UNIVERSITY OF LJUBLJANA

SCHOOL OF ECONOMICS AND BUSINESS

MASTER THESIS

A COMPARISON OF KEY RELATIVE FINANCIAL PERFORMANCE INDICATORS BETWEEN MALAYSIAN TAKAFUL FIRMS AND SLOVENIAN CONVENTIONAL INSURANCE FIRMS

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The undersigned Naida Alajbegović, a student at the University of Ljubljana, School of Economics and Business, (hereafter: SEB LU), author of this written final work of studies with a comparison of key relative financial performance indicators between Malaysian takaful firms and Slovenian conventional insurance firms, prepared under the supervision of prof. Dr. Aleš Ahčan.

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INTRODUCTION

Insurance is essential for us to be able to focus on the things that matter most to us in life as it offers financial security for you and your loved ones in the case of a number of different events that might exhaust your financial resources. When enormous financial difficulties develop, such as hospital expenses or medical expenditures, insurance can assist in covering the costs, allowing you to carry on with your regular routine and pursue your ambitions. It protects people against various hazards by grouping them together and distributing the losses within each group proportional to the amount of risk taken and premiums paid. While some people buy insurance contracts to protect themselves, others see insurance products as serving a different function. Some people prefer to get insurance because of the investment possibilities. Insurance products, for example, can generate higher income than traditional investing choices (Das, & Sahoo, 2022).

The basic principle on which insurance firms work is providing services that guarantee a specific amount of monetary value to insured persons, contingent on the occurrence of an unpredictable and future event (Insurance Europe, 2012). For this service, the insurance companies are compensated with premiums paid by the insured individuals. Insurance companies generate revenue from these premiums. Until and unless an insurance claim is submitted, such as a claim for fire damage to a home, death, or third-party liability, the firms are not required to pay out any money. As insurance firms generate surplus liquidity, they engage in investing activities, which entails disbursing funds into various investments that create additional revenue in the form of interest, dividends, and capital gains.

The takaful insurance market has shown a lot of potential in recent years. The takaful sector is the fastest-growing financial industry in the Islamic community, with a growth rate of 20% in its early stages (Hossen, 2018). Furthermore, the cumulative annual growth rate of takaful insurance contributions was 8.5 percent from 2011 to 2018 (Islamic Financial Services Board, 2020). In its simplest form, takaful is Islamic insurance, and it is the ideal alternative to regular insurance for Muslims and financial institutions that choose to follow the Sharia permissible approach to conducting insurance business. Islam places ethical constraints on how the insurance business is performed in all aspects of the operations of an insurance company. Further chapters of the master thesis will go into these limitations in detail.

This master thesis aims to compare the most important financial indicators of traditional and takaful insurance businesses to display takaful as a possible branch in which Slovenian insurance companies may choose to engage in the future. Furthermore, we intend to present takaful insurance in such a manner that its concepts and arguments are understood by a broader range of stakeholders with our master thesis, as this way of conducting insurance business is not present in the country.

The thesis is structured into various chapters, beginning with an overview of insurance and Islam's position with respect to traditional insurance, and why it has been forbidden under Sharia law. We shall encounter a new term in the thesis's second section: Islamic insurance, or takaful. We meet the features that distinguish such insurance from the standard insurance on a daily basis will be thoroughly described. We shall contrast traditional insurance with insurance that focuses on Sharia law compliance. At the end of the introductory part on takaful insurance, we will discuss how regulations treat this young form of insurance and whether they limit its establishment in any way. The following part of the thesis focuses on the models of Islamic insurance that have emerged, namely the tawuni, wakalah, mudarabah, and waqf models. The basic features of each model will be presented as well as the flow patterns of funds through the firm with respect to each model of Islamic insurance.

The thesis will then move on to two basic Islamic insurance products, general and family takaful, which branch out into a multitude of diverse products that are remarkably similar to those found in traditional insurance. We will learn about the insurance markets in Slovenia and Malaysia and the situation of Islamic financing in the Slovenian bordering nations. The issues that takaful insurance businesses face furthermore will be examined. Additionally, particular areas, where takaful insurance will face challenges in the west, will be identified.

We will explain the methods for analyzing the data received from Malaysian enterprises and traditional insurance companies in Slovenia in the methodology section of the master thesis. The work's goals and limits of research will be stated. The hypotheses of the thesis will be stated as comparing different financial performance indicators between Malaysian takaful companies and Slovenian conventional insurance companies. Following that, data analysis and interpretation using graphs and tables are undertaken. We will end with a concluding comment on the relationship between the financial performance of Slovenian conventional insurance companies and Malaysian takaful companies.

1 TAKAFUL

1.1 Description of Insurance Framework

The most common definition of insurance dates back to 1998, when Jean François Outreville wrote the Theory and practice of insurance, defining it as: “A contract of insurance is that whereby one party, the insurer, undertakes, for a premium or an assessment, to make a payment to another party, the policyholder or a third party, if an event that is the object of a risk occurs.” Babylonian and Chinese merchants were among the first to record the first types of insurance. These date back as far as 3000 years back, when merchants diversified their risk by dividing their goods among numerous boats, reducing the chance of massive

losses that could occur if the commodities were on only one vessel (Vaughan & Vaughan, 2008). These merchants pioneered the concept of maritime insurance that we know today.

Insurance appeared in a form comparable to what we know now thirteen centuries later when the Code of Hammurabi was written. As a sort of state-mandated insurance, this law included a language safeguarding merchants' rights against moneylenders. The merchant's loan would be lost rather than indebting their closest family or relatives in the event of illness or death (Amen, 2014).

The Great Fire of London in 1666 essentially compelled the creation of insurance in the event of residential fires. As a result, property insurance appeared. The first insurance businesses arose during this period (Malik & Ullah, 2019). The 17th century was the time when the insurance sector, with the establishment of the first firms and the introduction of the first kind of commercial insurance, was born.

The first life insurance plans were purchased in the early 18th century. The Amicable Society for a Perpetual Assurance Office (Outreville, 1998), formed in London, was the first to provide such a service. The first life insurance contracts offered protection for a set yearly payout per share, with contributions going to the offspring of dead members.

By the late 19th century, we could witness a variety of offered insurance services, as well as the start of the introduction of national insurance pioneered by Germany. National insurance was designed to help the working class and limit migration to other nations. As the roads got busier and the risk of an accident increased in this century, the need for motor insurance finally appeared. Individuals involved in traffic accidents were covered under the policy.

We now entrust our most valuable possessions and persons to insurance firms. In many ways, the insurance we purchase gives us peace of mind, including safeguarding our assets, our elderly, and our children. The purpose of insurance is to give financial security by accruing funds in one group rather than saving individually for protection against situations that decrease our financial resources. Today we can find a very large diversity of insurance services. Some of the most notable types of insurance are:

- We distinguish between private and public insurance based on whether the service is provided by a commercial corporation or a government. Social insurance is provided by the government and protects residents from a variety of dangers that they may encounter.
- We may divide insurance into life and non-life insurance based on the person or item being covered. The distinction between life and non-life insurance stems from the fact that the payout is based on the insured person's mortality, whereas non-life insurance may be thought of as anything else that is not based on the insured person's mortality and covers damages to property. As a result, non-life insurance is frequently referred to as property insurance.
- Some forms of insurance are mandatory and must be acquired. This is mandated by a country's government. Third-party liability insurance is the most often addressed topic

when we discuss obligatory insurance. Voluntary insurance, on the other hand, is insurance we acquire of our free will.

In addition to the immediate benefits of risk reduction, insurance provides plenty of other advantages. To offset the harm that might occur due to unexpectedly ill health, an individual does not need a significant stockpile of financial resources. Furthermore, insurance has positive effects on the economy. Investments are used by insurance firms to mobilize resources that might be otherwise stagnant. In this way, insurance businesses contribute to a country's economic growth and development.

According to Rejda (2011), principles that form the insurance business are the principle of utmost good faith, the principle of indemnity, the principle of subrogation, and the principle of insurable interest. The principle of utmost good faith requires the parties concluding an insurance contract to be aware and knowledgeable persons on the matter. The individual concluding an insurance contract must provide the insurance provider with all the data necessary and relevant for the contract. Both parties must be transparent and not misled into the business relationship. The indemnity principle states that the insurance contract is made to compensate the insured individual in the event of loss and not for profit. Insurance providers compensate the insured individual up to the level that returns the insured to the same position they were in before the occurrence of the loss. Thus, the insured cannot profit from the contract. The principle of subrogation refers to the act of substituting the insurer for the insured to get indemnification from a third party for a loss covered by insurance. In other words, the insurer has the right to recover any loss payments paid to the insured from a negligent third party. The insured individual must have an insurable interest in the object of insurance. When the actual existence of the insured event provides some benefit but its nonexistence results in a loss, a person has an insurable interest. Simply put, the insured person must incur some financial loss because of the insured object's damage.

