insurance, health insurance, and liability insurance. The insurance industry in Slovenia is regulated by the Insurance Supervision Agency of Slovenia (Agencija za zavarovalni nadzor). The agency oversees the licensing, supervision, and regulation of insurance companies to ensure compliance with legal and financial requirements. There are currently 31 insurance and reinsurance companies operating on the Slovenian insurance market (SZZ, 2024), and they are required to apply IFRS standards by local law (ZGD-1). The market is dominated mostly by several domestic and international established insurance firms, and it is made up with 22 domestic insurance companies, 9 foreign branches, and 2 reinsurance companies that are members of the Slovenian Insurance Association (Sava RE, 2022). However, the Slovenian insurance market is one of the smaller ones in Europe, representing only 0.2% of the total European insurance market share (SZZ, 2024).

Figure 4: Market share of insurance companies in Slovenia in the year 2022

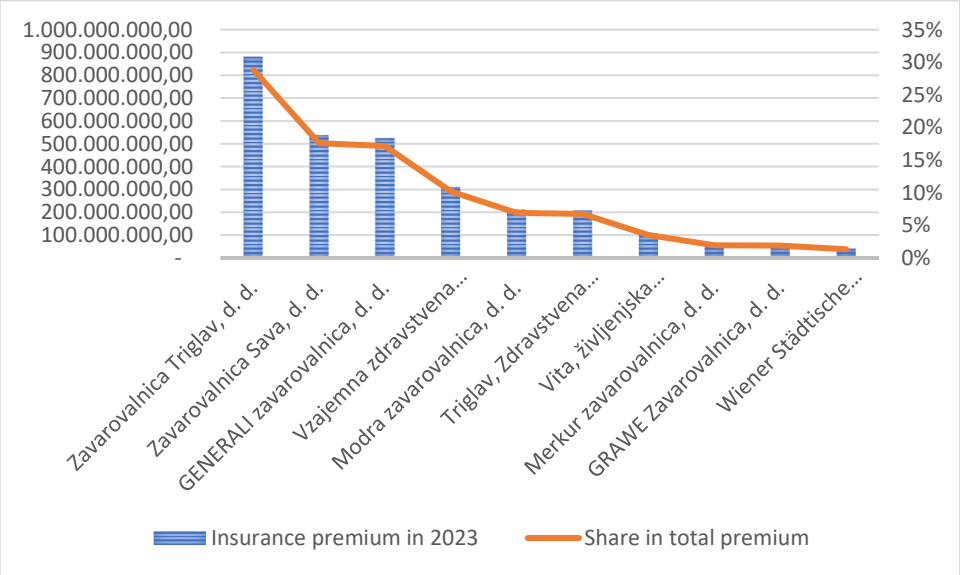


Source: Own work

As it can be observable from the figure 5. Slovenia's insurance market is highly concentrated and characterized by a strong domestic base supplemented by international players with the top three insurers Triglav, Sava, and Generali accounting for 64% of total premiums. This reflects a relatively small but stable market, with limited room for smaller players to disrupt the status quo. The undisputed leader, Zavarovalnica Triglav accounts for 29% of total premiums (€881.5 million), while another key domestic player Sava represents 18% of the market.

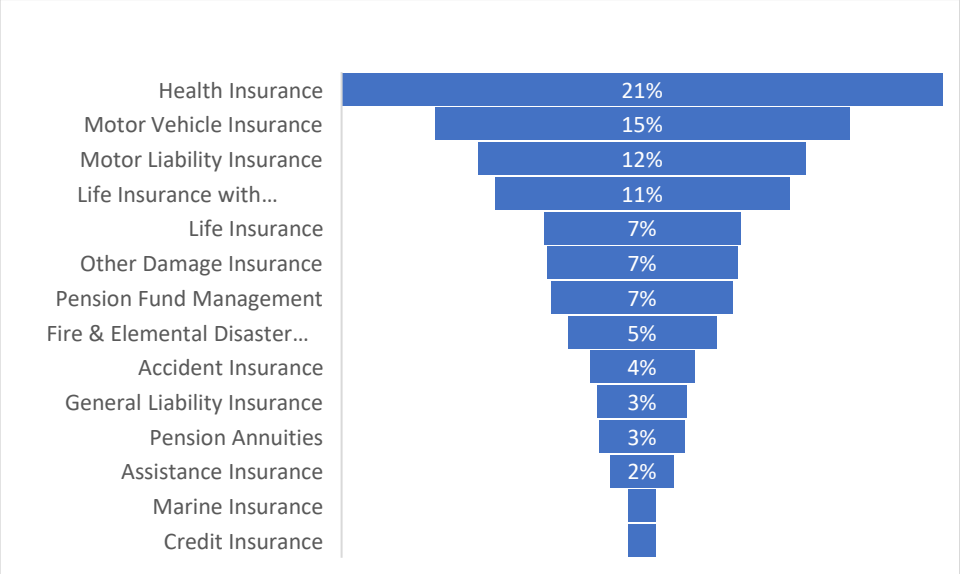
In comparison to other countries in the region, insurance penetration in Slovenia has been rather high. And insurance penetration refers to the level of insurance coverage or the percentage of the population that has insurance policies in a specific country or region. The Slovenian population has generally recognized the importance of insurance protection, leading to a significant number of individuals and businesses opting for insurance coverage. Slovenian insurance companies offer a wide range of insurance products tailored to individual and business needs. Non-life insurance, which includes motor, property, and liability insurance, dominates the Slovenian insurance landscape, representing more than two-thirds of total premiums (OG Analysis, 2021). This trend contrasts with the European market, where life insurance has traditionally held a stronger position, accounting for 55.4% of total premiums (EIOPA, 2024). In Slovenia, however, the non-life sector commands a significantly higher share, at 72.5% of total premiums, reflecting a distinct market preference.

Figure 5: Biggest insurance companies by premium in 2023



Source: Own work

Figure 6: Insurance premium in Slovenia in 2022



Source: Statistični zavarovalniški bilten (2024).

As illustrated in figure 6 Most significant insurance product in Slovenia is health insurance representing 21,46% of the total premiums. This is in line with the growing awareness of health risks and the importance of private health coverage in Slovenia's healthcare system, which is predominantly public. Another major products are motor vehicle and liability insurance making up together 27 % of premiums in Slovenia.

This share mirrors the consistent demand for motor vehicle coverage in Slovenia, as it is a legal requirement for car owners. This category includes both third-party liability insurance and coverage for vehicle damage.

On the life insurance side, while premiums have slightly decreased over the years, they still represent a substantial portion of the market. In 2023, life insurance with investment risk was the most popular product within the life insurance segment, contributing 10.54% to the overall market. This type of insurance is highly appealing to Slovenians seeking both financial protection and investment growth. Traditional life insurance, which provides straightforward coverage without investment components, accounted for 7.02% of total premiums in 2023. The evolving insurance market in Slovenia also reflects the increasing significance of retirement savings and financial planning. Products related to pension fund management have gained traction, representing 6.5% of the total premiums in 2023. Furthermore, one of the major profitability indicators in the insurance industry is the combined ratio, which according to EIOPA has a median combined ratio of 97% for the Slovenian insurance sector, indicating that insurers in the country operate with a small underwriting profit on average. However, the combined ratio of over 100% highlights the market's competitive challenges Complementing this profitability indicator, the Slovenian insurance sector's good financial position and minimal chance of insolvency, even under poor economic conditions, predict a very high Solvency Capital Requirement (SCR) ratio of 243% in 2023. This indicates that the sector is highly capitalized, with insurers holding over twice the required regulatory capital.

The insurance industry in Slovenia has experienced steady growth over the years, driven by factors such as increasing awareness about the importance of insurance, economic development, and changing consumer needs. However, like other markets, it also faces challenges such as intense competition, regulatory changes, and evolving customer expectations.

2.3 Insurance contracts

Insurance contracts are legal agreements between an insurance company and a policyholder in which the insurance company agrees to reimburse the policyholder for a certain amount as well as provide other benefits in the event of a particular loss or damage covered by the policy (NAIC, 2022).

Insurance contracts are completely controlled by state and federal laws, and insurers must typically be licensed and meet certain financial standards. Even within the EU, different countries have different laws governing insurance contracts. As a result, insurers cannot offer the same insurance contract in multiple European countries. Insurers must have contracts tailored to each country, which can raise insurance company costs. This is also an

issue that the European Commission aims to address in the future as part of its strategy to encourage growth in the economy throughout Europe (European Commission, 2022).
Insurance contracts in Slovenia are governed by the Insurance Act, which establishes the legal structure governing the oversight of insurance contracts as well as the rights and obligations of insurers and policyholders (Uradni list, 2015). The Insurance Act governs all types of insurance contracts, including life, health, property and casualty, and liability insurance.
Generally speaking, insurance contracts are effective tools for risk management and financial protection for individuals and businesses. They seem to be complex legal documents that require careful consideration of every detail as well as knowledge of the relevant laws and regulations.

2.4 Insurance Accounting and Reporting

The primary goal of insurance accounting is to precisely measure and disclose an insurance company's financial position, performance, and cash flows. This is accomplished by applying accounting principles such as generally accepted accounting principles (GAAP) and IFRS. These principles explain how to record and report insurance transactions such as premiums, claims, and investment income (AICPA, 2022).
Financial statements, risk-based capital reports, statutory filings, and management discussion and analysis (MD&A) reports are key components of insurance reporting (NAIC,2023). The financial statements of an insurance company provide an overview of its financial position and performance, including income, expenses, assets, and liabilities. Risk-based capital reports assess an insurance company's ability to withstand unforeseen events and losses. Statutory filings detail an insurance company's operations, such as premiums written, claims paid, and investment income. Finally, MD&A reports reveal management's interpretation of financial results as well as key risks and opportunities confronting the insurance company.

The insurance sector is changing dramatically because of technological advances, regulatory reforms, and global economic shifts. Notably, the adoption of IFRS 17 is a watershed moment in insurance reporting, introducing a consistent framework for assessing insurance liabilities and unifying financial reporting procedures across jurisdictions (PwC, 2023). Furthermore, the growing emphasis on Environmental, Social, and Governance (ESG) concerns has compelled insurers to incorporate non-financial measures in their reports, demonstrating their commitment to sustainability and social responsibility. Digitalization has also reshaped reporting practices, with insurers leveraging data analytics, artificial intelligence, and blockchain to enhance transparency and accuracy in financial disclosures. For instance, automated systems now facilitate real-time tracking of claims, enabling more precise risk modeling and improved customer insights (Deloitte, 2022).

Finally, insurance accounting and reporting provide the framework for decision-making, regulatory compliance, and stakeholder trust. The adoption of sophisticated accounting rules such as IFRS 17, together with digital innovation, is driving the sector toward more transparency and worldwide comparability. These developments highlight the changing significance of reporting as a strategic tool for managing the intricacies of the modern insurance industry.

2.5 Key performance indicators for Insurance companies

Key Performance Indicators (KPIs) are quantitative metrics used to analyze an individual's, team's, department's, or organization's performance and progress toward achieving its strategic objectives and goals in today's modern economy and business. KPIs are designed to assess key success factors and enable stakeholders to assess performance, identify areas for improvement, and make data-driven choices. They offer a clear and measurable method of tracking performance, defining goals, and monitoring progress over time (Parmenter, 2015). Even while companies are not required to publish KPIs in their annual reports, they offer appear, notably in the MD&A section. The MD&A section of the annual report is a narrative section in which management delivers analysis and insights into the company's financial performance, operations, strategies, and risks. Since 2006, UK-listed companies have been expected to analyze their company using KPIs in specified sections of their annual reports (Elzahar, et al., 2015). It's worth noting that the extent of KPI disclosure in annual reports varies by company. Some businesses may offer precise and specific KPIs with supporting data, whereas others may provide more broad or high-level comments. Furthermore, the particular requirements for KPI disclosure can vary between nations and regulatory regimes.

The insurance industry is a complicated and highly regulated industry that requires excellent performance assessment and evaluation to maintain long-term growth and profitability. Without exception, KPIs also play an important role in analyzing performance and offering vital insights for strategic decision-making for insurance companies. Financial, operational, employee, environmental, social, and governance KPIs are some of the common KPIs that may be included in annual reports of insurance companies.

Financial KPIs are critical in analyzing the financial health and performance of insurance companies, and when we examine the insurance sector, they are usually in the forefront of the considerations of company stakeholders and management (CE|ASA, 2010). For insurance companies, adjusted operating profit (AOP), combined ratio, loss ratio, return on equity (ROE), and other relevant KPIs are commonly used to assess efficiency, effectiveness, and competitiveness. It is also critical to emphasize measures for measuring growth in insurance sector, from which various KPIs such as gross written premium, value of new business, and others are generated.

2.5.1 Adjusted Operating Profit (AOP)

An essential financial KPI that measures the profitability of an insurer's core operations is AOP. It excludes non-operating items and extraordinary events to provide a more accurate reflection of ongoing profitability and operational efficiency (PwC, 2019b). The formula for calculating AOP varies slightly between firms, but it generally follows the following rules:

- First, consideration of the operational profit: The operating profit is calculated by deducting the money earned by core insurance activities from the expenses directly associated to those activities, such as claims payments, administrative expenses, underwriting costs, and commissions. The profitability of the company's major business operations is reflected in this statistic.
- Non-operational items are excluded: Non-operating items are those that are not directly tied to the fundamental business operations of the insurer. They may include investment gains or losses, one-time charges or gains, restructuring expenditures, or other unusual things. These items can have a substantial impact on overall profit figures and may not fully reflect the underlying profitability of the organization.
- Adjust for unusual events: Insurance firms may encounter unusual events that are not part of their typical business operations but have a substantial influence on their financial results. Natural disasters, large-scale lawsuits, fines, and substantial regulatory changes are all examples. To provide a bigger picture of the insurer's continuous profitability, adjustments are made to eliminate the financial impact of such events.
- Finally, insurance industry specific factors must be considered: Insurance companies operate in a distinct industry with distinct risk profiles and accounting standards. As a result, certain changes may be required to account for insurance-specific issues such as investment return volatility or claim payment delay (Mazars, 2022).

2.5.2 Combined ratio

The combined ratio is an important financial indicator used in the insurance sector, particularly for non-life insurers, to assess insurance companies' profitability and underwriting performance. It is not required by the IFRS, but it is widely used for measuring the relation between incurred losses and expenses and generated premiums, providing insights into an insurer's underwriting operations' efficiency and effectiveness (PwC, 2019b). The combined ratio is generally shown as a percentage and is calculated by summing the loss and expense ratios together. The loss ratio is the ratio of incurred losses to earned premiums (including claim payments and loss adjustment expenses), whereas the expense ratio is the ratio of underwriting expenses to earned premiums (including commissions, administration costs, and similar costs related to underwriting). A combined ratio less than 100% implies an underwriting profit, whereas a ratio greater than 100% indicates an underwriting loss.

2.5.3 Return on Equity (ROE)

One of the main areas of focus for analysts is Return on Equity (ROE), another often used KPI in the insurance industry for evaluating an insurance company's profitability and efficiency. ROE helping to understand the rate of return on shareholders' equity achieved by the insurance company business, and simply reflecting the rate at which the company uses its equity capital to generate profits. It is calculated as a percentage by dividing net income attributable to shareholders by the average shareholders' equity during a given period (Nissim, 2010). Higher ROE means that company is generating more profits relative to the equity capital invested by shareholders, whereas a lower ROE may indicate inefficiencies in deploying shareholder capital. Additionally, ROE can be used to compare investments in insurance businesses to other forms of investments, insurance companies within a market, and a specific class of business with others within the same company. The ROE can also be used by insurers to estimate the capability of individual company classes and units (The Actuary, 2012).

2.5.4 Premium growth

When it comes to measuring and analysis of growth-related KPIs for insurance companies, measuring of premium growth can provide valuable insights into the overall company business and it is one of the most basic KPI. Premium growth reflects the company's ability to recruit new policyholders, retain existing ones, and sell its insurance products efficiently. A positive premium growth rate suggests that the insurance company is increasing its customer base and expanding its market share. It demonstrates successful sales and marketing activities, effective underwriting practices, and competitive positioning in the insurance market. Premium growth can be achieved even with the exposure growth (selling more policies) or rate level growth (an increase in the price per exposure) depends on company strategy. Higher premium growth can result in increased revenue, profitability, and shareholder value (Shimell, 2009). On the other hand, when company achieve an increase in the number of sold policies, growth is valuable if the products are adequately priced, as a substantial increase in selling policies may indicate underpricing in competitive markets. This is a main reason for evaluating premium growth as potential warning sign of financial impairments (Hoyt and Liebenberg, 2011). However, it's important how to highlight that premium growth must be sustainable and balanced with profitability. Insurers must carefully manage risks, maintain appropriate pricing, and ensure that premium growth corresponds to claims experience and underwriting discipline. It's crucial to find a balance between growth objectives and maintaining a healthy risk profile.

2.5.5 The Value of New Business (VNB)

VNB is a key performance indicator used by insurance companies to calculate the present value of expected future profits from newly underwritten insurance contracts. It gives information about the financial value created by the company's new business activity.
This KPI considers several factors, including premium income, expenses, policyholder behavior, and investment returns. It reflects the profitability of new business underwritten during a specific period, considering both the costs associated with acquiring and servicing policies and the projected future cash flows from those policies. A positive VNB suggests that the new business will contribute to the company's profitability and shareholder value over time. Higher VNB indicates good underwriting operations, efficient distribution channels, and effective risk management, all of which lead to long-term growth and increased competition in the insurance industry. VNB calculations involve various assumptions and projections, such as mortality rates, lapse rates, investment returns, and expense ratios (Raavi and Satuluri, 2019). Also, it can be used as a benchmark to compare different insurance products or geographic regions, and to measure financial value generated by their new business activities.

3 Presentation of Standard

Insurance companies are facing a significant change in business environment, as a result of the adoption of IFRS 17, since accounting methods of insurance companies will undergo changes in practices and substantial developments. IFRS 17 goes into effect on or after 1. January 2023. The standard will replace the older IFRS 4 standard that governs insurance accounting. If we look at the current situation, there is no comprehensive standard for insurance accounting, as IFRS 4 was created as an interim standard to be used until its successor was published. Accounting changes are common in the IFRS standards, as new standards and amendments to previous standards are published at different times, depending on the need for an update (IFRS Foundation, 2023b). Originally, IFRS 17 was scheduled to go into effect in January 2021. However, as the new standard requires insurers to align their systems and processes and education of employees, the effective date has been extended to January 2023, providing insurers more time to adaptation.

3.1 History and need of IFRS 17

The International Accounting Standards Committee (IASC) was the first international accounting standards setting body. It is formed in 1973 by several different accounting bodies of different countries in response to economic integration and related increases foreign capital flows. According to Street and Shaughnessy (1998), the IASC's main two goals were to develop and publish public interest accounting standards, as well as to promote

their acceptance and observance, which was the basis for quality improvements of financial statements.

In the 1990s, when globalization reach significant level, and foreign investments have doubled, the IASC standards gained the attention and respect of national and regional regulators, accounting bodies and leading multinational companies. All this was signal to IASC to organize a Strategy Working Party in 1997 to reforms its organization and strategy. A discussion paper on this change was issued in 1998, followed by final recommendations in 1999. By May 2000, all members of the IASC had agreed to the proposals, culminating in the formation of a new financial standard-setting institution, the International Accounting Standards Board (IASB), as it is known today. The IASB was part of the International Accounting Standards Committee Foundation, or IASCF, which is now known as the IFRS Foundation (Walton et al., 2003). Hence, IASB took over the project from IASC in April 2001 and continued working, but soon realized that it would be impossible to complete the comprehensive project by the deadline for adopting IFRS (Deloitte Touch Tohmatsu, 2003). Consequently, the project was divided into two parts, IFRS 4 and comprehensive IFRS 17 (Dufrasne, 2020). In the final, EU's compulsory adoption of IFRS was one of the most major regulatory experiments in financial reporting ever performed, with almost all listed corporations forced to ensure compliance with IFRS in their consolidated financial statements by 2005.

The IASB took over all projects from IASC, also including the project of insurance contracts, which the IASC had begun in 1998. One of the main driver and motive for IASC to start insurance contracts project were Asian financial crisis from 1997, which prompted the World Bank, International Monetary Fund and finance ministers of most developed countries called for quick realization and global adoption of high-quality international accounting standards. Therefore, IASB continued the project on insurance contracts in 2001 with the objective of addressing the diverse accounting practices followed by insurance companies worldwide. The goal was to a develop a single, principles-based standard that would enhance comparability and transparency in financial reporting. To develop the standard and get feedback on practical difficulties, the IASB calls on and issues several documents and exposure drafts from insurance specialists, auditors, regulators and other people with experience in this field.

As mentioned earlier, an effective date for listed companies to ensure compliance with new formed IFRS was beginning of the 2005. The IASB recognized that the project could not be completed entirely by 2005, thus it was separated into two phases, the first of which was the publication of IFRS 4 and the second of which was the publication of IFRS 17 (Deloitte, 2023a).

3.2. IFRS 4

IFRS 4 is an accounting standard developed by the IASB to address the unique features and complexities associated with insurance contracts. The standard was first issued on March 31, 2004, having an effective date of January 1, 2005. Prior to the issuance of IFRS 4, there was no specific guidance on accounting for insurance contracts applicable for different countries and jurisdiction. This standard was created with the aim to provide interim guidance until a comprehensive standard for insurance contracts, known as IFRS 17, was developed (Leflaive and Rognon, 2013). Hence IFRS 4 was a first step of IASB and just a short-term solution for accounting of insurance contracts.

IFRS 4 applies to all insurance contracts issued by insurance companies, and for reinsurance contracts that it holds. It covers a wide range of insurance activities, such as life insurance, property and casualty insurance, health insurance, and other types of insurance arrangements. Also, IFRS 4 shall apply to investment contracts that it issues with a discretionary participation feature. Such an investment contract is defined as one that has the legal structure of an insurance contract but does not transfer considerable insurance risk to the insurer. Life insurance contracts, for example, in which the insurer bears no considerable mortality or morbidity risk, are not insurance contracts. Investment contracts with discretionary participation aspects are not considered insurance contracts. They are, nevertheless, covered by IFRS 4 (EY, 2021).
The main characteristics of this first standard were definition of insurance contract, and according to the IFRS 4, insurance contract is defined as:
‘‘A contract under which one party (the insurer) accepts significant insurance risks from another party (the policyholder) by agreeing to compensate the policyholder if a specified uncertain future event (the insured event) adversely affects the policyholder” (IFRS Foundation, 2023a).

Other important features in IFRS 4 were accounting treatment of embedded derivatives, unbundling of contracts, instructions for temporary exemption from some other IFRS, and requirement for liability adequacy test (CPA Australia Ltd, 2011).

Accordingly, to IFRS 4, insurance companies were allowed to continue with their previous accounting approaches. Nevertheless, the big focus and emphasis was on improving disclosures on the amount, timing, and unpredictability of future cash flows from insurance contracts (Fitch Ratings, 2004). As a result, insurance companies used a variety of accounting procedures for insurance contracts. And many different accounting approaches therefore have emerged depending on the regulations used across different countries. Although several exceptions and modifications to then-current accounting principles were introduced in paragraph 4 of IFRS 4:

- It prohibits provisions for claims arising from contracts that did not exist at the conclusion of the term.

- It required insurance liability adequacy testing as well as as-set impairment testing.
- It mandated that insurers hold liabilities on their balance sheets until they were cancelled or expired.
- It prohibits offsetting insurance liabilities against relevant reinsurance, resulting in reciprocal debt cancellation between two companies (Martinez, 2018).

Also, according to paragraph 5, insurers were allowed to adjust their accounting principles for insurance contracts only if the resulting information in its financial reports is more appropriate and more trustworthy. Insurers may not introduce certain principles but could keep using those principles involving them. These practices do:

- calculating insurance liabilities on an unadjusted basis
- valuing contractual rights to future investment management fees at a higher rate than their fair value, as evidenced by a comparison of current rates offered by other market participants for comparable services.
- using non-uniform accounting policies to subsidiaries' insurance liabilities.

Even with those accounting principles, there were gaps in certain areas, and information in the financial statements was potentially limited. All of this, in some circumstances, resulted in limited investments, ambiguity in reporting, and, ultimately, poor decision-making. Another issue that is closely related to potential ambiguity in reporting is the unbundling challenges. Namely, the standard required the unbundling of embedded derivatives and investment components in insurance contracts, but determining the fair value of these components could be complex and subjective, leading to potential inconsistencies in reporting. Also, there is a potential mismatch between assets and liabilities because an asset is recognized at its fair value under IFRS 4, one might assume that the same is true for a liability. However, this is not the case with IFRS 4, as liabilities are valued at historical cost (IASB, 2017).

To address these weaknesses and enhance insurance contract accounting, the IASB established IFRS 17, which intends to introduce a more principles-based and consistent approach to insurance contract accounting. Many of the weaknesses of IFRS 4 are addressed in IFRS 17, which provides more solid and transparent accounting standards for insurance businesses.

3.3. IFRS 17

First and foremost, the numerous participants who will be most affected by this new norm will be identified. Obviously, the entities engaged in insurance activities firms will be the most affected because it is a standard targeted to them. This includes insurance companies, reinsurance companies, and other entities that issue insurance contracts. It applies to both life insurance and non-life (general) insurance contracts, as well as reinsurance contracts issued by these entities. The standard will also have an impact on how investors and financial

analysts value companies because the presentation of financial statements will alter for the better. Other actors, such as regulators and auditors, will undoubtedly be affected, but to a smaller degree.

The first chapter of standard defines its objectives, and it is emphasized that IFRS 17 sets standards for recognizing, measuring, presenting, and disclosing insurance contracts that fall within the scope of the Standard. The objective of IFRS 17 is to make sure that a company gives accurate information that accurately depicts those contracts. Users of financial statements can evaluate the impact of insurance contracts on the entity's financial position, financial performance, and cash flows using this information as a framework. Since IFRS 4 permitted a variety of alternative accounting policies regarding insurance contracts, comparison was challenging. As a result, IFRS 17 aims to bring transparency and comparability among insurance businesses. However, IFRS 17 establishes a single accounting principle for all insurance contracts and introduces fundamental adjustments to accounting in terms of assessing liabilities and profit recognition (Deloitte, 2020).

In terms of the transition, it is expected that companies shall implement the standard retroactively, which means that it is applied as it has always been effective. The standard therefore includes requirements regarding a retrospective approach. These requirements consider for measuring all existing insurance contract groups in accordance with IFRS 17, derecognizing any balances that wouldn't exist under IFRS 17, and recording any net deviations from the aforementioned requirements in equity.

As stated in the preceding section, IFRS 4 was not complete, and the new standard's goal is to complete it with numerous modifications in how corporations deal with their insurance contracts. The impact of this new standard will be determined by an entity's existing consistency in reporting as well as the degree of separation between its real accounting policies and those that are now mandatory as a result of IFRS 17 (IFRS Foundation, 2023b).

3.3.1 Main features of IFRS 17

All contracts in which significant insurance risk is transferred are covered by IFRS 17, much as IFRS 4. Correspondingly, the scope of the standard is on insurance contracts, reinsurance contracts and investment contracts with discretionary participation features, which are contracts that include additional, non-insurance related payments as explained before. The definition of the insurance contract itself remains unchanged according to IFRS 4. While IFRS 17 defines reinsurance contract an insurance contract provided by one party (the reinsurer) to reimburse another party (the underlying contracts) for claims resulting from one or more insurance contracts issued by that other party (IFRS Foundation, 2023b). To be more specific, a reinsurance contract is an insurance contract purchased by insurance companies in order to reduce risk. For example, consider massive floods in Slovenia in August 2023, causes hundred million of euros in damage. If only a few companies sold all

homeowners insurance, the chances of covering losses would be very small. Instead, the insurance company reinsurance extends parts of the coverage to other insurance companies, spreading the expense of risk across multiple insurance companies (Patrik, 2006).

While the IFRS 17 applies to all insurance contracts, an insurance contract may contain components that do not fall within the definition of insurance contract. As a result, companies must divorce these components from the contract and apply either IFRS 9 or IFRS 15 standards, depending on the components. Specifically, insurance components and non-distinct investment components are not segregated and are measured within the framework of IFRS 17. In contrast, embedded derivatives and distinct investment components are to be separated and assessed under IFRS 9. Furthermore, distinct goods and services must undergo separation and evaluation according to the principles of IFRS 15.

Distinct investment components are identified based on two key criteria:

- The investment and insurance components should not be closely interrelated, meaning they can be measured independently of each other, or the policyholder can derive benefits from one component without relying on the other.
- A contract with equivalent terms can be or is sold separately in the market (Mogomotsi and Phetogo, 2021).