1.2 Islam

Islam is the second biggest monotheistic religion in the world and has more than two billion followers (Wormald, 2015). The Arabic term 'Islam' means "submission," implying the adherents of Islam's voluntary surrender to Allah, the single God, and his will. Islam was founded in the early seventh century by a man named Muhammad, who is considered to be God's messenger.

The beginnings of Islam may be traced back to the 7th century when the prophet Mohammad, at the age of 40, began to have visions and shared them with his relatives (Holt, Lambton & Lewis 1979). As a compelling teacher, he drew in a large number of new followers who were willing to listen to the details of what he would experience when visited by the angel

Jibreel[1]. The angel Jibreel is an intermediary between gods and humans. When Muhammad began to have visions, he gave orders for the holy book of the Qur'an to be transcribed because he was unable to read or write. The prophet had the Qur'an read to him several times to ensure that it was the unadulterated, unmodified message of God (Ohio University, n.d.). After the prophet's death, the visions continued. The Qur'an took 23 years to write, from 609 to 632 and was completed a year after Muhammad's death.

Muslims believe in six fundamental doctrinal principles (Čaušević, 2015):

1. Belief in Allah (Amentu billahi)

   Muslims believe that there is only one God, Allah, who was neither born nor gave birth, and who is the only one worthy of worship. Allah means "The one and only true deity" and is derived from an Arabic term. Only he sees our future, and we must give our life to him because he is the only one that determines our destiny. He is the one who created the planet, as well as us and our loved ones.
2. Belief in angels of Allah (ve melaiketihi)

   In Islam, God's angels are made of light and are tasked with all of God's responsibilities. Allah's angels never sin, and their duties include conveying God's revelations to humans, writing their deeds, looking after natural occurrences, and taking human souls after death.
3. Belief in God's books (ve kutubihi)

   Muslims believe that the writings given by Allah to his prophets must be believed and that the Qur'an is the last text, flawless and delivered in its original form. Other texts are said to be imperfect as a result of translations or other additions. Books revealed by Allah are (Seda, 2007):

   Suhuf revealed to Ibrahim
   Tawrat revealed to Musa
   Zabur revealed to Dawud
   Injeel revealed to Isa
   Qur’an revealed to Muhammad
4. Belief in all of God's messengers. (ve rusulihi)

   The whole Islamic faith is founded on the unshakable idea that the religion of Allah's Messengers is the indisputable truth. The notion of Allah's messengers, as well as the religion that they are Allah's most chosen creatures, are central to Islamic belief. They were brought to this earth to save people and lead them back to the one road that leads to happiness.
5. Belief in the day of judgment. (ve-l-jevmi-l-ahiri)

   God will replace the world of generation and corruption with the eternal, permanent world on the day of judgment. The dead will be brought back to life and judged. Muslims believe that the world we live in now is only transient and that there is a permanent life after death. We shall be judged and sent to either paradise (Jannah) or

[1] Jibreel is an Arabic word translating to „Hero of God“

hell (Jahanam), based on our actions in this brief world. Jannah is Allah's paradise, prepared for people who believe in everything that is commanded for them by Allah, obey Allah truly, and follow the prophet.

6. Belief in fate, in the fact that everything happens according to Allah's will and determination (ve bi-l-kaderi hajrihi ve sherrihi mine-l-lahi teala). This belief highlights the fact that Allah is aware of all of our actions prior to our taking them. This does not imply that Allah is in charge of our acts, but rather that Allah is aware of all past and present actions.

The Hijra[2], with its intrinsic causes, meanings, and messages, is a historical event on which adherents of the Islamic faith tradition calculate time. It is mentioned over thirty times in the Qur'an. Thus, the Muslim New Year dates back to Hijra in 622, when the prophet Muhammad and his companions moved from Mecca to Medina aimed to keep, maintain and uphold the message of Allah (Hassan & Majid, 2019). The second caliph Umar ibn al-Khattab picked the Hijra as the starting point for the Islamic calendar, marking it as the most important event in Islamic history.

The Islamic (Hijri) year lasts for 354 or 355 days, which is 10 or 11 days shorter than the solar calendar year. Similarly, to the Gregorian calendar, it has 12 months. The month of Ramadan is the most important of all the months because the Qur'an is revealed in it. Ramadan is followed by Rebiul-evvel in importance because the Messenger of Allah was born in it, then comes the Rajab, Sha'ban, and finally Dhul-Hijjah because the Hajj was performed during this time.

Muslims around the world celebrate the month of Ramadan as the most important month of the year. Ramadan, the ninth month of the Islamic calendar, is a month of fasting during which Muslims visit mosques, offer charity, and perform good deeds. For Muslims, Ramadan is a time of serious introspection, and it is one of the five pillars of Islam. For many, this period can be very challenging because, during the majority of the day, Muslims do not eat or drink any kinds of liquids. The second most important Muslim holiday is regarded to be Eid-Al-Adha. Muslims all across the world offer symbolic sacrifices to Allah on this day, each according to their capacity and customs. The prophet Ibrahim's willingness to sacrifice his son Ismail for the sake of God is commemorated on this day (Dolinar, 2013). A goat, sheep, cow, or camel is the most common sacrifice. It is only essential if the family has the financial means to do so. The meat is then divided into three portions: one for friends and family, another for neighbors, and the third portion is set aside for distribution to the poor. The Night of Qadr (Lejletu-l-kadr) marks the commencement of the Qur'an's revelation, God's final message to people. This night is given its chapter in the Qur'an. It is "a night greater than a thousand months." On this night Muslims pray for the forgiveness of their sins and God's kindness in both realities, the temporary and permanent ones. Mewlud is the birthday of the prophet Muhammad. Amina gave birth to Muhammad in the Arabian

[2] Hijrais an Arabic term translating to „Migration“

Peninsula city of Mecca on this day in the late 16th century. Muslims are not required to celebrate the birthday of the prophet, but rather to focus on the text and teachings from Allah.

The five pillars of Islam are (Harward, 2020):

1 Shadahah
Shahadah is an Islamic prayer that expresses one's belief in one God (Allah) and acceptance of Muhammad as his prophet.

2 Salat
Prayer is the word for the five-times-a-day Islamic prayer that is required. It creates a direct line of communication between an individual and God. In Islam, there is no clergy; prayer is conducted by a person who understands the Qur'an and by the congregation or community's decision. These five prayers include body gestures and reciting (learning) Qur'anic texts in Arabic. However, prayer or personal prayer can also be conducted in the mother tongue. Prayers are offered (worshiped) in the morning, noon, afternoon, after sunset, and at night. Muslim men and women can pray practically anywhere, yet prayers at the mosque are considered more honorable.

3 Zakah
Zakah is one of Islam's most essential concepts. Zakah is an Arabic term that symbolizes cleansing and prosperity. One portion of our property is distributed to poor Muslim men and women. Every Muslim man and woman is responsible for calculating their zakah. Zakat entails paying 2.5 percent of the property's worth over the course of a year (Meezan Bank, 2010). A person can contribute as much as he or she likes, generally in secret.

4 Sawm
Muslims fast from dawn to sunset every year during Ramadan (the ninth month of the Muslim calendar), refraining from eating, drinking, and sexual activity. Sick people, the elderly, travelers, pregnant women, and nursing mothers are exempt from fasting if they make up the days later in the year. If they are unable to do it physically, they should feed the impoverished person for each day they are unable to fast. Although fasting is beneficial to one's health, it is mostly used for spiritual cleansing. The fasting individual develops genuine sympathy for those who are hungry by abstaining from earthly pleasures, even if only for a short period.

5 Hajj
Only those who are medically and financially capable of performing the yearly pilgrimage to Mecca, known as Hajj, are required to do so. Tours around the Ka'bah and crossing between Saffa and Merwa seven times, as Hajar did in quest of water, are among the Hajj ceremonies that originated with Ibrahim. The pilgrims then gather in Arefat's huge valley to plead to God for the forgiveness of their sins.

Sharia[3] law is a law that the Islamic community follows both as the source of their morals in day-to-day life and possibly as the official law of a government. It refers to a variety of legal systems that have been developed and are still developing with the goal of conforming to

[3] Sharia is an Arabic term translating to „Path to water which gives life“

the Islamic faith. The Qur'an and the Sunnah[4] are the two most important sources of Sharia law. Sharia law dictates how Muslims live their lives, where they invest, and their beliefs and responsibilities. It is founded on the principle of devotedness to Allah and his will. Sharia law differs from other legal systems in that it covers a considerably broader range of topics, from how Muslims worship to how they conduct business.