Hence, insurance contracts are recorded at the group level upon initial recognition and also upon subsequent measurement. As a result, IFRS 17 requires insurance contracts to be aggregated, but only at the group level. The insurance company must therefore additionally separate each portfolio of insurance contracts into groups of insurance contracts, whereby individual groups of insurance contracts are distinguished primarily from the point of view of the profitability of the insurance contracts. A group of insurance contracts are created by splitting an insurance portfolio into at least contracts that are finalized within one year and are profitable.

IFRS 17 defines a portfolio of insurance contracts as insurance contracts that cover similar risks and are managed collectively. Contracts in the same product line, such as life insurance, have similar risks and must be included in the same portfolio (Deloitte, 2020; Moody's Analytics, 2018). For instance, Slovenian insurance companies usually have practice to divide their insurance portfolios into two categories: standard life insurance and life insurance where the insured bears financial risks. IFRS 17 suggests that insurance classified in the same insurance type should be treated as a portfolio of insurance contracts, giving the impression that insurance contract classification in Slovenian insurance companies is unlikely to change dramatically.

According to IFRS 17, groups of insurance contracts are divided into:

- group of contracts that are onerous
- group of contracts with a slight possibility of becoming onerous

- group of all the remaining insurance contracts

These three categories are the minimum required by the standard, however insurers may further separate contracts (KPMG, 2022). For example, insurance companies are supposed to examine insurance contracts at the insurance type level in the case of property insurance and at the insurance product level in the case of life insurance. In the latter case, it is possible to evaluate them at the level of groups of insurance products (e.g., a group of mixed life insurances, a group of life insurances in case of death, etc.), but the insurance company must be able to prove that the entire group consists solely of profitable insurance contracts, as the standard prohibits combining profitable and unprofitable insurance contracts into one group, where losses would be offset against profits (IASB, 2011).

Different contracts have different risks and must thus be treated separately. As an example, car insurance is more likely to require the insurer to cover expenses than insurance against natural disasters. As a result, those contracts must be divided into groups and measured independently in order for financial statements to be more comparable. Furthermore, paragraph 22 of the standard states that an insurance company may not combine contracts that are more than one year apart in the same group. In fact, this means that the insurance firm will mix insurance contracts based on the insurance product and then divide them into groups based on the date of the insurance contract's conclusion. In doing so, it is necessary to be aware of an additional operational challenge arising from the fact that individual generations of insurance contracts have different maturity dates and, as a result, different durations and methods of releasing the contractual service margin, which, in the opinion of many specialists, must be considered when combining insurance contracts.

3.3.2 Valuation practices of IFRS 17

IFRS 17 introduces a notable shift in valuation methods for insurance contracts, which is arguably one of the most innovative and significant changes the standard brings forth. Unlike its predecessor, the new standard is characterized by a structured framework comprising three distinct valuation approaches:

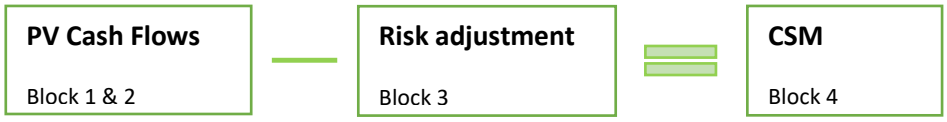
- Building Block Approach (BBA),
- Variable Fee Approach (VFA),
- Premium-Allocation Approach (PAA).

This transformation in valuation methods represents a pivotal aspect of IFRS 17, as it ushers in enhanced clarity and consistency in financial reporting for insurance contracts (IASB, 2011). These methods reflect the evolving nature of the insurance industry and align accounting practices with a more comprehensive understanding of contract characteristics, ultimately contributing to a more accurate representation of financial performance.

3.3.2.1 Building Block Approach (BBA)

Building Block Approach, often referred to as general measurement model (GM), stands as the fundamental valuation methodology within the framework of IFRS 17. This model serves as the cornerstone of valuation for a multitude of insurance contracts, and companies choosing alternative valuation techniques must provide justification (EYGM Limited, 2021). The term "Building Block Approach" stems from the fact that the valuation process for a cohort of insurance contracts comprises distinct components or "blocks". The BBA, as the bedrock model, is universally applicable to all insurance contracts within the scope of IFRS 17 (EYGM Limited, 2021). Its framework encompasses four key blocks, each integral to the comprehensive valuation process. In essence, the BBA entails the computation of the present value of anticipated future net cash flows, increased by adjustments to accommodate the associated risk liability. The outcome of this meticulous evaluation is denoted as the contractual service margin (CSM), an innovative concept introduced by IFRS 17.

Figure 7: CSM calculation



Source: own work

3.3.2.1.1 Present value of fulfilment cash flows

Block 1 is dedicated to the meticulous computation of future cash flows, encompassing not only premiums but also elements such as salvage and subrogation. These incoming and outgoing cash flows are meticulously evaluated to ascertain the initiation of coverage, with the contract's recognition anchored in the earliest point of the coverage period. According to the IFRS 17 standard, determining of cash flows for insurance liability involves sing cash flows that arise within the contract boundaries, are current, explicit, and reflect the entity's perspective. These cash flows should encompass all possible outcomes, weighted by their probabilities, and should be based on a range of data sources, including the entity's own experience, market conditions, and predictive modeling. Market variables take precedence over non-market variables, which must be relevant to the entity's activity and insured population (EY, 2021). Cash flows should be based on current estimates and explicitly separated from risk adjustments and discounting for time value of money and financial risk. The boundaries of the contract are defined by the reporting period in which the entity can compel policyholders to pay premiums or has substantive obligations to provide services.

3.3.2.1.2 Discount rate

The subsequent block, known as the time value of money (Block 2), is intricately linked to Block 1. This stage revolves around the application of a discount rate for insurance contracts which must meet specific criteria. It should reflect the time value of money and the characteristics of the cash flows and liquidity associated with the contracts. This rate must also be consistent with observable market prices and exclude factors that affect market prices but not future cash flows.

Entities typically adapt a market yield curve to their portfolio by either adding an "Illiquidity Premium" to a risk-free rate or selecting a yield curve with returns similar to their assets and removing non-existent risks. The cash flows meeting these criteria must then be discounted, considering the time value of money and financial risks like currency and liquidity, if not already included in the cash flows. This approach differs from previous practices under IFRS 4, which used rates from financial assets on the balance sheet (PwC, 2017).
However, this step is exempted for contracts with a short-term duration of less than a year. Together, these first two blocks form the "Present value of fulfilment cash flows," a fundamental aspect of the valuation process.

3.3.2.1.3 Risk adjustment

Upon traversing the described initial phase of valuation, insurance entities proceed to the integral task of risk adjustment, denoted as Block 3 (Aormaih and Halim, 2021). In this phase, insurers incorporate uncertainty, diversity, and risk aversion into the valuation equation. The salient importance of risk adjustment stems from its pronounced impact on the comprehension of financial statements by stakeholders. This adjustment serves as an avenue through which insurers convey their perception of the intricate effects of uncertainty, encompassing both the quantum and timing of cash flows stemming from the insurance contract.

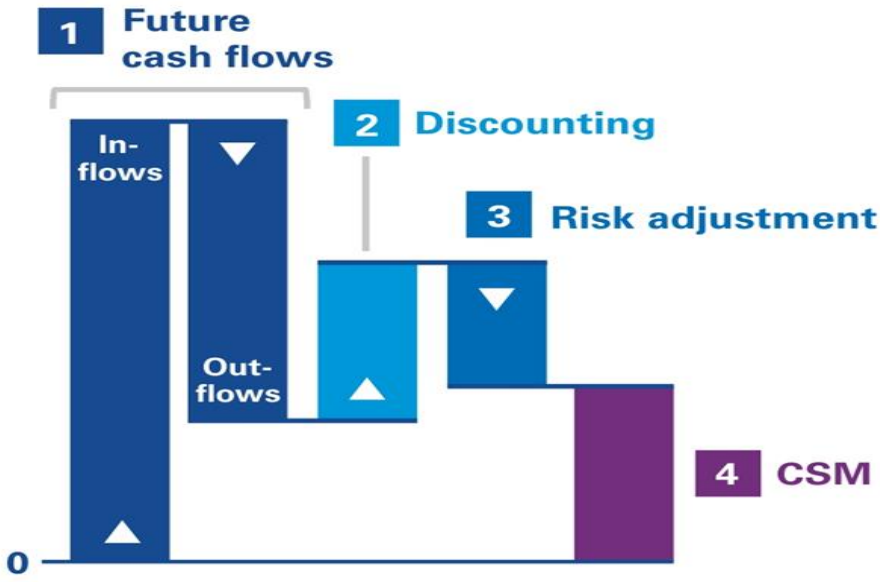
IFRS 17 does not specify an approach for calculating the risk adjustment. Article of the Cambridge University Press suggests three potential techniques: confidence level, conditional tail expectation, and cost of capital (El Alami et al., 2022). Nevertheless, a prevalent approach adopted by many insurers involves the utilization of a cost of capital method, a choice aimed at facilitating comparability with the Solvency II framework. Also, it is important to emphasize that specific amount of risk adjustment is subjective and depends on factors such as insurer’s risk appetite. The standard does not prescribe methods for determining risk adjustment, but there are guiding principles to follow:

- Contracts with low-frequency, high-severity claims are riskier than those with high-frequency, low-severity claims.
- Longer durations for similar risks are riskier than shorter durations for the same risks.

- Wider probability distributions indicate higher risk compared to narrower distributions.
- Contracts with emerging experience that increases uncertainty on non-financial risks are riskier than those where emerging experience decreases such uncertainty.

Hence, these principles provide a framework for determining risk adjustments that align with the specific characteristics and diversification strategies of the reporting entity. As seen in the figure 7., the CSM is a component of block 4, and it reflects the aggregate of previous phases in BBA. The subsequent recognition of this profit in the profit and loss statement is contingent upon the contract's duration (Zanders Group, 2023). Notably, in cases where the computed CSM manifests as negative, losses are promptly acknowledged in the profit and loss statement.

Figure 8: Key components of Building Block Approach



Source: KPMG (2017).

3.3.2.1.4 Contractual service margine (CSM)

According to Mogomotsi and Phetogo (2021), the CSM is the cornerstone of IFRS 17, which reflects the unearned profit that insurers expect to earn and recognize during the coverage period of the contract. Initially, this amount is not accounted for on the Profit & Loss (P&L) statement, but rather, it is gradually released throughout the contract's duration. This approach ensures that expected profits are distributed evenly over time, preventing the concentration of substantial or total profits at the outset of the contract.

The concept of CSM comprises two key components: the CSM at initial recognition, which occurs when the entity first acknowledges the contracts, and the CSM at subsequent measurements, which is calculated at various points in time when the entity compares projected cash flows with actual cash flows (Cooper Hiscox, 2019).

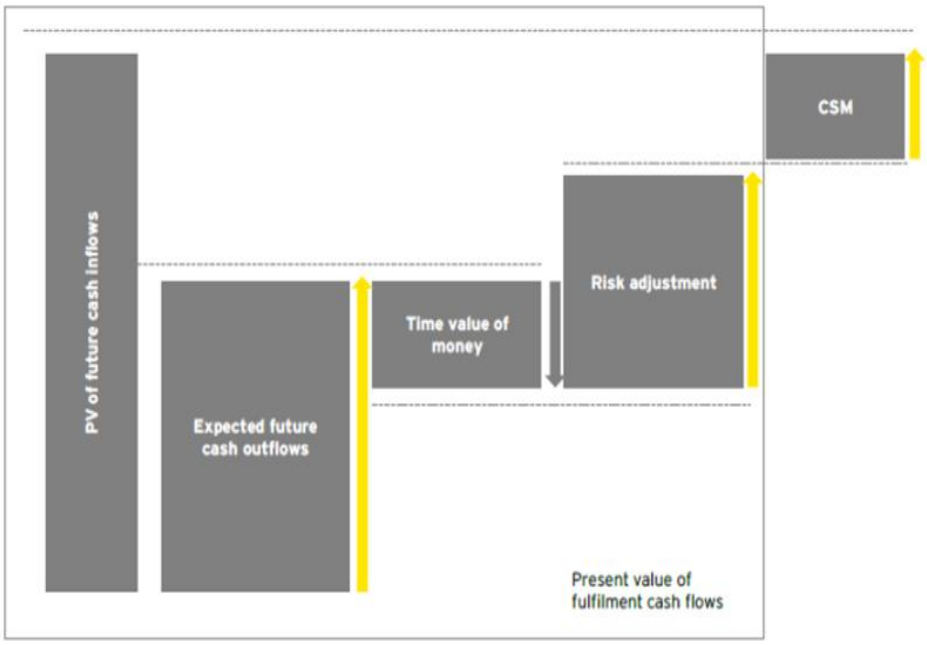
When it comes to the component of CSM at initial recognition, according to the current practice when insurance companies write a new contract, there are two probable scenarios. In first scenario, if the contract is profitable companies on their balance sheet shows a negative liability (like an asset), whereas in the second scenario, companies recognize a positive liability if their contract is non-profit (Yousuf at al, 2021). The issue with those practices, which IFRS 17 or CSM are attempting to address, is that from an economic standpoint, insurers capitalize the whole profits or losses predicted to be earned under those contracts during their term at the date of sale. In contrast, IFRS 17 has two unique principles. The first principle is referenced to paragraph 38 of the standard, and profitable contracts can't immediately recognize expected profit. Instead, profits are spread over time. While the second principle is elaborated in paragraph 47 of the standard, stands that onerous or non-profit contracts can't delay recognizing losses. They must be recognized immediately (IFRS Foundation, 2023b).

It follows from those principles that CSM is computes as negative value or opposite, of the total result obtained by considering various factors. These factors include the fulfillment cash flows, adjustments related to the recognition or derecognition of assets or liabilities associated with insurance acquisition cash flows, and any cash flows arising from contracts within the group at a specific date. Hence, the CSM can be epressed as in equation (1).

"*CSM = PV (best-estimated future cash inflows) - PV (best-estimated future cash outflows). - Risk Adjustment - any delayed acquisition costs attributed to the group + cash inflows at recognition date - cash outflows at recognition date*" (Actuaries, 2019) (1)

This calculation at the initial recognition holds significant importance as it serves as the primary factor for identifying whether a contract is onerous or not. Specifically, if the CSM amount turns out to be negative, indicating a net outflow, the contract transitions from being profitable to becoming onerous. In such a case, the negative CSM is recognized as a Loss Component and is directly accounted for in the P&L.