According to the report "The Future of World Religions: Projections 2010-2050", released by the American Pew Research Center, Islam is the only religion that is expanding rapidly and will have the biggest number of adherents by 2070 compared to other religions. One of the reasons noted is the fact that a Muslim family has more children on average compared to other religions. Additionally, the Muslim community is a fairly young one. The majority of the world's Muslim population is young, contrasting to most Western countries. In reality, 60% of Muslims worldwide are under 25 years old (PricewaterhouseCoopers, 2008). This growing and young generation is beginning to reach a certain degree of income, and if caught early enough, it has the potential to become a client base. The community focuses on the products specifically designed for the Muslim market and will often seek out Sharia-compliant substitutes.

1.3 Insurance in Islam

Takaful, originating from the Arabic word “Kafalah”, meaning "guaranteeing each other" or "joint guarantee" (Institute of Islamic banking and insurance, 2022) is an alternative way of conducting insurance business. Takaful insurance is a relatively new sector. Islamic banks were interested in obtaining insurance coverage based on Sharia principles, hence the first takaful operators were founded in the late 1970s (The World Bank, 2012). The Islamic Company of Sudan was the first Islamic insurance company (Syimee, Kasmoen, Habibahanin, Taha, Mir, et al., 2016), and its purpose was not to make a profit but to assist the operation of Islamic banks.

There is some debate on whether insurance or risk mitigation is permissible in Islam. However, interpreting the hadith (Moad, 2019):

> “O Messenger of Allah! Shall I tie the camel and rely upon Allah, or leave it loose and rely upon Allah?” the Prophet said: “Trust in Allah, but tie your camel”.

We can clearly understand that it would be nonsensical not to take precautions to decrease our exposure to risk where we can. This statement argues for admitting takaful as Sharia-permissible insurance since the consumers of takaful insurance are taking precautions while ultimately leaving Allah's will to determine their destiny. It also demonstrates that the Prophet himself supports the idea of takaful insurance. Insurance based on solidarity was already in use at the time of the prophet, with participants in the insurance case donating a fixed amount of money to aid the affected individual.

[4] Sunnah refers to actions that the Prophet Muhammad did, said, or quietly endorsed.

For individuals following the Islamic faith, takaful insurance provides the best alternative to conventional forms of insurance we can find today as they want to follow their faith values in all segments of their lives. At its core takaful is based on the principle of solidarity and mutuality. With a few exceptions or limitations, takaful insurance essentially provides the same service as traditional insurance. The concept of tabarru is reflected in takaful insurance, which means "donating, contributing, providing, or giving" (Wahab, Lewis & Hassan, 2007). As a result, it is possible to conclude that in takaful insurance, insured people cooperate for mutual benefit, pay contributions from which the fund is formed, as a financial basis for support to insured persons who require assistance, risks and losses are shared and the possibility of benefits to the detriment of others is eliminated. Through mutual collaboration and ethical treatment, takaful insurance enables the assembled community of insured individuals to preserve their lives and possessions.

The segment of the Sharia law treating the governance of the takaful insurance business is muamalat[5]. According to Oxford Islamic Studies, muamalat includes Islamic rulings of commercial transactions, civil acts, and all other acts not connected to prayer and worship of Allah. Muamalat provides the basis to trade transactions and economics according to Sharia law. In this approach, Islam encourages religious individuals to work together and support each other in society by allowing takaful firms to collect small donations from individuals and distribute them to those in need.

“Help each other in righteousness and piety and do not help each other in sin and aggression”.

-Qur’an

The first essential feature of takaful that we will discuss is that it is similar in many respects to what is provided by a mutual insurance business. In takaful firms, policyholders contribute to a pool of financial assets primarily to compensate those who may have financial difficulties, therefore sharing the liability of the policyholders who contributed to the pool of assets. Furthermore, policyholders in a takaful insurance firm share the company's profit and loss. If the takaful firm generates a profit at the conclusion of the financial year, it is dispersed to the policyholders. On the other side, if the firm makes a loss at the conclusion of the fiscal year, it is funded by a benevolent loan from the firm’s stakeholders or policyholders, depending on the model used to form the takaful fund. The policyholder money and the shareholder fund must be kept separate in takaful firms. Contributions, claims, reclamation and recoveries, consulting, and other receipts assigned by the Board of Directors make up the policyholder fund. This implies that the policyholder fund covers claims, reinsurance charges, technical funds, and administrative expenditures. If there is insufficient money to pay the claim, it is either partially paid or the insurance company asks its members for an interest-free loan for temporary funding. Insurance management is also available to members who are both policyholders and insurers. The deduction of

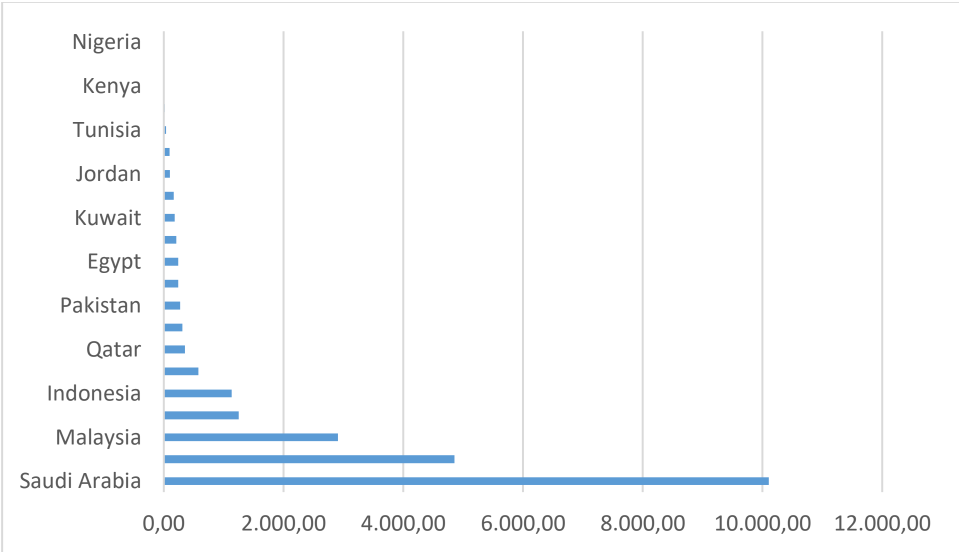
[5] Muamalat is an Arabic term translating to „Transactions“

management cost of the fund is dependent on the model of takaful insurance, we will discuss them in further detail in later chapters.

At the first international conference on Islamic economics in 1976, it was concluded that insurance, how it is provided conventionally, is in conflict with Sharia law, and confirmed that it supports haram[6] activities (Billah. 1998). Additionally, supporting this notion, Muslim scholars unanimously agreed that the practices of conventional insurance companies are impermissible.

Even though a version of takaful insurance may be traced back to the Muslim prophet Muhammad's time, official takaful insurance company registrations are a creation of the late twentieth century. In 1979, the United Arab Emirates and Sudan formed the first Islamic insurance institutions. Malaysia, which developed a legislative framework for Islamic insurance businesses in 1984, followed their lead. Takaful is fast gaining traction, particularly in the Asia-Pacific and Gulf Cooperation Council (GCC)[7] countries, where a huge Muslim population lives. As seen in the figure below, we can conclude that the countries providing a home to takaful insurance are the ones whose citizens are of a Muslim majority. Increasing demand for Sharia-compliant products as the Muslim community grows and increased liquidity in oil-producing nations are some of the primary reasons encouraging the expansion of takaful firms in these regions. Takaful insurance has been growing rapidly since 2006, extending to other parts of Africa and even Europe, where a large Muslim population is found.

Figure 1: Takaful Contributions Globally 2019, by Country (billion USD)

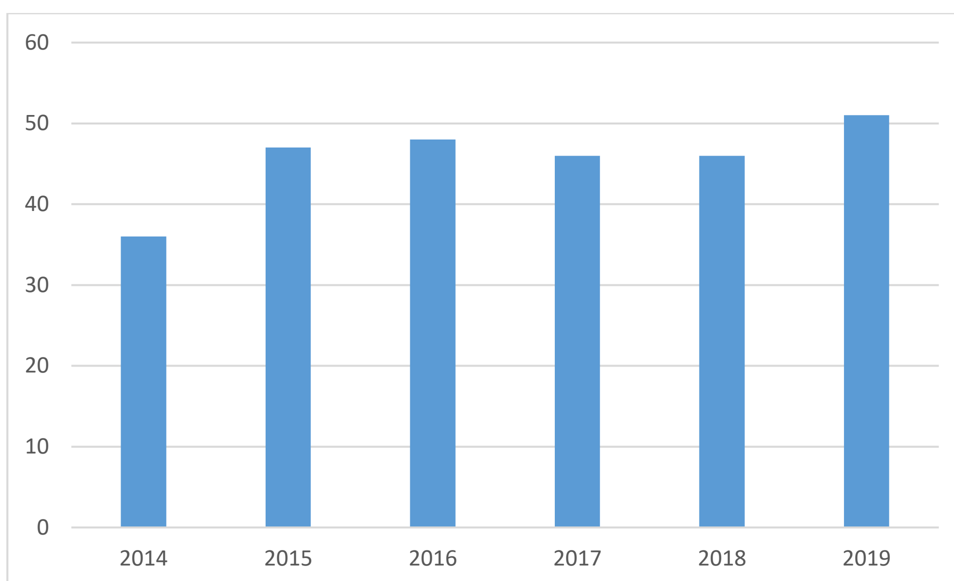


Source: Islamic Financial Services Board (2020).