Figure 9: Presentation of CSM

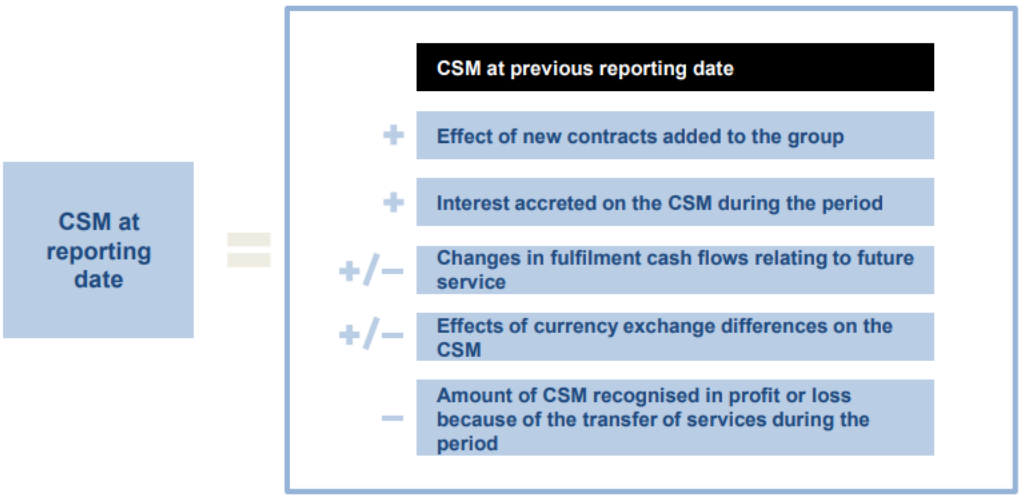


Source: Grant Thornton (2017).

Further on, the carrying amount of a group of insurance contracts must be regularly reassessed. After the initial recognition, the insurance companies need to measure the CSM in each reporting period to assess if expectations align with reality. This involves updating cash flow assumptions and adjusting the CSM to account for changes in that period. IFRS 17 recognizes the need to reflect emerging experiences and future assumption changes as "changes that relate to future service" (Domingues, 2019). Essentially, the CSM should be adjusted for all changes related to future services, such as favorable mortality updates increasing the CSM or unfavorable lapse experiences decreasing it.

Figure 10. depicts a computation for a CSM amount at the cutoff date, which is performed until the contract's coverage period expires. It is also important to note that insurance firms are not permitted to formulate negative CSM in the case of non-profit contracts and must instead report such excess losses promptly.

Figure 10: Subsequent measurment of CSM



Source: IAA (2020).

3.3.2.1.5 Onerous contracts

As discussed above onerous contracts are those which at date of initial recognition have a negative amount of CSM indicating negative outflow. In adherence to the requirements of IFRS 17, when managing a portfolio of insurance contracts, a pivotal requirement involves the distinct identification and separate accounting treatment of onerous contracts within that portfolio. The primary objective underlying this practice is to prevent profitable contracts from masking or concealing the existence of unprofitable contracts within the same portfolio and avoid any potential distortion in the portrayal of the portfolio's overall performance. IFRS 17 mandates that when a group of insurance contracts is identified as onerous, the entity must recognize a loss component. This loss is subsequently recorded in the profit or loss statement.

Following initial identification, a group of insurance contracts is considered onerous or more onerous if the following amounts surpass the value represented by the CSM. These excess amounts can result from:

- Unfavorable changes in the fulfillment cash flows due to changes in either future cash flow estimations or the risk adjustment for non-financial risk.
- The decline in the amount of the entity's share of the fair value of the underlying items for a set of insurance contracts with direct participation characteristics.

In such instances, the entity is obligated to record a loss in the profit and loss statement to the extent of the surplus.
In compliance with IFRS 17, insurance company is tasked with monitoring and managing the remaining loss component (LC) when a group of insurance contracts is considered onerous, leading to the absence of a CSM. Subsequent changes in the Future Cash Flows (FCF) of the liability for remaining coverage are attributed to estimates of future cash flows for claims and expenses, changes in the risk adjustment for non-financial risk, and insurance finance income or expenses. The systematic allocation process ensures that the total amounts allocated to the loss component reach zero by the conclusion of the coverage period for a group of contracts, indicating that the loss component has been realized through incurred claims (Chang, et all., 2019).

Monitoring the loss component within the obligation for remaining coverage for onerous contract groups, according to Pole and Nagari (2017), constitutes a new and complex task, particularly for many life insurance companies. Non-life insurers, who are used to handling provisions for unearned premiums and unexpired risks, may find this process easier, especially for short-term contracts.

3.3.2.2 Variable Fee Approach (VFA)

The variable fee approach (VFA) presents an alternate method for assessing specific contracts that fulfill specific criteria, particularly those involving participation policy. This alternative valuation model, detailed in Paragraph 45 and sections B101 to B118 of the standard, serves as an option for eligible products featuring direct participation attributes. A participation contract in the insurance industry is a policy or arrangement that allows policyholders to participate in the financial outcomes of the insurance business. This usually entails the payment of surplus funds or earnings, such as dividends, to policyholders based on the company's performance and the contract terms. The qualifying criteria for applying the Variable Fee Approach (VFA) for valuing participating contracts encompass the following aspects:

- “The contractual terms specify that the policyholder participates in a share of a clearly identified pool of underlying items.
- The entity expects to pay a substantial share of the returns from the underlying items to the policyholder. A substantial proportion of the cash flows that the entity expects to pay to the policyholder are expected to vary with the cash flows from the underlying items.” (IFRS Foundation, 2023b, p. A913)

According to the Oracle paper from July 2023, the insurance contract must meet all three conditions in order to be eligible for the variable fee approach and thus be referred to as "direct participating contracts". A variable fee is the requirement under an insurance contract

for an insurance company to pay the policyholder an amount equal to the value of the underlying items plus the consideration paid for the insurance policy.

IFRS 17 introduces the risk mitigation option to address potential accounting mismatches that can arise when an entity employs derivatives to manage risk. When a derivative's variation is recognized in profit or loss, while the corresponding impact on the entity's fair value share or the financial risk effect of fulfillment cash flows is reflected in the Contractual Service Margin (CSM), a disparity occurs. This option permits recognition in profit or loss if a documented risk mitigation strategy exists and a link between the derivative and insurance contracts is established. Under this approach, the CSM is systematically recognized in profit or loss based on time progression, though discrepancies may still emerge, such as when derivatives are used for economic risk reduction. Notably, while changes in fee estimates are acknowledged in the CSM, fair value movements in hedging derivatives are attributed to profit or loss. This risk mitigation option essentially aligns with the Building Block Approach (BBA) but incorporates the current rate for CSM interest accretion as opposed to a locked-in rate, resulting in comprehensive income adjustments (EY, 2015). It's worth noting that adherence to a documented risk mitigation strategy can permit the recognition of financial risk changes in the profit and loss statement, as outlined in Chapter B115 of IFRS 17. Consequently, the VFA stands as a tailored version of the BBA, accommodating investment-related considerations.

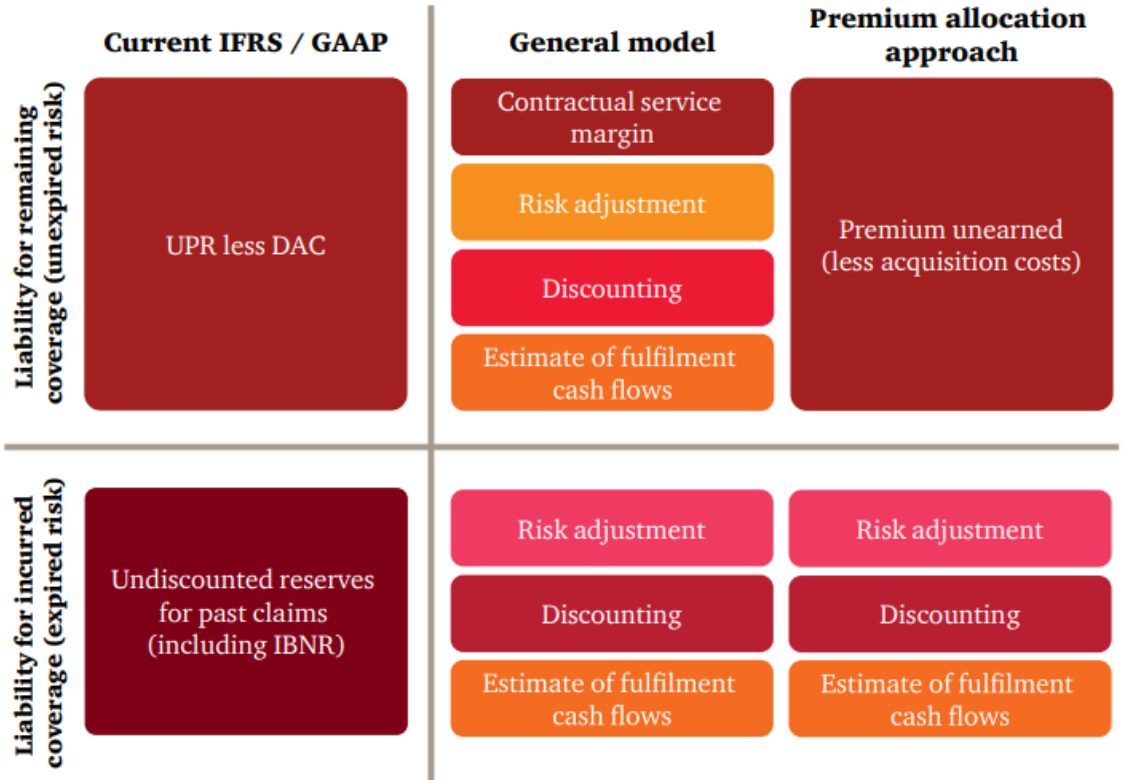
3.3.2.3 Premium Allocation Approach (PAA)

The Premium Allocation Approach (PAA), which debuts as part of the new IFRS 17 standard, emerges as a simpler yet impactful approach suited for specific classes of insurance contracts. To qualify for the PAA, each contract within the group must either have a duration of no more than one year or exhibit measurement consistency with the BBA, ensuring no material differences. While this approach simplifies the measurement of the liability for remaining coverage, it maintains the principles of the BBA, except for cases where cash flows from incurred claims are to be received within a year, allowing for non-discounting. This aspect is covered in paragraphs 53 to 59 of the standard (IFRS Foundation, 2023b).
One notable advantage of the PAA is its exemption from calculating the CSM and risk adjustment as part of their liability remaining coverage (LRC), as it can be seen in below figure 5. Furthermore, because the coverage duration is less than a year, the time value of money does not need to be considered. It also provides relief and alternatives, particularly concerning non-insurance components and discounting.

Following that, PAA presents fundamental shift in the measurement of the liability for remaining coverage. The starting point is the premium received at initial recognition, from which acquisition cash flows are subtracted. Adjustments are made to account for any assets or liabilities recognized as deferred acquisition cash flows.

Particularly, when the coverage period of each contract in the group is less than one year, acquisition cash flows might be expensed immediately. Similarly, if the period between premiums and related services is less than one year, discounting of the liability for remaining coverage is not required (KPMG, 2020).

Figure 11: Comparison of measurement models



Source: PwC (2017).

According to Grant Thronton's (2021) article, the question of whether the PAA is indeed the most basic method arises. This is especially true when longer-term contracts are being evaluated and PAA eligibility must be demonstrated. As previously stated, one of the conditions for implementing the PAA approach is that contracts lasting more than one year must demonstrate measurement consistency with the BBA, assuring no major variances. As a result, many insurance firms will be required to perform BBA in order to demonstrate eligibility, which makes this model not as simple as it seems.

The approaches under the BBA and PAA in IFRS 17 differ significantly in how they handle onerous contracts and the recognition of losses. In the BBA, when a contract is identified as onerous upon initial recognition, a LC is established, equal to the negative amount of the net outflow represented by the fulfillment cash flows.

This LC enables entities to track onerous contracts and any subsequent increases or reversals in total loss amounts during subsequent measurements. Additionally, if unfavorable changes in fulfillment cash flows render a contract loss-making in subsequent measurements, the CSM is reduced to zero, and a new LC is established for the excess amount.

In contrast, the PAA approach allows for immediate recognition of onerous contracts at any point during the coverage period. This recognition involves calculating the difference between the carrying amount of the LRC, which is based on premiums received, and the fulfillment cash flows, which must be calculated following the BBA requirements, including Risk Adjustment. However, unlike the BBA, there is no requirement to discount the fulfillment cash flows in the PAA if the initially calculated LRC did not consider the time value of money (Cruz, 2019).

3.3.3. Presentation of financial position and performance in IFRS 17

3.3.3.1 Statement of financial position

The degree of aggregation is significant not just for determining measurements but also for how information is displayed. Insurance companies must have the capability to distinguish between assets and liabilities for each set of contracts. This distinction ensures the correct presentation by consolidating all contract groups within each portfolio.

IFRS 17 mandates the separate presentation of assets and liabilities related to issued insurance and reinsurance contracts in the balance sheet (IFRS Foundation, 2023b), with the goal of enhancing transparency and improving the quality of financial information. Unlike the diverse practices allowed under IFRS 4, new standard standardizes the display of rights and obligations arising from groups of contracts as net values, akin to a single insurance contract, considering the breakdown of contract components such as implicit derivatives and investment elements (Conyinno, 2016). This approach, which prevents the set-off between asset and liability groups, aligns with the requirements of IAS 1, ultimately bolstering the quality of financial reporting. Furthermore, the statement of financial position should include line items as investment property, financial assets and liabilities, assets and liabilities for current and deferred tax, and also including line items supporting policyholder liabilities.

Conversely, it is not mandated to display separate balances on the statement of financial position for valuation methods. Likewise, there is no obligation to present the individual components of these balances, like the contractual service margin or the risk adjustment for non-financial risk, as distinct entries on the face of the statement of financial position.
The primary challenge in presenting the balance sheet under IFRS 17 lies in the accurate data representation. Insurers, depending on their chosen transition approach, may need to retrieve and utilize historical data from many years back to create an opening balance sheet that complies with IFRS 17 (Deloitte, 2023b).

This process creates a considerable gap between the old and new accounting standards at the from January 1, 2022. Consequently, the implementation of IFRS 17 will notably impact the future reported totals of assets, liabilities, and equity. Given the variability of IFRS 4 applications across different countries and insurance types, the net impact on balance sheets will vary accordingly and will be analyzed in empirical part of this work.