[6] Haram is an Arabic term translating to „Forbidden“
[7] Gulf Cooperation Council countries include Saudi Arabia the United Arab Emirates, Bahrain, Kuwait, Qatar, and Oman.

We may now find several recognized names among the 336 takaful operators throughout the world, such as Swiss Re, Munich Re, Allianz, and many more. The global takaful market size has been quickly rising in size since its inception. However, the growth has varied from country to country. In 2019, the largest growing market was Turkey. The overall takaful assets in the same year were around 51 billion dollars, according to the Islamic Finance Development Report (figure 2).

Figure 2: Global Takaful Market Size Worldwide from 2014 to 2019 (in billion U.S. dollars)



Source: Statista (2019).

Takaful insurance companies, as well as conventional insurance companies, need reinsurance. However, Sharia prohibitions dictate takaful insurance companies cannot use regular reinsurance companies for their services. Due to the presence of riba[8], gharar[9], and maysir[10], the use of conventional reinsurance company services is prohibited, with made exceptions to keep takaful businesses operating. The first retakaful company was established in the Bahamas in 1098, the Saudi Islamic Takaful and Re-takaful Company. The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) defines reinsurance as a contract in which the reinsurer assumes responsibility for some or all of the risks the insurer has covered. The reinsurance agreement has no effect on the insured's legal rights, and the insurer is responsible to the insured for paying claims in accordance with the insurance policy terms and conditions (The World Bank, 2012). Simply put, reinsurance is

[8] Riba is an Arabic term translating to „Excess“ or „Addition“
[9] Gharar is an Arabic term translating to „Absence“
[10] Maysir is an Arabic term translating to „Ease“

very similar to an insurance contract, the reinsurer indemnifies the reinsured company in the case that the claims assumed by the reinsurance company are reported. A takaful company shares its risk with a retakaful company based on proportional, non-proportional, facultative, and treaty retakaful (Malik & Ullah, 2019). Under facultative retakaful, the oldest model of retakaful, individual risks are reinsured, while treaty retakaful is set up for a certain time frame rather than the number or share of the risks. Proportional retakaful is based on a risk retention threshold, a proportion of the risk actually kept by the takaful firm. Non-proportional retakaful, on the other hand, is concerned with the potential of loss as a result of claims.

On the basis of solidarity and risk sharing, retakaful allows takaful enterprises to operate in a more safe and solvent manner, as well as to grow their company by diversifying their risks. Furthermore, retakaful increases the takaful company's stability and is critical to the takaful company's long-term sustainability.

Among the 336 takaful operators we see worldwide, 21 of them are retakaful companies. This means there is rather a scarcity of retakaful companies available for takaful companies to reinsure with. Sharia scholars have allowed, in the case that no reinsurance companies that work based on Sharia law are available retakaful operators can also use conventional reinsurance companies (Ahmad, Masood, & Khan, 2010). Thus, if a takaful firm finds itself in a situation where no retakaful companies are available, they are permitted to enter into a reinsurance contract with a conventional reinsurer based on necessity.

The key feature of retakaful companies is that their operations are based on risk sharing rather than risk transfer. Thus, Sharia law allowed the operation of retakaful companies.

It is a fact that only a small proportion of the Muslim community lives in rich countries with immense access to good quality financial services. Most of the members of the community live in low-income to lower-middle-income countries. Access to formal financial services given by formal financial institutions is limited in developing nations, particularly in the most impoverished or so-called third-world countries. Microfinance was started to guarantee that the more disadvantaged communities have access to proper financial services to ensure inclusion and progress in these impoverished areas. Microtakaful serves this section of the Islamic community and emphasizes the social mission of takaful. Microtakaful is a special part of the takaful industry aimed at helping the poorer parts of the community. Lower-income households benefit from these unique types of takaful firms because they assist in financial troubles that might result from various unanticipated situations. For this, microtakaful companies need the involvement of diverse additional operators like non-governmental organizations, zakat funds, and government subsidies. These additional takaful operators provide numerous services, including technical support in administering and maintaining the fund as well as donations. In essence, it performs the same function as takaful companies, risk sharing based on solidarity and mutual cooperation. However, these services are adjusted for the needs of the more impoverished communities.

1.3.1 Sharia Conflicts with Conventional Insurance

The basic function performed by takaful insurance companies is identical to what we can find in a conventional insurance company. Sharia law sets certain limitations on how insurance can be provided to be compatible with the teachings of Islam. Some restrictions imposed on insurance firms' business practices are traditionally lawful and permitted in countries not abiding by Sharia law. As a result, we frequently encounter them in insurance businesses. The first difficulty with traditional insurance firms is that their primary purpose is to make a profit. The profits of the insurance business are derived from two sources: the firm's investments and the difference between revenue and claim expenditures. Sharia law debates that the second way of earning profits is unethical. Next, we will discuss the main elements present in conventional insurance contracts but deemed impermissible under Sharia law. These elements are riba, gharar, and maysir.

The Holy book of the Qur'an prohibits riba:

Those who consume interest cannot stand (on the Day of Resurrection) except as one stands who is being beaten by Satan into insanity. That is because they say, "Trade is (just) like interest." But Allah has permitted trade and has forbidden interest.

Additionally, the Prophet himself indicated that trading with interest is impermissible on multiple occasions. Islam fully recognizes the necessity of an economy existing and maintaining profit as a goal to a reasonable extent. However, it clearly condemns the use of interest and stresses the notion of profit sharing and loss sharing. Today, we may not even consider the presence of interest in different aspects of our economy. However, it is, in essence, a creation of additional amounts of money with just money. Even Aristotle, the Greek philosopher, condemned lending on interest because it may result in the lender abusing his position in the relationship (Brégianni, 2017). Islam recognizes that and sets the prohibition of interest (riba) to ensure the injustice of passing all the risk to the debtor is eliminated. Therefore, takaful operators must operate interest-free and invest in interest-free investment products as traditional insurance firms' practice of investing in interest-bearing securities is Sharia unacceptable.

The two types of riba prohibited in Islam are present in conventional insurance companies. These are riba al Qur'an and riba al hadith (Malik & Ullah 2019). Riba al Qur'an is considered to be the occurrence of any excess above the principal payment and constitutes an increase in wealth and thus is not allowed in Islam (Saari & Borhan, 2004). Riba al Qur'an appears in insurance companies during the investment function. Because the payment of premiums and distribution of contributions to the participants (in case of profit occurring in the fund) is not occurring at the same moment, an excess of liquidity appears. This excess is then invested in different financial assets. Most of the made investments are in interest-bearing loans and other assets that provide a safe return for the insurance company. However,

the absence of interest does not exclude the insurance company from investing and borrowing money for profit. The main focus stressed in Islam is that the rules of transactions must be founded on a fair distribution of profits and losses. The income earned based on interest-bearing assets is haram and prohibited in Islam. Takaful enterprises must ensure that the assets they invest in are interest-free and permissible in Islam by other principles as well. Riba al Hadith is the following type of riba we see in traditional insurance contracts. Riba al Hadith is a kind of riba that the Prophet Muhammad additionally introduced to riba al Qur'an and deemed it unacceptable. It is related to the excess that occurs when homogeneous items are exchanged (Meezan Bank, 2002). When a claim is reported, the insurance company distributes the covered amount to the insured individual, which is how this type of interest or riba happens in an insurance contract. When compared to the amount paid in premiums by the insured, the amount distributed is always larger. Money is regarded as an asset in the case of insurance firms causing riba al hadith to occur within an insurance contract. An exchange of money occurs, and an excess of money is created.

Gharar appears in finance in the form of uncertainty, risk, or speculation. Information asymmetries in a contract can arise when one of the parties of a commercial contract does not share or conceals information required for the relationship to function. Gharar can appear in a business relationship in multiple ways. If there are any discrepancies in the quality, quantity, or price of a commodity in a trade contract, Islam regards it as gharar and thus impermissible. In order for a contract to be legal under the legislation of Sharia law, a transaction must be completely transparent. Both parties in a commercial partnership must supply and understand the relevant information for the contract in question. Only in this way can we ensure that there is no excessive risk or speculation on any side of the business relation. The prohibition of gharar stems from the principle that Islam intends to protect the less informed party in a business endeavor and prevents unjustified loss and gain on the other side of the relationship. For gharar to be present in a contract, it must fulfill the following conditions (Malik & Ullah, 2019):

- The uncertainty is related to a sale. Here we also consider the insurance business as the sale of a service.
- There is a significant amount of uncertainty relating to the main elements within the contract.

In the insurance business gharar initially appears due to the fact the contract is concluded based on something that has not yet happened, and there is uncertainty about the fact whether the insured event will happen or when it will occur.

Another method that insurance businesses are susceptible to the gharar prohibition is when they invest in financial assets. When a firm invests in financial assets, the firm speculates that the asset's value will rise in the future. As a result, it is considered gharar and prohibited in Islam. Islam recognizes that it is impossible to eliminate all uncertainty in this business relationship and focuses on the risk sharing in a contract. In takaful companies, the insured

individuals are also the ones who manage the fund and take part in the risk of other insured individuals in a takaful insurance fund. Finally, gharar is accepted if it is deemed insignificant and unrelated to the contract's main elements. It is also permissible in the event of other types of contracts, such as charitable gifts (Malik & Ullah, 2019). The insured individual under the conventional contract, additionally, is ill-informed on the number of their premiums being contributed for paying claims, management expenses, or invested assets. The premium contributions to a takaful fund are considered donations and thus permissible under Sharia law.

The final main element found in traditional insurance contracts and prohibited under the Sharia law is maysir. Maysir relates to gambling or speculation, any attempt to achieve profits without putting in the appropriate effort. Any type of business in which monetary success is derived solely from chance, speculation, or wild guesses, rather than through hard labor and effort is forbidden in Islam.

In insurance practice, traditionally, we can find elements of maysir because insured individuals pay premiums in the hope that an insured event will occur and the payment of compensation will follow. The premium payments always amount to less than the final compensation if a claim is submitted. Here, the insured individual will gain a certain amount of money, without putting in any effort.

On the other hand, if the insured event does not happen, the insured person loses his or her money. Making a profit at the expense of another party’s loss without giving that party any product or service in return may also be referred to as maysir. In takaful insurance, insured individuals contribute to a takaful fund and share the risk based on the principle of solidarity. If the takaful fund makes a profit, they also receive the payments (in the case when a claim is not reported). Some conditions for maysir to be present in a contract are (Malik & Ullah, 2019):

- The contract in subject consists of an exchange
- No party in the relationship has control over the event that will happen
- Both parties lose in this relationship, or one party makes an unjust enrichment at the expense of the other party’s loss

1.3.2 Investment in Prohibited Assets

In addition to the prohibition on investing in interest-bearing assets, Sharia law sets restrictions on the investments a takaful company can make. This includes the investment into companies that sell or engage in providing services relating to:

- Alcohol

- Weapons
- Gambling
- Pork
- Tobacco
- The adult entertainment industry

1.4 Insurance Market Overview

In this section, we will look at the background of insurance in Slovenia and Malaysia, as well as the regulatory agencies that oversee the industry. We will go through how takaful is now governed in Malaysia and what rules takaful enterprises in Slovenia would be subject to if they added certain takaful products to their portfolio.

1.4.1 Insurance Market in Slovenia

The insurance sector is one of the most important economic sectors in Slovenia. In 2020 it achieved its highest growth since 2009. According to the Statistical insurance bulletin 2021, compared to the previous year, the growth was up by 0,3 percentage points, and record spending, up to date, on life insurance was recorded. Average spending on life insurance has reached its peak at 362,3 EUR in 2019. The Slovenian insurance market consists of 20 insurance, pension, and reinsurance companies.

Islamic Community in Slovenia

According to a Eurobarometer survey, 3,7% of the Slovenian population is Muslim. Slovenia has a significant Islamic population, which emerged in two historical periods: under the Ottoman empire in the 16th century and after the Austro-Hungarian empire in the 19th century. As a result of the Yugoslav conflicts of the 1990s, the Muslims of neighboring countries migrated to Slovenia. The Islamic community in Slovenia is active and growing, with currently 17 communities recorded across different municipalities in the country (Islamska Skupnost v Republiki Sloveniji, 2021).

Islamic Finance in Slovenia

The demand for Islamic financial products increased following the financial crisis of 2008 since Islamic banking institutions demonstrated endurance during difficult times and strong crisis management tools (International Monetary Fund, 2010). Unfortunately, there is currently no bank in Slovenia that offers Sharia-compliant products. The Bank of Slovenia, however, claims that the banking legislation does not exclude the functioning of Islamic

financial institutions if they open in the future. Currently, no insurance company offers Sharia-compliant insurance products in Slovenia.

1.4.2 Islamic Finance in Slovenia's Neighboring Countries

In 2008, UNIQA Versicherung Group AG, one of Austria's largest insurance companies, invested in a Sharia-compliant health and life insurance joint venture in the emirate of Sharjah (Life Insurance International, 2008). The improvements, however, were not beneficial to the Austrian market. UNIQUA group provided 15% of the funding for Takful Al-Emarat, which was situated in Dubai. Unfortunately, there are presently no Islamic insurance plans available to Austrian citizens.

Since the 2000s, FWU, a life insurance business, has been a pioneer of takaful insurance products. The products, on the other hand, were created for Muslim buyers in the Middle and the Far East regions.

In Austria, more progress has been made in the area of Islamic finance. Sharia-compliant or ethical products are offered to the Austrian market by banks BAWAG PSK, Erste Group Bank, UniCredit Bank Austria, Raiffeisen bank, Oberbank, and Hypo NOE Group. Islamic financial services are offered by My Islamic Finance Österreich and INAIA Finance.

The Italian legal system does not exclude Islamic financial institutions from functioning; in fact, several amendments have been made to the legislation to allow for the establishment of Islamic financial institutions (Iannazzone, 2019). Italy and the Arab countries have traditionally had strong commercial ties. At the 2010 Forum in Rome, there was discussion and support for introducing Sharia-compliant financial products. The Italian Muslim community now accounts for over 6% of the country's population. Furthermore, the Pew Research Center predicts that by 2050, the percentage will have risen to 10%. Recognizing the market's importance, Italy has taken certain moves to create Islamic financial institutions. A mortgage plan launched by Cassa di Risparmio di Fabriano e Cupramontana savings bank was one of the earliest Sharia-compliant attempts. Later, in Pavia, a Sharia-compliant real estate deal was completed. Currently, however, no initiatives have been done in Italy to market Sharia-compliant insurance policies.

Administrative hurdles now hinder the establishment of Islamic financial institutions in Croatia. According to the independent magazine Nacional, the Croatian National Bank believes that if a bank operates in Croatia, it must follow the banking legislation in effect there, which includes the regulation on bank operation with interest. The advantages of bringing Islamic banks to the Croatian market have been acknowledged by academics. Even Bosna Bank International has announced an expansion to Croatia, which has sparked interest from other firms already interested in their goods prior to the expansion (Nacional, 2013). The bank has been successfully operating under the Sharia-compliant principles since the 2000s in neighboring Bosnia and Herzegovina. The expansion into Croatia did not yet take

place and unfortunately, no Sharia-compliant banks or insurance businesses are functioning in Croatia, at the moment.

1.4.3 Insurance Market in Malaysia

The insurance market in Malaysia consists of regular insurance companies and takaful companies working in tandem. According to the latest census, Muslims account for 63,5% of the population in Malaysia, presenting the most significant market to cater products for (Department of Statistics Malaysia, 2020). The takaful companies emerged as a complement to the Islamic banking sector in Malaysia. In 1972, the fatwa committee in Malaysia declared that conventional insurance was not permissible under Sharia law due to the fact it prohibited elements of gharar, riba, and maysir (Anand, 2014). The first takaful company in Malaysia was Syarikat Takaful Malaysia Berhad in 1984. In the same year, the legislative framework was adapted for insurance businesses to operate under Sharia principles. In 1982 a feasibility study had been conducted to see whether it is possible to establish Islamic insurance companies in Malaysia.

The Islamic financial sector's robustness to the global financial crisis of 2008, along with the Middle East's relative gain in oil wealth, has allowed the Islamic finance industry to grow at an incredible rate (Ahmad, Masood, & Khan, 2010). Strong demand for Islamic finance continues even after the global crisis. In 2018 financing by Islamic financial institutions grew by 10,5% compared to the previous reporting period (Bank Negara Malaysia, 2018). The takaful market in Malaysia exhibits sharp growth according to a Fitch Ratings report. Family takaful rose by 46,7% while general takaful grew by 1,5% in 2021 compared to the previous year. As takaful businesses develop a strong presence in the insurance sector and public awareness of takaful products rises, demand for takaful products is increasing. The market does exhibit low investment returns but has recently shown an improvement. On the other side, the takaful insurance market maintains a strong capital adequacy ratio of 230%, above the 220% capital adequacy ratio of its conventional counterparts.