3.3.3.2 Profit & Loss statement

A presentation on the Statement of Financial Performance under IFRS 17 can shed light on the fundamental changes this international accounting standard brings to the insurance industry's financial reporting (Palmborg, et all., 2020). A reporting under new standard requires a modified P&L that separates profit into insurance profit and investment profit. This differs from the current IFRS 4 P&L statement, which does not include such a split. A crucial part of the presentation explores the elements of the P&L statement under IFRS 17. This includes:

- Insurance Service income explains how income from insurance contracts is recognized over time as services are rendered, better reflecting the long-term nature of the insurance company.
- Acquisition Costs, which analyzes the capitalization of acquisition costs across the coverage period in order to align expenses with revenue recognition.
- Insurance Finance Income or Expenses clarifies the inclusion of interest and financing costs associated to insurance contract commitments, ensuring a more complete representation of the cost of carrying those responsibilities.

In compliance with IAS 1, the presentation of income or expenses arising from reinsurance contracts held must be distinct from the income or expenses related to insurance contracts issued (IFRS Foundation, 2023c). While such income or expenses may be presented as a consolidated net amount or separately, the presentation serves to enhance transparency and facilitate clear financial reporting, ensuring a comprehensive understanding of an entity's financial performance within the realm of insurance and reinsurance activities.

Table 1: Changes in P&L statements

P&L Statement	
IFRS 17	**IFRS 4**
Insurance revenue	Gross premiums written
Insurance service expenses	Ceded premiums written
Reinsurance result	Change in unearned premiums (net)
Insurance service result	**Premiums earned (net)**

Table continues

Table 1: Changes in P&L statements (cont.)

Interest result	Interest and similar income
Realized gains/losses (net)	Income from financial assets and liabilities carried at fair value through income
Valuation result	Realized gains/losses (net)
Investment expenses	Fee and commission income
Net investment income	Other income
Finance income (expenses) from insurance contracts (n	**Total income**
Finance income from reinsurance contracts (net)	Claims and insurance benefits incurred (gross)
Net insurance finance expenses	Claims and insurance benefits incurred (ceded)
Investment result	**Claims and insurance benefits incurred (net)**
Fee and commission income	Change in reserves for insurance and investment contracts (net)
Fee and commission expenses	Interest expenses
Net result from investment contracts2	Loan loss provisions
Acquisition and administrative expenses	Impairments of investments (net)
Other income	Investment expenses
Other expenses	Acquisition and administrative expenses (net)
Amortization of intangible assets	Fee and commission expenses
Restructuring and integration expenses	Amortization of intangible assets
Income before income taxes	Restructuring and integration expenses
Income taxes	Other expenses
Net income	**Total expenses**
	Income before income taxes
	Income taxes
	Net income

Source: Annual report of Allianz Group (2023)

From Table 1, we can observe that the P&L statement under IFRS 17 includes new items. The first item, insurance revenue, is recognized over time and consists of cash flows released from best estimate liabilities, adjusted for risk adjustments, historic losses, and the release of the Contractual Service Margin. Additionally, the insurance service expense includes benefits and expenses paid related to insurance business (excluding investment components and premium refunds), amortization of acquisition expenses, and any losses recognized at inception for new business or changes in previously recognized losses. IFRS 17 also introduces new metrics for assessing financial performance: the insurance service result and net insurance finance expenses or income related to the insurance contract are presented separately.

Statement of Comprehensive Income (SoCi)

The transition from IFRS 4 to IFRS 17 not only affects the Statement of Financial Performance but also brings substantial modifications to the Statement of Other Comprehensive Income (OCI), altering how insurance businesses display their financial health. Under IFRS 4, insurance finance income or expenses were often included within the profit or loss statement without a clear separation based on discount rate changes. In contrast, IFRS 17 mandates that insurance companies have the option to present the effect of changes in discount rates on insurance liabilities in OCI rather than in P&L, thus helping to reduce the volatility caused by market interest rate fluctuations (IFRS Foundation, 2023c). Additionally, IFRS 17 introduces a more detailed breakdown of the components of comprehensive income, reflecting the company's financial performance related to its insurance activities with greater granularity. This includes fair value changes in reinsurance contracts being explicitly presented as part of OCI, providing a transparent view of their economic impacts. These changes, which would have directly influenced profit or loss under IFRS 4, are now distinctly shown in OCI under IFRS 17, enhancing the clarity and accuracy of financial reporting.

These presentation changes provide a more transparent and detailed view of the economic activities and financial position of insurance companies. Improved understanding of how market rate fluctuations affect insurance liabilities and reinsurance contracts will be advantageous to all parties involved, including analysts and investors. KPIs derived from comprehensive income, including Total Comprehensive Income (TCI), will now more accurately reflect the underlying economic activity and market conditions thanks to the increased granularity in OCI presentation under IFRS 17. Under IFRS 17, terms like "Operating Profit," "Insurance Revenue," and "Combined Ratio" will incorporate adjustments that were previously combined, giving a more coherent indication of the business's operational effectiveness and financial stability (Deloitte, 2017).

3.3.4. Disclosures

IFRS 17 mandates both qualitative and quantitative disclosure obligations. The primary goal is for a company to reveal information that, in conjunction with the data in the main financial statements, offers the necessary insights for the company stakeholders to evaluate how insurance contracts impact the company's financial standing, operational results, and cash flow. The introduction of disclosures under the new standard, IFRS 17, does not significantly affect comparability. Nevertheless, it is essential for both companies and financial statement users to review these disclosures to gain insights into and facilitate comparisons of the applied valuation methods. These disclosures can reveal instances where similar contracts have been valued in the same manner, enabling meaningful comparisons. In general, the disclosure requirements under IFRS 17 are quite similar to those of IFRS 4, and this is because stakeholders have suggested that such disclosures help users of financial statements comprehend the amount, timing, and unpredictability of future cash flows from insurance contracts. But there are still improvements and additional paragraphs about disclosures in the standard which insurance companies have not applied under the previous IFRS 4 standard. According to IFRS 17 insurance companies must include the following information in their disclosures:

- An explanation of the lines in the financial statements.
- Insights into the judgments made while applying the standard and any future changes to those judgments.
- A thorough awareness of the types and extent of risks associated with contracts covered by the standard (IFRS Foundation, 2023c).

Furthermore, insurance companies must provide essential information to help users comprehend the disaggregation of insurance contracts as well as the disaggregation of financial income and expenses between other comprehensive income (OCI) and profit and loss (P&L). For insurance contracts, for example, it may be relevant to disclose information such as contract type by product line, geographical area, and reportable segment, as described in IFRS 8. Finally, disclosures are needed under IFRS 17 also in regard to the risk and uncertainty associated with cash flows deriving from insurance contracts. The insurance companies must explain the risk, how it affects cash flows, how it is evaluated and managed, and, in particular, if risk management changes. The risk concentration must also be disclosed. Minimum disclosures should be made regarding:

- Disclosure of insurance risk and market (financial assets) risk, including a sensitivity analysis and the development of claims
- Disclosure of credit risk, including the presentation of maximum risks and information regarding credit risk for reinsurance held.
- Disclosure of liquidity risk in relation to cash outflows payable within the next five years (EY, 2018).

If the designated disclosures do not fully achieve the intended objective, entities should provide supplementary information as needed to fulfill the objective. Insurers should evaluate the extent of detail required to meet the broader disclosure objective and decide on the relative importance of each disclosure requirement (KPMG, 2020a).

4 EMPIRICAL ANALYSIS OF THE IMPACT OF IMPLEMENTATION OF IFRS 17

4.1 Research questions and hypotheses

Different insurance companies, even those in the same segment, will experience different effects on assets, liabilities, and equity as a result of IFRS 17. This is mostly because of specifics of each insurance company's contracts, assumptions, and initial accounting practices.

However, inclusion of a risk adjustment and the CSM will often increase the reported insurance assets compared to previous standards, as these components represent additional conservatism and deferred profit. Also, compared to earlier standards, the inclusion of a risk adjustment and the CSM may frequently result in an increase in the reported insurance liabilities because these elements reflect more conservatism and deferred profit. Furthermore, the present value of liabilities may increase as a result of the application of current market discount rates if those rates are lower than those that were previously used. The transition to IFRS 17 can result in a increase in equity due to adjustments in the measurement of insurance liabilities and assets. This is especially true if liabilities decrease more than assets upon initial application.

Insurance revenue, or written premiums, as disclosed by the previous IFRS 4, is used as a KPI by insurance companies. Depends on existing insurance accounting practices applied by a company, many companies will report insurance revenue for the first time when applying IFRS 17. Insurance revenue is projected to be much lower for insurance companies who previously included any deposit component on long-term insurance contracts. All of these early adjustments, as well as a more conservative approach to revenue recognition, may result in a decrease in net operating results during the first implementation of IFRS 17. Also, a decrease could be caused by the prompt recognition of losses on onerous contracts.
Based on the aforementioned and a review of previous research, I developed the following research questions 1 and 2, which pertain to changes in the balance sheet and the income statement:

Question 1: **The transition to IFRS 17 will lead to a decrease in the book value of assets and liabilities, resulting in an increase in the company's equity.**

Table 2: Defining alternative hypothesis for question 1

Change in BS items	**Change calculation**	**Alternative hypothesis**
% change in total assets	(total $assets_{IFRS\ 17}$/total $assets_{IFRS\ 4}$) - 1	$H1_a$: $\Delta < 0\%$
% change in total liabilities	(total $liabilities_{IFRS17}$/total liabilities $_{IFRS4}$) - 1	$H1_b$: $\Delta < 0\%$
% change in total equity	(total $equity_{IFRS\ 17}$/total $equity_{IFRS4}$) - 1	$H1_c$: $\Delta > 0\%$

Source:Own work

Question 2: The transition to IFRS 17 will result in a decrease in reported insurance revenue and net profit

Table 3: Defining alternative hypothesis for question 2

Change in P&L items	**Change calculation**	**Alternative hyposthesis**
% change in insurance revenue	(insurance revenueIFRS 17/insurance revenueIFRS4) - 1	H1a: $\Delta < 0\%$
% change in net result	(net resultIFRS 17/net resultIFRS4) - 1	H1b: $\Delta < 0\%$

Source: Own work

As I explained in more detail in the second chapter, many changes to the balance sheet and income statement will have an impact on KPIs. From the perspective of insurance firms, the most relevant indicators of previously issued annual reports are ROE, insurance revenue, and combined ratio. I'll evaluate the effect on insurance income in question 2, and the ROE and combined ratio hypothesis in question 3. Based on previous practices, ROE will either stay the same or improve. Historically, some insurance companies excluded Other Comprehensive Income (OCI) from their ROE calculations, while majority of companies included it. With the recent changes that move portions of amounts previously recorded in OCI into the CSM, those insurers who included OCI in their ROE calculations will see a mechanical increase in their ROE (EY, 2023; PwC, 2024). On the other hand, the combined ratio will decrease due to the discounting of the liabilities for incurred claims.

Question 3: IFRS 17 implementation will increase return on equity (ROE) and reduce the combined ratio.

Table 4: Defining alternative hypothesis for question 3

Change in KPIs	Change calculation	Alternative hyposthesis
% change in ROE	$(ROE_{IFRS\ 17}/ROE_{IFRS4}) - 1$	$H1_a$: $\Delta > 0\%$
% change in combined ratio	(combined $ratio_{IFRS17}$/combined $ratio_{IFRS4}$) - 1	$H1_b$: $\Delta < 0\%$

Source: Own work

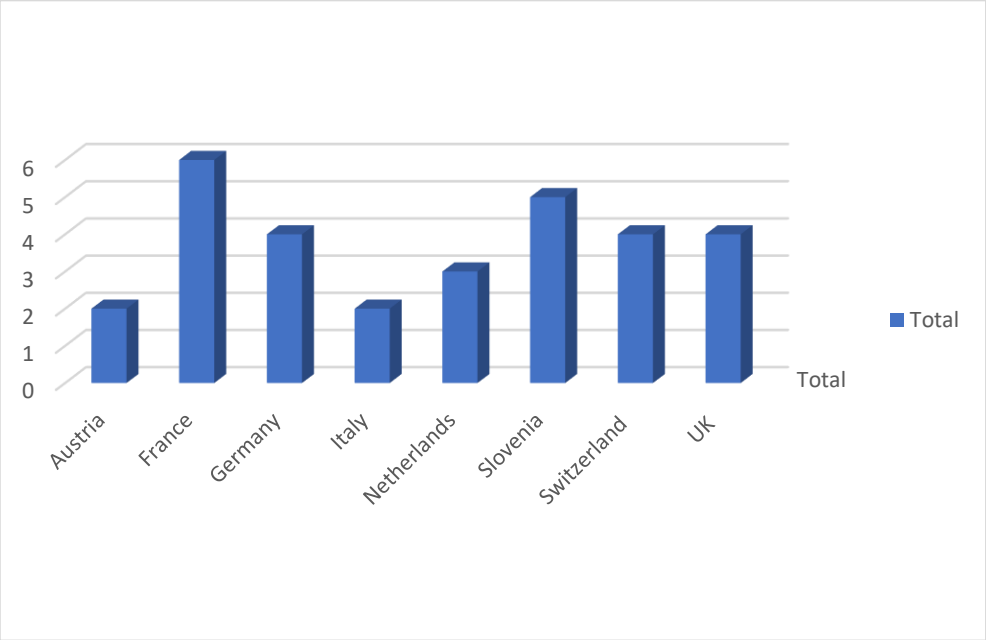
I will investigate the formulated research questions and statistical hypotheses using a sample of companies. Subsequently, I will provide a detailed explanation of the sample selection and its characteristics and practically demonstrate effects of IFRS 17 implementation on analyzed variables on one example. The research section will conclude with a presentation of the key results and findings. Based on these findings, I will determine whether the initial alternative hypothesis is confirmed or rejected.

4.2. Sample description

As part of the sampling, I carried out the process of selecting sample units for empirical analysis.

Based on the units selected in the sample, I will estimate the value of the key parameters and draw conclusions for the entire population. Considering that IFRS 17 will be implemented by insurance companies, a sample was selected from this population. The selection of units is based on the size of company and specific geographic area. I aimed to cover a broad geographical scope, focusing mainly on insurance companies and groups from Slovenia and Europe. However, it is important to emphasize that the majority of companies included in the sample represent large insurance groups. Consequently, the analysis will be based on consolidated data, which means that a much larger area beyond the EU will be covered.

Figure 12: Structure of the studied sample by country



Source: Own work

Since the aim of the master's thesis is to examine the impact of the new standard IFRS 17, on financial statements and KPIs of insurance companies, I collected companies in the sample according to the following criteria:

- The company has a publicly published audited annual report for the business years on 31.12.2023 and 31.12.2022.
- The company prepares (consolidated), financial statements in accordance with IFRS.
- The company discloses restated data for 31.12.2022 in accordance with IFRS 17 within the annual report 31.12.2023.
- The company has a disclosed ROE and combined ratio restated for 31.12.2022 in accordance with IFRS 17.