1.5 Comparison of Takaful Insurance and Conventional Insurance

The first major distinction between the business operations of takaful insurance firms and traditional insurance companies is the fundamental framework on which they operate. Conventional insurance companies operate in a manner where the risk from individuals is transferred to another entity that is perceived to handle the burden of risk more skillfully. However, in takaful insurance, the risk is shared among the fund participants who willingly take on the risk of other fund members. As previously stated, traditional insurance plans

have Sharia-prohibited features such as riba, gharar, and maysir. The differences are summarized in the following table:

Table 1: Summary of Conventional and Takaful Insurance Differences

Issue	Conventional insurance company	Takaful insurance company
Initial capital	Paid by shareholders	Paid by fund members or takaful operator
Underlying concept	Risk transfer	Risk sharing
Source of funds	Premiums	Donations
Source of law	Governmental state bodies	Sharia law in addition to governmental state bodies
Ownership	Shareholders	Fund members
Main goal	Profit	Compensation of members in case of an insured event
Profit case	Retained by a company	Distributed to fund participants
Management	Company	Fund members and appointed operators
Investment	Limited by state laws	Limited by state and Sharia law

Source: own work.

Furthermore, the investment products that the two organizations invest in are drastically different as a result of such restrictions Sharia law puts on the operations of takaful companies. Sharia is thus the source of law on which takaful insurance is based while conventional insurance is sourced from laws set up by states. To ensure Sharia law compliance, the takaful companies have additional governing bodies like the Sharia board and the advisor. In takaful companies, the initial capital is paid by participants, while in conventional insurance, it is paid by shareholders of the company. Conventional insurance companies focus on maximizing profits. To earn their revenue, traditional insurance firms charge premiums to insured individuals. On the other hand, the takaful operators do not operate with high profits. The focus of the takaful fund is risk sharing among the takaful fund members. There is no payment of premiums. The fund is financed with donations from members or shareholders. If the takaful company employs any agents, it must be known to the fund participants. The takaful members are essentially the owners of the takaful fund and can participate in fund management. They are also attributed to any surpluses that can occur in a takaful fund. While in conventional insurance, the surpluses are retained within the company. In the case of dissolution of a conventional insurance company, any excess is distributed to shareholders, while in takaful insurance, the surpluses are returned to the fund members or donated to charity. In addition to the regular government tax, takaful companies are also obliged to pay zakat annually, a donation to charity.

1.6 Regulation of Takaful Companies

As takaful firms perform the same functions as traditional insurance companies, extensive and uniform regulation is required. Strict regulations must be put in place to guarantee that all parties involved in insurance operations operate legally and ethically and do not abuse their position as an insurer and insured. Managing individual contributions from takaful fund members is subject to regulatory constraints, similar to what we see with traditional insurance firms. Furthermore, because they must operate in line with Sharia law, takaful insurance firms are subject to stricter limitations in the activities they can participate.

Takaful insurance firms operating in a particular jurisdiction must operate under the same legislation as conventional insurance companies in that country. This implies that they are essentially governed by the same authority. In addition to these regulations, takaful corporations must abide by laws that apply to takaful companies, which we will discuss further in the thesis.

The legal restrictions that are applied to regular and takaful firms are (Malik & Ullah, 2019):

- The regular insurer and the takaful operator have to follow the minimal capital requirement relevant to the insurance company set in place. The level of minimal capital requirement is set in the specific country of operation of the insurance company.
- The minimum deposit requirement specific to the country of operation must be followed by both takaful and regular insurers. This entails that the insurer has a minimum amount of liquidity stored in their account at the central bank of the country in which they operate.
- An actuary is necessary for the operations of the regular and takaful insurers.
- All products developed by the insurance company must be approved by the regulator of that country.
- A Board of Directors is legally required for conventional and takaful insurers. The Board of Directors observes and sets the insurer's risk appetite and approves the formulated investment strategy and the risk management strategy fully implemented throughout the organization.
- Reinsurance must be arranged for both types of the insurer, along with the type of reinsurance and the maximum limits to reinsurance a company can purchase.

Further legal requirements set out for takaful insurance operators follow (Malik & Ullah, 2019):

- Additional legal requirements for takaful firms begin with the legal establishment of a Sharia board, a Sharia advisor, and a Sharia-compliance team. The regulatory authority bodies oversee the functioning of Islamic financial institutions. It assures that enterprises using the Islamic financial institutions' designation adhere to Sharia law. And those other elements of Islamic financial institutions' operations are closely monitored. All products and models of operation developed by the takaful insurer must comply with Sharia law.

This is monitored by the Sharia board that approves all products from takaful insurance companies. The Sharia audit department should be set out within a takaful operator if the company size allows it to do so. For smaller takaful operators, an external Sharia audit board can exist to approve the claims reported to the company. The Sharia board monitors whether the reported claims do not violate Sharia law. The Sharia advisor is an expert in their field, a person or institution, that is set out to advise on matters relating to compliance with Sharia law. Within a company, they are also entrusted with refunding surplus to participants of the takaful fund, approving investments, and overseeing and approving charitable donations. Ideally, a Sharia board, Sharia advisor, and a Sharia-compliance team would be set out by the government regulator for the whole country, and to ensure uniform regulations throughout different operators.

- Furthermore, the investment that the Islamic financial institutions participate in must be approved by the Sharia board.
- If the takaful operator operates under the wakalah model, a wakalah fee, a percentage of overall contributions from members into the wakalah fund, must be approved by the relevant authority. A wakalah fee is a service fee that compensates the wakalah fund operator for his services. Later, we will further discuss the wakalah model of operation of takaful insurance companies later.
- If a claim is reported to the takaful insurer, it must be paid out from the fund set out to pay claims and not from the fund used to pay expenses.

Solvency II is the European Union's new legal and regulatory framework for insurance and reinsurance businesses' whole operations that came into effect on January 1st, 2016. The most significant changes are the new solvency and risk management regulations. Solvency II key goals are to safeguard policyholders, provide a solvency buffer that reflects the whole exposure to all risks, anticipate market developments, be based on principles rather than specific regulations, preserve financial stability and increase transparency. Three pillars make up Solvency II. Solvency II first pillar establishes quantitative requirements for technical provision evaluation and model calibration. The second pillar defines the qualitative requirements, which include risk management and oversight. The final pillar imposes disclosure obligations and improves market transparency and discipline (EU Commission, 2022).

Introducing takaful insurance models into Europe means that the companies in question will be subject to the Solvency II directive. In many ways, Solvency II can improve the robustness of the takaful company's operations by increasing transparency and setting appropriate capital requirements for the firms. This approach of the legislation to protect the interests of policyholders is in accordance with Sharia law. However, we can also indicate some concerns that may rise along with the specificity of the industry not being well established in Europe.

The first issue is what available funds the takaful company would have for the solvency margin. In its initial stages, it can be assumed that takaful companies will be under the same legislation as mutual insurance companies due to the high similarity in operation. It is likely that usual sources of the takaful insurer may fall into the category of ancillary funds and are not available to cover the minimum capital requirements (Dreassi, 2009). This can possibly be solved by a gradual introduction of takaful insurance into the European market. Rather than opening a fully Sharia-compliant insurance company, the existing conventional insurance operators can begin introducing takaful products into their offer until there is more regulatory recognition of the alternative method of conducting the insurance business. When a conventional insurance company offers takaful insurance products in the form of a separate segment of the company, it is referred to as the takaful window. This approach is used when tapping into a market not yet explored and ensures gradual introduction and enables market testing.

The second major issue for establishing takaful companies under the Solvency II directive is the treatment of risk the company undertakes, specifically the technical provision (Dreassi, 2009). Since the investments from the takaful operator must be interest-free and follow additional Sharia law restrictions mentioned in previous sections, this may pose a significant challenge for takaful companies operating in Europe. The pool of the investment that is fully Sharia-compliant is limited but growing nonetheless. However, at this stage of development, investing in Sharia-acceptable products would entail overexposure to a certain segment of the economy, industry, or company. In turn, this leads to the increase in market risk faced by the takaful company as there are few diversification possibilities. This will make the capital requirements higher for the takaful companies and it may affect their operations.

The third major issue we recognize for takaful companies operating in Europe complements the last issue of limited investment opportunities in Sharia-compliant assets. Article 134 of the Solvency II framework states that for assets to be held to cover technical provisions they must be localized within the community or in any European Union member state. It is obvious that the introduction of takaful insurers into the European market has large opportunities due to the growing demand, but it will be faced with many difficulties in terms of the legal framework until the growth progresses further.