Table 5. summarizes the descriptive statistics of the entire studied sample. The selected unit in the sample has on average EUR 207,21 billion in assets, EUR 194,28 billion in liabilities and 12,92 billion in equity. The median of total assets is EUR 127,43 billion, liabilities EUR 117,58 billion and equity EUR 9,09 billion. In addition selected companies generate on average EUR 19,36 billion, and have average EBITDA of EUR 1,44 billion.

Table 5: Descriptive statistics of sample

In mn EUR	No. of units	Arthimetic mean	Median	Standard deviation	Minimum	Maximum
Total assets	30	207.219	127.438	226.672	41,24	935.897
Totala liabilities	30	194.282	117.586	215.024	25,01	877.163
Equity	30	12.928	9.096	13.862	16,23	58.735
Insurance revenue	30	19.360	11.011	23.090	7,88	91.251
EBITDA	30	1.449	616,85	2.683	-2.239,00	9.644

Source: Own work

Table 6: Analysis of indicators in sample

KPI	No. of units	Arthimetic mean	Median	Standard deviation	Minimum	Maximum
ROE	30	5%	8%	11%	-32%	22%
Combined ratio	30	98%	95%	17%	84%	184%
Operating result in mn EUR	30	1.449	617	2.683	-2.239	9.644
Net operating result in mn EUR	30	1.048	472	2.019	-1.384	6.856

Source: Own work

In terms of generated insurance revenues, the largest is Germany company Allianz group, which generates EUR 91,25 billion, and the smallest is the Slovenian company Modra Zavarovalnica with just EUR 8 million. According to the book value of assets and liabilities, the largest insurance companies are Allianz, Axa and Legal & General Group Plc.

The analysis of indicators of the insurance companies in the sample showed that average return of equity is 5 % with median return of 8 %. On average companies achieve a combined ratio of 98 %. Additionally, they achieved operating result of EUR 1.44 billion by the end of 2022, and net operating result of EUR 1,04 billion.

4.3 Presentation of the methodology

The methodology employed is a quantitative analysis, focusing on the numerical data presented in the financial statements. The audited annual reports for year end 31.12.2022 and 31.12.2023 of the sampled companies served as the primary source of information. In my analysis, I utilized only the published data within the reports as variables. This approach meant that I relied solely on the reported figures without making any estimates or adjustments. This method ensured that the analysis was based on actual reported data, reflecting the real impact of IFRS 17 on financial statements.
The variables analyzed included key financial metrics such as ROE, combined ratio, net operating result, and other relevant KPIs and items of financial statements. By comparing these variables for the same reporting period ending December 31, 2022 with one set of data calculated according to IFRS 17 and the other according to IFRS 4, I was able to identify changes and trends attributable to the new accounting standard.

The theoretical aspects of the changes regarding the IFRS 17 is presented within the second chapter, where I described main features and expected effects of the implementation of the IFRS 17. Additionally, in this chapter, I will follow the theoretical aspect and present actual effects of the implementation on the practical example of the Slovenian company Sava Re.

4.3.1 Results of IFRS 17 transition

In Figure 13, I present the impact of transitioning to IFRS 17 on the balance sheet of Sava Re. Insurance companies were required to apply IFRS 17 retrospectively and present one year of comparative information. Therefore, I used the restated amounts calculated according to IFRS 17 for the year ending December 31, 2022, from the audited annual report of Sava Re for 2023 and compared them with the amounts disclosed for the same period in the annual report for 2022 according to IFRS 4.

As previously discussed in Chapter 2, the significant changes introduced by IFRS 17 on insurance company balance sheets include replacing technical provisions with assets and liabilities from insurance and reinsurance contracts. These provisions are now calculated using best estimate assumptions rather than conservative estimates. Additionally, all liabilities are discounted using a risk-free interest rate and expected future profits for portfolios valued under the BBA and VFA methods are recognized in the CSM. Transition to IFRS 17 affected investments through the reclassification of deposits from cedents and part of assets from financial contracts, and changes in the valuation model for equity investments. Consequently, from the Figure 13, we can see that most impacted items exactly insurance receivables and liabilities as well as accumulated other comprehensive income, retained earnings and deferred tax liabilities.

The total assets decrease by 8%, and total liabilities also decrease by 17 % after the implementation of IFRS 17. Effects of changes in insurance valuation contracts and financial assets and the other effects of transition are recognized in equity, which increase by 22 % according to the IFRS 17 calculation.

Figure 13: Effect of the transition to BS for the company Sava re

	IFRS 17		IFRS 4	%
Balance sheet	**31.12.2022**	**Transition effect**	**31.12.2022**	**Change**
Intangible assets and goodwill	65.895.292	- 5.119.233	71.014.525	
Property, plant and equipment	62.435.626	- 21	62.435.647	
Investment property	22.795.759	-	22.795.759	
Right-of-use assets	7.425.676	132	7.425.544	
Investments in assosiates and join ventu	21.856.109	-	21.856.109	
Deferred tax assets	17.065	- 27.926.622	27.943.687	
Financial investments	1.776.132.075	479.119.304	1.297.012.771	
Insurance/reinsurance assets	257.341.929	- 667.775.996	925.117.925	
Non-current assets held for sale	991.803	-	991.803	
Cash and cash equivalents	93.223.631	- 10.834	93.234.465	
Other assets	4.025.283	- 149.057	4.174.340	
Total assets	**2.312.140.248**	**- 221.862.327**	**2.534.002.575**	-10%
Subordinated liabilities	74.924.356	-	74.924.356	
Deferred tax liabilities	2.811.300	- 836.860	3.648.160	
insurance/reinsurance liabilities	1.653.119.127	- 325.122.929	1.978.242.056	
Provisions	7.973.454	- 121.037	8.094.491	
Lease liability	7.657.186	221.182	7.436.004	
Other financial liabilities	548.576	- 19.295	567.871	
Other liabilities	33.642.572	- 15.495.778	49.138.350	
Total liabilities	**1.780.676.571**	**- 341.374.635**	**2.122.051.206**	-19%
Share capital	71.856.376	-	71.856.376	
Capital reserves	42.702.320	-	42.702.320	
Profit reserves	256.945.591	-	256.945.591	
Treasury shares	- 24.938.709	-	- 24.938.709	
Accumulated other comprehensive incom	- 45.138.332	69.316.766	- 114.455.098	
Retained earnings	214.047.218	71.457.588	142.589.630	
Net profit or loss for the period	18.712.745	- 21.322.209	40.034.954	
Foreign currency translation reserve	- 3.256.083	- 518	- 3.255.565	
Equity attributable to owners of the cont	530.931.126	119.451.627	411.479.499	
Non-controlling interests in equity	532.551	60.681	471.870	
Total equity	**531.463.677**	**119.512.308**	**411.951.369**	22%
Total liabilities and equity	**2.312.140.248**	**- 221.862.327**	**2.534.002.575**	-10%

Source: Own work.

The introduction of the new standard also brings important changes to Sava Re's income statement, and most important are decrease of insurance revenue by 8 %, and decrease in the net result by 45 % which is attributable to the higher liabilities being recognized earlier in contract term.

Additionally, the ROE decreased by 7 %, reflecting the lower net result, while the combined ratio increased by 2%, indicating a higher proportion of claims and expenses relative to premiums earned.

Figure 14: Effect of transition on financial performance for the company Sava Re

Financial performance	IFRS 17 31.12.2022	Transition effect	IFRS 4 31.12.2022	% Change
Insurance revenue	652.322.877	- 49.054.832	701.377.709	-8%
EBITDA	58.502.045	- 25.481.163	83.983.208	-44%
Net result	46.923.441	- 21.319.145	68.242.586	-45%
ROE	8,3%	-7%	14,9%	-80%
Combined ratio	92,6%	2%	90,7%	2%

Source: Own work

I repeated the same procedure as presented on the example of the Sava Re company on the remaining units of the sample. The results of the transition to IFRS 17 will be presented below.

4.4. Testing Statistical Hypotheses

I defined null and alternative hypotheses for the study questions posed. Following the recommendations of Košmelj and Rovan (2007), I selected relevant statistics for a sample of 30 units. Given the small sample size, I assume that the variables being studied are normally distributed in the population, justified by the Central Limit Theorem which supports the normality assumption for relatively small samples if the population distribution is not severely non-normal. For hypothesis testing, I chose the t-statistics (Student's t-distribution) as the appropriate statistic. This choice allows for the assessment of individual arithmetic means as well as comparisons between two arithmetic means, including paired tests (before and after the implementation of IFRS 17). Using SPSS (version X), I calculated the t-tests, and the results are presented in Tables 9–1. The detailed calculations are shown in Equation (2), which outlines the specific steps and formulas used in the t-test analysis.

$$t = \frac{d}{sd/\sqrt{n}} \tag{2}$$

where:

- d is the mean of the differences between the paired observations.
- sd is the standard deviation of the differences.
- $\sqrt{n}$ is the number of pairs.

The selection of statistics was followed by the determination of the significance level, denoted as α. I chose α=0.05 (5%) as the significance level. Based on the distribution of the test statistics and this significance level, I determined the boundaries of the critical region. Furthermore, I calculated the t-statistics using the sample data and proceeded to draw conclusions. Using the sample data, I computed the t-statistics for each hypothesis test followed by next decision rule:

- Reject the Null Hypothesis: If the calculated t-statistic falls into the critical region (i.e., if the t-statistic is greater than the critical value in absolute terms), I reject the null hypothesis and accept the alternative hypothesis at the α=0.05 significance level.
- Fail to Reject the Null Hypothesis: If the calculated t-statistic does not fall into the critical region, I do not reject the null hypothesis at the α=0.05 significance level.

5 RESULTS

In this chapter, I will present the key findings of the empirical analysis, which aims to address the research questions outlined in Chapter 3.1. By examining the effects of IFRS 17 implementation, I will analyze key financial segments, including assets, liabilities, equity, revenue, EBITDA, net results, and relevant financial ratios. These segments will be evaluated individually to illustrate the transition impacts. The data collected will then serve as the basis for statistical tests, which will provide further insights into the research questions posed.

5.1 Results of transition to IFRS 17 for the entire sample

This section of the thesis presents a comparative content analysis of the annual reports of selected European insurance companies. The analysis examines how these companies transitioned to IFRS 17, focusing on the methods chosen and how their financial position was presented. Specifically, the data for 31 December 2022 is compared using two different approaches: IFRS 4 figures from the 2022 annual reports and IFRS 17 figures from the 2023 annual reports, where 2022 is presented as the comparative year. This approach highlights the effects of IFRS 17 implementation on the balance sheet, revenues, and key performance indicators.

In Figure 15, the transition to IFRS 17 resulted in a decrease in total assets for most of the analyzed companies. Notably, Skupina Triglav experienced a 9% decline, which can be attributed to changes in the valuation methods for insurance liabilities, particularly in claims reserves. The company's transition to IFRS 17 has led to the use of more precise, risk-neutral estimates for reserves, significantly altering previously reported values. This downward adjustment aligns with trends observed across other insurers, such as Allianz Group and AXA, which showed decreases of 9% each, and Munich Re, which saw an 11% reduction.

These asset decreases emphasize the notable impact that IFRS 17 has had on re-evaluating insurance contract liabilities, applying new financial standards more rigorously.

Figure 15: Results of transition to IFRS 17 on assets

Change in Assets in millions CU				
Company name	IFRS 4	IFRS 17	Effect of transition on IFRS 17 in absolute amount	Effect of transition on IFRS 17 in percentage
Zavarovalna skupina Sava	2.534	2.569	35	1%
Skupina Triglav	4.129	3.802	- 326	-8%
Merkur Zavarovalnica d.d.	355	347	- 9	-2%
Modra zavarovalnica	670	653	- 17	-3%
Prva osebna zavarovalnica d.d.	42	41	- 1	-2%
AXA Group	696.697	638.357	- 58.340	-8%
Allianz Group	1.021.503	935.897	- 85.606	-8%
Assicurazioni Generali	519.051	503.236	- 15.815	-3%
Munich Re	298.570	269.391	- 29.179	-10%
Zurich Insurance Group	377.782	335.412	- 42.370	-11%
Hannover RE	86.952	62.959	- 23.993	-28%
Crédit Agricole Assurances	409.389	390.064	- 19.325	-5%
CNP Assurances	452.228	424.635	- 27.593	-6%
Aviva plc	315.316	309.583	- 5.733	-2%
MAPFRE S.A.	59.626	52.197	- 7.429	-12%
Achmea N.V.	80.240	76.735	- 3.505	-4%
Prudential PLC	165.942	160.249	- 5.693	-3%
R+V Versicherung AG	118.321	120.935	2.614	2%
SCOR SE	55.331	34.987	- 20.344	-37%
Aegon N.V.	400.936	380.487	- 20.449	-5%
Swiss Life	218.349	213.440	- 4.909	-2%
Groupama Assurances Mutuelles	94.721	86.316	- 8.405	-9%
Legal & General Group Plc	513.276	513.270	- 6	0%
NN Group NV	217.110	207.024	- 10.086	-5%
Swiss Life Hldg	218.349	213.440	- 4.909	-2%
Groupe des Assurances du Crédit Mutuel	135.154	133.941	- 1.213	-1%
British United Provident Association Ltd	16.820	15.249	- 1.571	-9%
Viena Insurance Group AG	49.274	47.218	- 2.056	-4%
UNIQUA Group AG	28.196	26.641	- 1.555	-6%
Helvetia Group AG	61.445	57.500	- 3.945	-6%

Source: Own work

This trend underscores that while IFRS 17 aims to provide more accurate assessments, the effects have often led to lower asset values, especially where companies had previously adopted more conservative approaches under IFRS 4. Nevertheless, despite the general pattern of reductions, a few exceptions exist, such as R+V Versicherung AG, which reported a slight 2% decrease in assets under the new standard. However, such cases remain in the minority, highlighting the overall downward pressure on asset values following the IFRS 17 transition.

Figure 16: Results of transition to IFRS 17 on liabilities

Change in Liabilities in millions CU				
Company name	IFRS 4	IFRS 17	Effect of transition on IFRS 17 in absolute amount	Effect of transition on IFRS 17 in percentage
Zavarovalna skupina Sava	2.122	1.781	- 341,37	-16%
Skupina Triglav	3.376	2.905	- 470,64	-14%
Merkur Zavarovalnica d.d.	344	286	- 57,89	-17%
Modra zavarovalnica	340	310	- 29,95	-9%
Prva osebna zavarovalnica d.d.	31	25	- 5,55	-18%
AXA Group	648.319	589.267	- 59.052,00	-9%
Allianz Group	966.261	877.163	- 89.098,00	-9%
Assicurazioni Generali	500.914	474.263	- 26.651,00	-5%
Munich Re	277.368	242.146	- 35.222,00	-13%
Zurich Insurance Group	349.868	308.482	- 41.386,00	-12%
Hannover RE	78.205	53.002	- 25.202,30	-32%
Crédit Agricole Assurances	401.169	380.154	- 21.015,00	-5%
CNP Assurances	431.466	401.907	- 29.558,80	-7%
Aviva plc	302.421	299.369	- 3.052,00	-1%
MAPFRE S.A.	51.266	43.328	- 7.938,00	-15%
Achmea N.V.	70.962	68.138	- 2.824,00	-4%
Prudential PLC	148.815	143.351	- 5.464,00	-4%
R+V Versicherung AG	113.886	111.952	- 1.934,00	-2%
SCOR SE	50.198	30.636	- 19.562,00	-39%
Aegon N.V.	387.376	369.553	- 17.823,00	-5%
Swiss Life	208.065	204.231	- 3.834,00	-2%
Groupama Assurances Mutuelles	87.219	77.533	- 9.686,00	-11%
Legal & General Group Plc	501.137	507.737	6.600,00	1%
NN Group NV	216.667	185.923	- 30.744,00	-14%
Swiss Life Hldg	208.065	204.231	- 3.834,00	-2%
Groupe des Assurances du Crédit Mutuel	126.148	123.219	- 2.929,00	-2%
British United Provident Association Ltd	9.604	8.084	- 1.520,00	-16%
Viena Insurance Group AG	44.840	41.504	- 3.336,04	-7%
UNIQUA Group AG	26.144	24.740	- 1.403,67	-5%
Helvetia Group AG	56.753	53.247	- 3.505,50	-6%

Source: Own work

From Figure 16, we can see that the transition to IFRS 17 led to a decrease in liabilities for all analyzed companies. This is because IFRS 17's requirements for discounting future cash flows and revising risk margins generally reduce insurance liabilities compared to IFRS 4, which used less precise valuation methods. SCOR SE saw the largest impact, with a 64% decrease in liabilities. This significant reduction likely stems from a major revaluation of long-term insurance reserves, better alignment with updated risk adjustment principles, and the application of discounted cash flows under IFRS 17, which results in lower liability recognition.

Figure 17: Results of transition to IFRS 17 on equity

Change in Equity in millions CU				
Company name	IFRS 4	IFRS 17	Effect of transition on IFRS 17 in absolute amount	Effect of transition on IFRS 17 in percentage
Zavarovalna skupina Sava	411,95	531,46	119,51	29%
Skupina Triglav	752,80	896,97	144,17	19%
Merkur Zavarovalnica d.d.	11,21	60,48	49,27	439%
Modra zavarovalnica	331,51	343,45	11,94	4%
Prva osebna zavarovalnica d.d.	11,51	16,23	4,72	41%
AXA Group	48.378,00	49.090,00	712,00	1%
Allianz Group	55.242,00	58.735,00	3.493,00	6%
Assicurazioni Generali	18.137,00	28.973,00	10.836,00	60%
Munich Re	21.202,00	27.245,00	6.043,00	29%
Zurich Insurance Group	27.914,00	26.930,00	- 984,00	-4%
Hannover RE	8.747,70	9.956,90	1.209,20	14%
Crédit Agricole Assurances	8.220,00	9.910,00	1.690,00	21%
CNP Assurances	20.762,30	22.727,90	1.965,60	9%
Aviva plc	12.895,00	10.214,00	- 2.681,00	-21%
MAPFRE S.A.	8.360,20	8.869,70	509,50	6%
Achmea N.V.	9.278,00	8.597,00	- 681,00	-7%
Prudential PLC	17.127,00	16.898,00	- 229,00	-1%
R+V Versicherung AG	4.435,00	8.983,00	4.548,00	103%
SCOR SE	5.133,00	4.351,00	- 782,00	-15%
Aegon N.V.	13.559,00	10.935,00	- 2.624,00	-19%
Swiss Life	10.285,00	9.209,00	- 1.076,00	-10%
Groupama Assurances Mutuelles	7.502,00	8.783,00	1.281,00	17%
Legal & General Group Plc	12.139,00	15.533,00	3.394,00	28%
NN Group NV	34.918,00	21.101,00	- 13.817,00	-40%
Swiss Life Hldg	10.285,00	9.209,00	- 1.076,00	-10%
Groupe des Assurances du Crédit Mutuel	9.006,00	10.722,00	1.716,00	19%
British United Provident Association Ltd	7.216,00	7.165,00	- 51,00	-1%
Viena Insurance Group AG	4.434,18	5.713,87	1.279,69	29%
UNIQUA Group AG	2.052,39	1.901,01	- 151,37	-7%
Helvetia Group AG	4.692,50	4.253,30	- 439,20	-9%

Source: Own work

From Figure 17, it is seen that the impact of IFRS 17 on equity also varies significantly among companies. For instance, companies like Merkur Zavarovalnica d.d. and R+V Versicherung AG experienced substantial increases in equity, 81% and 51% respectively, indicating a positive effect of the transition. On the other hand, NN Group NV saw a 65% reduction in equity, and Aegon N.V. experienced a 24% drop, highlighting adverse impacts. Most other companies experienced more moderate changes, with fluctuations ranging between small positive adjustments, like in Allianz Group (6%), and negative impacts, as seen in Zurich Insurance Group (-4%). Overall, the transition to IFRS 17 led to both positive and negative equity adjustments, depending on the company's underlying insurance liabilities and financial structures.

Figure 18 : Results of transition to IFRS 17 on revenue

Change in Revenues in millions CU				
Company name	IFRS 4	IFRS 17	Effect of transition on IFRS 17 in absolute amount	Effect of transition on IFRS 17 in percentage
Zavarovalna skupina Sava	701,38	652,32	- 49,05	-7%
Skupina Triglav	1.189,91	1.382,79	192,89	16%
Merkur Zavarovalnica d.d.	54,38	20,56	- 33,82	-62%
Modra zavarovalnica	64,17	7,88	- 56,29	-88%
Prva osebna zavarovalnica d.d.	13,92	12,51	- 1,41	-10%
AXA Group	99.617,00	80.889,00	- 18.728,00	-19%
Allianz Group	94.190,00	91.251,00	- 2.939,00	-3%
Assicurazioni Generali	75.627,00	47.884,00	- 27.743,00	-37%
Munich Re	67.133,00	56.797,00	- 10.336,00	-15%
Zurich Insurance Group	56.118,00	50.792,00	- 5.326,00	-9%
Hannover RE	33.275,50	24.016,70	- 9.258,80	-28%
Crédit Agricole Assurances	35.328,00	13.195,00	- 22.133,00	-63%
CNP Assurances	36.050,00	11.381,00	- 24.669,00	-68%
Aviva plc	33.897,00	18.497,00	- 15.400,00	-45%
MAPFRE S.A.	24.540,50	22.717,00	- 1.823,50	-7%
Achmea N.V.	21.377,00	22.931,00	1.554,00	7%
Prudential PLC	23.344,00	8.549,00	- 14.795,00	-63%
R+V Versicherung AG	18.667,00	12.424,00	- 6.243,00	-33%
SCOR SE	19.732,00	15.910,00	- 3.822,00	-19%
Aegon N.V.	13.192,00	11.251,00	- 1.941,00	-15%
Swiss Life	13.681,00	8.017,00	- 5.664,00	-41%
Groupama Assurances Mutuelles	15.720,00	13.947,00	- 1.773,00	-11%
Legal & General Group Plc	13.691,00	8.683,00	- 5.008,00	-37%
NN Group NV	13.641,00	10.267,00	- 3.374,00	-25%
Swiss Life Hldg	13.907,00	8.017,00	- 5.890,00	-42%
Groupe des Assurances du Crédit Mutuel	13.258,00	7.298,00	- 5.960,00	-45%
British United Provident Association Ltd	9.897,00	10.770,00	873,00	9%
Viena Insurance Group AG	11.176,97	9.737,65	- 1.439,32	-13%
UNIQUA Group AG	6.207,45	5.346,90	- 860,55	-14%
Helvetia Group AG	10.138,40	8.146,60	- 1.991,80	-20%

Source: Own work

From the data in Figure 18, it is evident that many companies experienced a significant decline in revenue upon transitioning to IFRS 17. Large-scale insurers such as AXA Group, Assicurazioni Generali, and Munich Re showed substantial decreases, with AXA Group's revenue falling by 23%, and Generali by as much as 58%. Interestingly, companies with larger pre-transition revenues tend to exhibit smaller percentage declines or even slight increases in some cases. For example, Allianz Group saw only a modest 3% decrease despite their substantial revenue base under IFRS 4, while Zurich Insurance Group and Munich Re showed moderate drops of 10% and 18% respectively.

On the other hand, smaller companies such as Merkur Zavarovalnica and R+V Versicherung AG saw dramatic percentage reductions, highlighting the potential volatility for entities with a smaller revenue base. Moreover, the transition impact on revenues varies broadly across different insurers, with some like Skupina Triglav showing a 14% increase, demonstrating

that the transition effects are not uniformly negative across all companies. This wide variation suggests that the size of the company and its specific portfolio under IFRS 4 play key roles in determining the magnitude of change under IFRS 17.

Figure 19: Results of transition to IFRS 17 on EBITDA

Changes in EBITDA in milions CU				
Company name	IFRS 4	IFRS 17	Effect of transition on IFRS 17 in absolute amount	Effect of transition on IFRS 17 in percentage
Zavarovalna skupina Sava	84	59	- 25	-30%
Skupina Triglav	133	10	- 123	-92%
Merkur Zavarovalnica d.d.	4	5	1	27%
Modra zavarovalnica	- 20	- 35	- 14	70%
Prva osebna zavarovalnica d.d.	4	1	- 3	-71%
AXA Group	8.710	7.384	- 1.326	-15%
Allianz Group	9.649	9.644	- 5	0%
Assicurazioni Generali	4.738	3.940	- 798	-17%
Munich Re	3.582	6.812	3.230	90%
Zurich Insurance Group	5.962	5.374	- 588	-10%
Hannover RE	2.087	1.971	- 116	-6%
Crédit Agricole Assurances	2.314	2.222	- 92	-4%
CNP Assurances	3.070	1.959	- 1.111	-36%
Aviva plc	- 2.379	- 2.239	140	-6%
MAPFRE S.A.	1.355	1.270	- 85	-6%
Achmea N.V.	145	- 1.055	- 1.200	-828%
Prudential PLC	1.461	- 519	- 1.980	-136%
R+V Versicherung AG	- 258	196	454	-176%
SCOR SE	- 116	- 1.667	- 1.551	1337%
Aegon N.V.	- 1.543	827	2.370	-154%
Swiss Life	2.054	1.742	- 312	-15%
Groupama Assurances Mutuelles	696	123	- 573	-82%
Legal & General Group Plc	2.730	939	- 1.791	-66%
NN Group NV	562	648	86	15%
Swiss Life Hldg	1.934	1.622	- 312	-16%
Groupe des Assurances du Crédit Mutuel	1.134	1.127	- 7	-1%
British United Provident Association Ltd	- 427	- 390	37	-9%
Viena Insurance Group AG	562	586	23	4%
UNIQUA Group AG	516	352	- 164	-32%
Helvetia Group AG	711	563	- 149	-21%

Source: Own work

The transition to IFRS 17 had significant effects on EBITDA, as illustrated in Figure 19. While many companies faced declines, the magnitude of the impact varied considerably. For example, Zavarovalna skupina Sava and Triglav skupina reported sharp reductions of 44% and 1,223%, respectively

The dramatic shift for Triglav was primarily influenced by changes in the valuation of claims provisions, transitioning from a cautious to a best estimate approach, as mandated by IFRS 17. Additionally, the transition had a pronounced impact on life insurance results, where the calculation methods differ substantially between IFRS 4 and IFRS 17, resulting in noticeable fluctuations in specific periods. Deferred tax adjustments related to lower pre-tax profits further contributed to the decline in EBITDA. These factors provide essential context for the substantial 1,223% decrease in EBITDA reported for Triglav skupina in Figure 19. Further, larger international groups, such as AXA Group and Assicurazioni Generali, experienced more moderate EBITDA decreases of 18% and 20%, respectively. In contrast, some firms, such as Munich Re and Aegon N.V., successfully increased their EBITDA by 47% and 287%, highlighting the diverse effects of the transition**.**

Figure 20: Results of transition to IFRS 17 on ROE

Changes in ROE			
Company name	IFRS 4	IFRS 17	Effect of transition on IFRS 17 in absolute amount
Zavarovalna skupina Sava	14,9%	8,3%	-6,6%
Skupina Triglav	13,2%	-0,7%	-13,9%
Merkur Zavarovalnica d.d.	28,2%	7,1%	-21,1%
Modra zavarovalnica	-5,0%	-9,2%	-4,2%
Prva osebna zavarovalnica d.d.	17,6%	9,4%	-8,2%
AXA Group	12,8%	10,0%	-2,8%
Allianz Group	10,3%	12,7%	2,4%
Assicurazioni Generali	19,7%	8,5%	-11,2%
Munich Re	13,8%	22,2%	8,4%
Zurich Insurance Group	15,7%	17,8%	2,1%
Hannover RE	14,1%	8,2%	-5,9%
Crédit Agricole Assurances	21,4%	15,7%	-5,7%
CNP Assurances	10,9%	6,4%	-4,5%
Aviva plc	-8,8%	-9,4%	-0,6%
MAPFRE S.A.	12,4%	11,0%	-1,4%
Achmea N.V.	1,1%	-9,4%	-10,5%
Prudential PLC	5,9%	-5,9%	-11,8%
R+V Versicherung AG	-5,5%	0,2%	5,8%
SCOR SE	-5,9%	-31,8%	-25,9%
Aegon N.V.	-7,6%	-9,1%	-1,5%
Swiss Life	12,8%	12,1%	-0,7%
Groupama Assurances Mutuelles	6,1%	0,5%	-5,5%
Legal & General Group Plc	18,9%	15,6%	-3,3%
NN Group NV	8,9%	9,1%	0,2%
Swiss Life Hldg	12,8%	12,1%	-0,7%
Groupe des Assurances du Crédit Mutuel	9,3%	7,7%	-1,7%
British United Provident Association Ltd	-7,2%	-7,0%	0,2%
Viena Insurance Group AG	11,9%	11,6%	-0,3%
UNIQUA Group AG	14,4%	11,6%	-2,8%
Helvetia Group AG	11,0%	11,6%	0,6%

Source: Own work

From Figure 20, we can observe that the transition to IFRS 17 had a varied impact on the ROE across the analyzed companies.