International Accounting Standards (IAS) are a collection of regulations developed by the International Accounting Standards Board to provide a standard for financial statement preparation and presentation. Accounting rules are used to create financial statements (standards) that businesses must follow to guarantee that their financial data represents reality and that this reality is recognized throughout the world. International Financial Standard (IFRS) 17 will come into effect on January 1st, 2023; however, it can be used sooner. The discussion on how IFRS 17 will impact takaful operators has been very limited, and interpreting it for takaful companies may not be very straightforward as the standard does not recognize the specifics of the industry in question. Some market players even argue

that IFRS 17 is inapplicable to takaful companies, as there is no transfer of risk from the policyholder to the company (Millman, 2018). IFRS 17 is applied to mutual insurance companies as well. Due to the similarity to the previously mentioned form of the insurance company, takaful operators will also have to adhere to IFRS 17. Some issues that appear with the IFRS treatment of takaful companies start with the complexities of disclosure requirements. There are multiple funds within a takaful insurance company (shareholders fund, policyholder fund, and even more in certain jurisdictions). For these funds, the company needs to provide separate reports. In takaful operations, if a surplus appears, it is distributed to the fund participants. Otherwise, in case of a loss, a benevolent loan must be provided to the company. This raises an issue of whether they need to be included in cash flows, as it is not directly treated in the legislation. Some difficulties also appear in the selection of the measurement model used while accounting, where takaful companies may have to assess every product they offer in terms of what treatment it qualifies for.

1.7 Issues in Takaful Insurance

Takaful insurance is a very young industry that has been confronted with several problems in the course of its development. We must acknowledge the industry's achievements and the amount of solvent and successfully functioning companies it has produced. For years, the takaful business has been the fastest expanding segment of the global insurance market, with truly spectacular outcomes. Even global corporations have realized the market's potential, propelling the takaful industry's continued rise. However, because the business is still so new, there are still significant challenges with its wider global acceptance. We will briefly examine the obstacles that the takaful sector encounters in its operations, as well as certain issues that takaful enterprises may face directly, in this section. The issues we are going to discuss are lack of consumer awareness, expertise, regulation, retakaful companies, and the lack of investment opportunities for Islamic insurance companies.

Takaful enterprises very early in their operation can face certain demand issues. This is fueled by the fact that the sector is new and still laying its foundations, so there may be some mistrust and apprehension. It is critical to research the market in which the takaful firm wishes to operate. Even within Muslim communities, businesses may encounter additional demand challenges for a variety of reasons. Certain Muslims believe that the insurance sector is in some ways banned by Islamic teachings and hence shun the industry's products in general, particularly life insurance policies, which they see as gambling with a person's life (Alnemer, 2013). We have previously discussed that insurance was practiced even by the prophet Mohammad himself and has shown open support to decreasing the potential of risk adversely impacting an individual’s wellbeing. It is necessary to grow the public knowledge of the takaful industry as the Sharia accepted substitute for conventional types of insurance.

Knowledge inadequacy is a particular problem faced by takaful insurance companies. Professionals must approve every product sold as Sharia-compliant. Thus, this challenge is aggravated by the fact that the aforementioned personnel is required by management and supervisory organizations, such as the Sharia committees that oversee takaful corporate Sharia compliance. Good education in this sector is still in its early stages of development, and new businesses may have difficulty organizing a Sharia Board, which is usually made up of three scholars, and hiring a Sharia adviser, who must be experts in their field with the necessary expertise and education. This problem is further intensified when corporations wish to start offering Sharia-compliant insurance products in nations where Muslims are not the majority, and Sharia scholars may be even less accessible.

In comparison to the industry's regulatory evolution, takaful has expanded at a significantly faster rate. Because the Islamic insurance sector suffers from a lack of widely accepted regulation, various companies interpret Sharia law independently. Due to the numerous interpretations, the products offered by the takaful companies are not standardized, nor are the procedures and models employed inside the organization. Although the AAOIFI has developed norms adopted by several Middle Eastern nations, there are no universally acknowledged regulatory standards for the operation of takaful insurance. As a result, in many countries with active takaful markets, there may appear an issue with ineffective takaful insurance company oversight and a lack of assistance from takaful supervisors (Bhatty, 2010). There will be a conflict between takaful fund management, which is primarily concerned with producing a profit, and the Sharia committees concerned with Sharia concerns if there are no well-defined rules that allow little space for dilemmas and discretionary acts by administrative structures.

As previously mentioned, the investments of takaful companies are limited by the rulings of Sharia law. This encompasses the prohibition of operating on the principles of riba, gharar, and maysir but also prohibits conducting investment into firms that operate under those aforementioned principles (Jaffer, Ismail, Noor, Unwin & Ajayi, 2010). Additionally, takaful firms cannot engage in investment in firms selling other products prohibited by Sharia law such as alcohol, pork, the adult entertainment industry, gambling, and guns. This further limits the pool of investment for takaful insurance companies and indicates that there must be a critical awareness concerning conducting investment, which inhibits necessary analysis of companies the takaful firm may engage in business with. A traditional insurance firm's financial strength is founded, among other things, on the successful investment of a portion of their premiums and equity in various financial market instruments with strong credit ratings and liquidity. However, because most of these instruments pay interest, takaful funds are unable to invest in such instruments. One of the most challenging issues that funds and their operators face is a shortage of quality and liquid, Sharia-acceptable financial

instruments, which makes it impossible to produce substantial profits. Some efforts have been made to establish Sharia-compliant instruments that Islamic financial companies can invest in; however, the lack of liquid investment opportunities remains one of the biggest problems of the Islamic insurance industry.

Reinsurance companies that operate under the teachings of Islam are scarce in Muslim majority countries and non-existent in non-Muslim majority countries. This notion limits the choices of the takaful insurance firms regarding reinsuring their business and may hinder the company's successful management. To maintain homogeneity of risk and avoid dangerous overexposure takaful companies must also engage in reinsurance. These issues that the takaful companies face would be easily resolved by the establishment of retakaful firms. However, in reality, reinsurance firms that have Sharia-compliant operations are very few, and the takaful companies are left wishing nothing else but to reinsure with conventional reinsurers. This is allowed by Sharia scholars; it is viewed as a necessity based on scarcity (Asmak , Marhaini & Buang, 2011).

1.8 Previous Studies on Financial Performance Analysis

Previous studies on financial performance analysis of takaful companies compared to conventional insurance companies are listed in the following table on page 26, as well as the authors and years of publication of the paper.

2 TAKAFUL MODELS AND PRODUCTS

2.1 Takaful Models

Takaful companies differ based on the underlying conceptual framework on which they work. How funds flow through the takaful fund, compensation schemes, and profit allocation is defined within a certain takaful model. Broadly, we can divide takaful models into for-profit and non-profit. For-profit includes the cooperative or tawuni model, while for-profit models are wakala, mudarabah, and waqf (Malik & Ullah, 2019). Not-for-profit takaful models operate based on the takaful operator that does not get any compensation for the services they provide, while in for-profit models, the takaful operator is compensated.

Table 2: Previous Studies on Financial Performance Analysis of Takaful Companies in Comparison to Conventional Insurance Companies