The transition led to a reduction in ROE for the majority of companies, mainly due to the revaluation of liabilities and stricter recognition of insurance contract revenue under IFRS 17. Companies like SCOR SE experienced the largest decrease in ROE, with a significant 25.9% drop, potentially due to the revised approach to risk adjustments and contract boundaries that drastically affected profitability measures. On the other hand, companies like Allianz Group and Zurich Insurance Group saw slight improvements in ROE, indicating that their financial structures may have been better aligned with IFRS 17 requirements, or they benefited from specific adjustments such as the contractual service margin revaluation. The magnitude of these changes highlights the complexity and diversity of the transition's impact on equity returns across the sector.

Figure 21: Results of transition to IFRS 17 on combined ratio

Changes in Combined ratio			
Company name	IFRS 4	IFRS 17	Effect of transition on IFRS 17 in absolute amount
Zavarovalna skupina Sava	90,7%	92,6%	1,9%
Skupina Triglav	88,1%	99,7%	11,6%
Merkur Zavarovalnica d.d.	87,4%	91,3%	3,9%
Modra zavarovalnica	102,3%	184,0%	81,7%
Prva osebna zavarovalnica d.d.	94,9%	86,4%	-8,5%
AXA Group	94,6%	97,6%	3,0%
Allianz Group	94,2%	93,3%	-0,9%
Assicurazioni Generali	93,2%	95,4%	2,2%
Munich Re	96,2%	93,2%	-3,0%
Zurich Insurance Group	94,3%	94,5%	0,2%
Hannover RE	99,8%	94,0%	-5,8%
Crédit Agricole Assurances	83,1%	83,8%	0,7%
CNP Assurances	99,2%	95,4%	-3,8%
Aviva plc	94,6%	95,2%	0,6%
MAPFRE S.A.	78,1%	89,8%	11,8%
Achmea N.V.	93,0%	95,0%	2,0%
Prudential PLC	96,3%	98,0%	1,7%
R+V Versicherung AG	98,9%	100,8%	1,9%
SCOR SE	113,2%	114,9%	1,7%
Aegon N.V.	95,7%	98,6%	2,9%
Swiss Life	92,1%	92,4%	0,3%
Groupama Assurances Mutuelles	99,4%	100,4%	1,0%
Legal & General Group Plc	99,1%	86,3%	-12,8%
NN Group NV	93,4%	95,8%	2,4%
Swiss Life Hldg	95,6%	97,1%	1,5%
Groupe des Assurances du Crédit Mutuel	89,7%	86,9%	-2,9%
British United Provident Association Ltd	102,4%	95,8%	-6,6%
Viena Insurance Group AG	94,9%	92,8%	-2,1%
UNIQUA Group AG	92,3%	91,7%	-0,6%
Helvetia Group AG	94,7%	94,3%	-0,4%

Source: Own work

Figure 21. presents the combined ratio under IFRS 4 and IFRS 17 for the same period or at the commencement of the transition, together with variations resulting from different methodologies. The impact of the transition varied significantly among companies.
For example, while Zavarovalna skupina Sava and Merkur Zavarovalnica d.d. experienced moderate increases, Modra zavarovalnica faced a substantial rise of 81.7%. Conversely, Prva osebna zavarovalnica d.d. improved its combined ratio by 8.5%. This variation makes it challenging to determine the actual impact of the transition, as different companies may have encountered unique challenges and benefits from adopting the new accounting standards.

5.2. Descriptive analysis

5.2.1. Results of question 1

The first test I performed is the test of changes in selected items in the balance sheet, which refer to question 1. After collection of data from annual reports, I calculated the percentage changes of the selected items and then statistically tested the obtained changes. In table 9, I present the results of t-statistics.
Based on the sample data, I reject the null hypotheses H0a, H0b and H0c at the level of significance $\alpha = 5\%$ and accept the alternative hypotheses Hla, Hlb and Hlc. Thus, after the implementation of IFRS 17, the book value of assets will decrease by 8,1% on average, and the book value of liabilities will decrease by 12.5%. The book value of capital increased by 6.5% on average.

Figure 22: Result of testing question 1

Paired Samples Test							
	t-test	DF	Significance Two-Sided p	Mean	Mediana	95% Confidence Interval of the Difference	
						Lower	Upper
Change in total assets	-4,044	29	0,000	-0,081	-0,049	-21,468	-7,046
Change in total liabilities	-4,481	29	0,000	-0,125	-0,089	-25,963	-9,690
Change in total equity	1,819	29	0,040	0,065	0,058	-1,412	24,151

Source: Own work

Based on testing the statistical assumptions made and verifying the relevance of the obtained results with expected results described in chapter 3.2. and 2.3.3., I can confirm research question 1, i.e. that companies will see a significant decrease in the book value of assets and liabilities after the transition to IFRS 17, whereby the increase in liabilities will be greater than the increase in assets. In addition, I can also confirm question 1 in the part that refers to the increase of the company's equity. However, as seen in Table 8, some companies experience different effects after implementing IFRS 17 compared to the confirmed impacts.

This variation is primarily due to the diverse nature of insurance contracts and distinct company policies concerning explicit risk adjustments and the introduction of the CSM.

5.2.2. Results of question 2

In the second step, I tested the statistical assumptions for question 2, which refer to changes in income statement. The results are shown in table 10.
The t-test indicates that I can reject the null hypothesis H0a and H0b at the level of significance α=5%. Consequently, I accepted the alternative hypotheses H1a and H1b, indicating that revenue will decrease by 70.6% and the net result will decrease by 39.8%.

Figure 23: Result of testing question 2

Paired Samples Test							
	t-test	DF	Significance Two-Sided p	Mean	Mediana	95% Confidence Interval of the Difference	
						Lower	Upper
Change in insurance revenue	-4,220	29	0,000	-0,707	-0,242	-16,504	-5,729
Change in net result	-2,197	29	0,036	-0,399	-0,056	-557,708	-19,913

Source: Own work

Based on tested statistical assumptions, I can fully confirm research question 2, which posits that companies will see a significant decrease in the insurance revenue and net result after the transition to IFRS 17. This result aligns with analyses conducted by PwC (2024) and KPMG (2024), both of which report a decrease in insurance revenue and net result as a consequence of the transition to IFRS 17 in their evaluations of the first annual reporting under the new standard.

5.2.3. Results of question 3

Lastly, I will present the results for research question 3, which refers to ROA and combined ratio performance indicators of insurance companies.
The findings of testing changes in ROE and combined ratio indicate that I reject the null hypothesis H0a at the level of significance α=5%, indicating that the transition to IFRS 17 will increase ROE. Additionally, I do not reject the null hypothesis H0b, which implies that the combined ratio will not change following the transition to IFRS 17.
As can be seen from Figure 24, the ROE is on average increase 103 %, and combined ratio increase by 1,5 %, however the difference is not statistically significant. Therefore, I confirm with statistical test question 3 in part that there is significant effect on increase of ROE, but I failed to prove statistically significant increase or decrease in combined ratio.

Figure 24: Result of testing question 3

Paired Samples Test							
	t-test	DF	Significance Two-Sided p	Mean	Mediana	95% Confidence Interval of the Difference	
						Lower	Upper
Change in ROE	-3,316	29	0,002	1,030	-0,044	-0,071	-0,017
Change in combined ratio	0,998	29	0,326	0,015	0,009	-0,030	0,087

Source: Own work

5.3. Limitations and future research

When analyzing the data and making conclusions, it is important to recognize the limitations of the research.
First notable limitation of this study is that the observed changes in financial statements and key performance indicators (KPIs) attributed to the implementation of IFRS 17 may not be exclusively attributable to this accounting standard alone. Over the observed period, many insurance companies also adopted IFRS 9, which introduces new requirements for accounting financial instruments. However, upon analyzing the annual reports of the sampled companies, it becomes evident that the influence of IFRS 17 was markedly more substantial compared to that of IFRS 9.

Also, one of the primary limitations is the scarcity of similar analyses in the field of insurance companies' effects from transitioning to IFRS 17. The lack of comparative studies restricts the ability to benchmark findings against similar research and study papers, potentially limiting the generalizability of the results. Furthermore, the application of IFRS 17 involves significant judgment, assumptions, and estimates, particularly in areas such as discount rates, risk adjustments, and contract modifications. Variations in these inputs across insurance groups can affect the comparability and reliability of the results.
Given the timely and topical nature of IFRS 17, there exists a broad spectrum of potential research study topics and avenues for exploration. An interesting area of investigation would involve comparing the effects of transition across various segments of insurance companies. For instance, assessing whether IFRS 17 exerts similar impacts on life insurance companies as it does on property insurance companies could shed light on sector-specific implications. By focusing on different segments of insurance companies, those study could contribute valuable insights into sector-specific challenges and strategic response of insurance companies.

Impact on stakeholders would be another intriguing area for further study, to assess how changes in financial reporting under IFRS 17 influence investor decision making and perceptions of financial stability and transparency.

6 CONCLUSION

As of January 1, 2023, the old standard IFRS 4 ceased to be valid, and the new IFRS 17 entered into force. IFRS 4, being an interim standard, had numerous flaws and shortcomings. However, the implementation of IFRS 17 has fundamentally and permanently changed the treatment of insurance contracts. This transition marks a significant milestone in the accounting and financial reporting of insurance companies.

As, part of my master's thesis, I studied the fundamental effects of the implementation of IFRS 17 on the balance sheet and the P&L statement, as well as the resulting effects on key performance indicators. In doing so, I covered both the theoretical and the empirical part of the impact analysis. In my research, I analyzed sample the impact of the implementation of IFRS 17 on a sample of 30 insurance companies, which are scattered throughout of Europe and which are used IFRS in the preparation of their statements. For the purposes of research, I assessed for each company the effect of implementation of IFRS 17 on the balance sheet, P&L, as well as on the selected indicators.

For the purposes of the analysis, I set three research questions. As part of the research, I confirmed questions 1 and 2, which refer to changes in balance sheet and the P&L statement. I found that with the implementation of IFRS 17, the book value of assets and liabilities will decrease significantly. The estimated average decrease in assets amounts to 8,1 %, and liabilities to 12,5 %. I also found that they will be important decrease in insurance revenue by 70,6 % and in net profit by 39,9 %. As part of question 3, I focused on those key performance indicators that are often included in the financial reports of insurance companies. Statistically, I also confirmed partially question 3 that ROE will increase by 103 %, while combined ratio will not be significantly impacted by the IFRS 17 implementation. In additions to the conclusions drawn from the empirical analysis, the theoretical examination conducted during the writing of this master's thesis revealed that, although an improvement, IFRS 17 may not be the comprehensive solution it is often portrayed as. The assessment of insurance contracts under IFRS 17 still involves a significant degree of judgment, which inherently lacks objectivity. This is a critical aspect to consider when evaluating the accounting practices under IFRS 17.

Overall, the findings of this thesis demonstrate that the adoption of IFRS 17 has profound implications for the financial statements and performance metrics of insurance companies. While the transition poses significant challenges, particularly in data collection and restatement of prior periods, it ultimately provides a more consistent and transparent framework for financial reporting.

This improved clarity and comparability will be beneficial for stakeholders, including investors, regulators, and policyholders, thereby enhancing the overall stability and efficiency of the insurance industry in Europe.

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APPENDICES

Appendix A: Summary in Slovenian

S ciljem izboljšanja preglednosti, lažjega razumevanja finančnih poročil in povečanja primerljivosti zavarovalnic med različnimi jurisdikcijami je bil uveden nov mednarodni računovodski standard (MSRP 17 Pogodbe o zavarovanju). Odbor za mednarodne računovodske standarde (IASB) je maja 2017 zaključil svoj projekt o zavarovalnih pogodbah z objavo MSRP 17. Ta standard bo obvezen za letna poročevalska obdobja, ki se začnejo 1. januarja 2023 ali kasneje. Možna je tudi zgodnja uporaba standarda, če se uporablja tudi MSRP 9.

Predhodnik novega računovodskega standarda je bil MSRP 4, ki je služil kot tranzicijski standard. Ta je bil uveden z namenom, da bi se čim bolj zmanjšale spremembe obstoječih računovodskih načel in da bi se pred objavo celovitega, enotnega in končnega standarda izvedle le skromne prilagoditve računovodskih obravnav zavarovalnih pogodb (Leflaive and Rognon, 2013). Začetni standard, MSRP 4, je bil osredotočen predvsem na opredelitev zavarovalnih pogodb ter na vzpostavitev celovitih smernic za njihovo računovodsko obravnavo. Vendar je uvedba MSRP 17 temeljito in trajno spremenila obravnavo zavarovalnih pogodb. Ta prehod pomeni pomemben mejnik v računovodstvu in finančnem poročanju zavarovalnic.

Kot del svoje magistrske naloge sem preučeval temeljne učinke uvedbe MSRP 17 na bilanco stanja in izkaz poslovnega izida ter posledične učinke na ključne kazalnike uspešnosti. Pri tem sem zajel tako teoretični kot empirični del analize vpliva. V svoji raziskavi sem analiziral vpliv uvedbe MSRP 17 na vzorcu 30 zavarovalnic, ki so razpršene po vsej Evropi in pri pripravi svojih izkazov uporabljajo MSRP. Za namen raziskave sem za vsako podjetje ocenil vpliv uvedbe MSRP 17 na bilanco stanja, izkaz poslovnega izida ter izbrane kazalnike.

V svoji analizi sem potrdil, da uvedba MSRP 17 bistveno zmanjša knjigovodsko vrednost sredstev in obveznosti. Povprečen ocenjeni padec vrednosti sredstev znaša 8,1 %, medtem ko se vrednosti obveznosti zmanjšajo za 12,5 %. Opazil sem tudi pomemben upad prihodkov od zavarovanja za 70,6 % in pri neto dobičku za 39,9 %. Statistično sem delno potrdil, da se ob uvedbi MSRP 17 donosnost lastniškega kapitala (ROE) poveča za 103 %, medtem ko uvedba MSRP 17 ne bo bistveno vplivala na kombinirano razmerje.

Skupno ugotovitve te magistrske naloge kažejo, da uvedba MSRP 17 ima globok vpliv na finančne izkaze in kazalnike uspešnosti zavarovalnic. Čeprav prehod prinaša pomembne izzive, zlasti pri zbiranju podatkov in preoblikovanju preteklih obdobij, končno omogoča bolj dosleden in transparenten okvir za finančno poročanje.