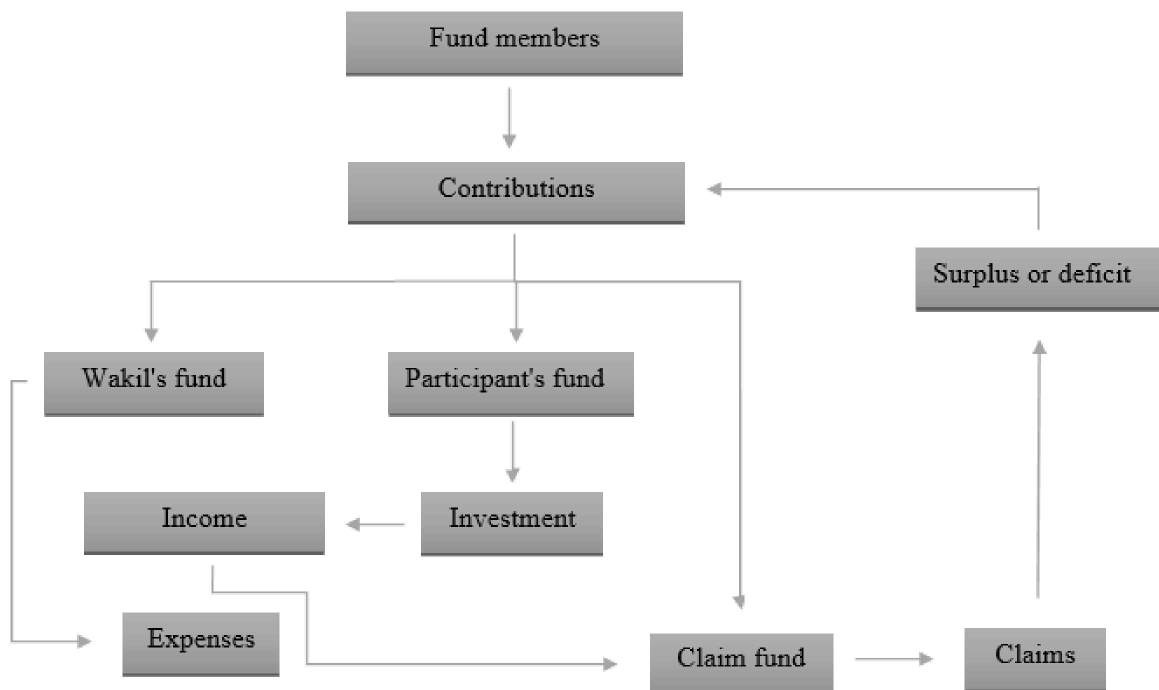
No	Author	Title of study	Year
1	Saad et. al	A Comparative Analysis of the Efficiency of Takaful and Conventional Insurance in Malaysia	2006
2	Saad, Norma and Haji Idris, Nur Edzalina	The efficiency of life insurance companies in Malaysia and Brunei: a comparative analysis	2011
3	Talat Afza, Muhammad Jam-e-Kausar Ali Asghar.	Financial reforms and efficiency in the insurance companies of Pakistan	2012
4	Muhammad Syafii Antonio, Mohammad Mahbubi Ali, & Akbar	A Comparative Analysis of the Efficiency of Takaful and Conventional Insurance in Malaysia	2013
5	Héla Miniaoui, Anissa Chaibi	Technical efficiency of takaful industry: A comparative study of Malaysia and GCC countries	2014
6	Hafiza Tahira, Zeeshan Arshad	Comparative performance of Islamic and conventional insurance companies in Pakistan	2014
7	Hachemi, Mohamaed, Oun Eshebani, Abd Aziz, Wan Abd, Ghani, Ridhwan Ab. Aziz	Takaful and Conventional Insurance: A Comparative Study	2014
8	Aysha Al-Salih	Takaful and Conventional General Insurance: Analyzing Muslim Consumers' Perceptions and Choices in the UK and Saudi Arabia	2014
9	Sutan Emir Hidayat, Aaleya Mohammed Abdulla	A Comparative Analysis of the Financial Performance between Takaful and Conventional Insurance Companies in Bahrain during 2006-2011	2015
10	Muhammad Hanif Akhtar	Performance analysis of Takaful and conventional insurance companies in Saudi Arabia	2018
11	Nor Aishah Hamdan	A Comparative Analysis of the financial performance of Takaful and Conventional Insurance in Malaysia	2018
12	Muhammad Abbas, Allah Bakhsh Khan, Salman Abbas, & Zeeshan Mahmood	Determinants of Cost Efficiency of Takaful and Conventional Insurance Firms of Pakistan	2018
13	Tarifa Almulhim	Analysis of Takaful vs. Conventional insurance firms' efficiency: Two-stage DEA of Saudi Arabia's insurance market	2019
14	Waheed Akhter, Hassan Jamil, Kim-Shyan Fam	Islamic influence on customer satisfaction: evidence from Takaful and conventional insurance industry	2021

Source: own work.

The tawuni model of providing takaful insurance services was practiced by the first takaful operator, the Islamic company of Sudan. The core principle of this non-profit concept is to pool members' contributions and pay out claims in the event of insured events. Each person makes a financial contribution proportionate to the risk amount they acquire in the takaful fund. The takaful operator acts as an agent, providing the technical assistance of the takaful fund is not compensated monetarily. All the surpluses that may occur in the takaful fund are distributed to fund members.

The phrase wakalah originates from an Arabic word that means "agency." As a natural result, the wakalah insurance business is fee-driven and relies on a contract similar to what we can consider an agency contract. Wakils are employed companies or agents who provide these management services to the takaful firm. These professionals use their knowledge and experience in the takaful insurance organization to provide managerial support, gather contributions, manage investments, and pay out surpluses. Wakils are experts in their industry, and they must have the necessary training and experience to provide such services. Wakils are reimbursed for their services by a fee derived from participant contributions to the fund (Whear & Western, 2006). The Sharia advisory board sets the fee that must be reasonable and acceptable. Individual fund members make contributions according to the coverage they want and the risks they're willing to take. Participants provide initial capital (Pasha & Hussain, 2013).

Figure 3: Simplified Pure Wakalah Model



Adapted from Malik & Ullah (2019).

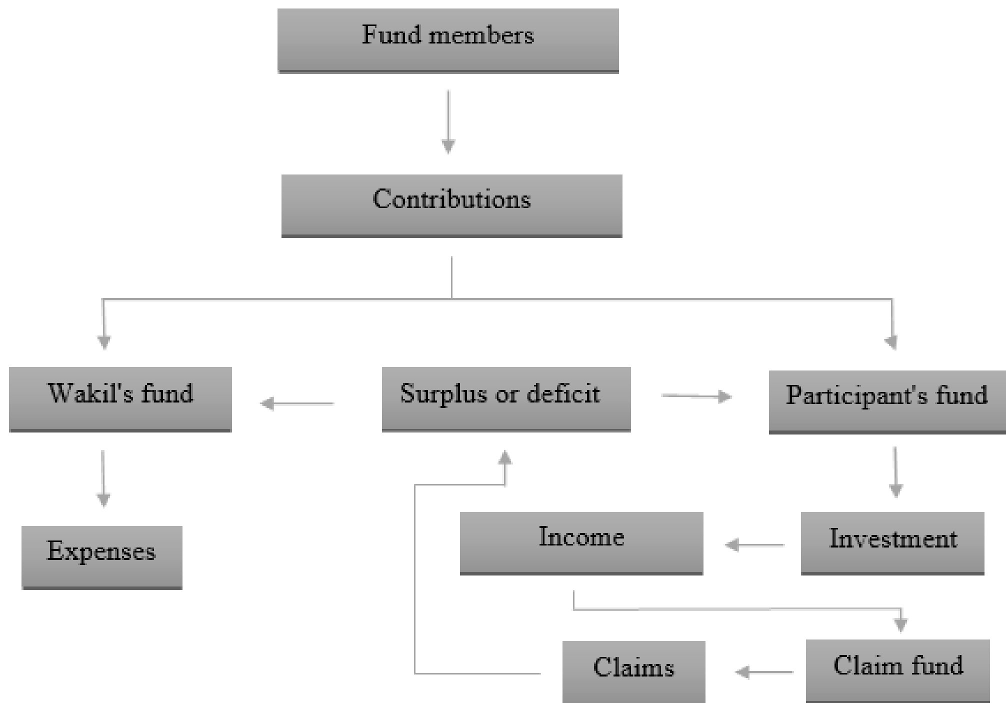
The fund members are the owners of the takaful business under the wakalah model, and any excess generated by the funds' investments is allocated to them. The wakil cannot be reimbursed by the takaful fund's profits in the pure wakalah model. In some hybrid models, the wakil can receive a part of the surplus from investment profits if agreed in the contract. Before the wakil invests the funds in Sharia-compatible assets, retakaful and wakalah fees are deducted. In the event of a loss, the takaful operators must provide the takaful fund with a charitable loan or qard hasan (Wahab, Lewis & Hassan, 2007). The literature differs on the topic of loss occurring within the takaful fund, where some sources note that participants may also make a benevolent loan to the fund in case of loss (Malik & Ullah, 2019). Additional expenses that the shareholders' fund covers are marketing services that occur during the operation of the takaful fund. A simple representation of the flow of funds in the wakalah takaful model is seen in the figure 3.

Mudarabah is essentially a partnership agreement based on a profit-sharing mechanism. It is a unique partnership in which one partner invests capital (money) and the other works as a laborer. The one who invests funds is known as rabbu l-mal (capital owner), while the person who invests his labor is known as mudarib. The rabbu l-mal depends on the mudarib to utilize their knowledge within the partnership and does not actively participate in the business venture management. The one who bears the loss in this business relationship is the capital provider, while in the event of a surplus or profit occurring, it is divided by the parties based on previously specified proportions (Malik & Ullah, 2019).

The takaful operator and the insured form a partnership under the mudarabah model, with the takaful operator acting as the mudarib, managing the takaful fund and investing his time, effort, and knowledge, and the insured acting as the rabbu l-mala. They invest their capital but do not actively participate in managing the fund. The mudarabah model applies to the takaful insurance company in that any excess that may arise as a consequence of the investment of contributed funds is split between the takaful operator (mudarib) and policyholders (rabbu l-mal) in predetermined proportions. Within a mudarabah model, the takaful operator's responsibilities include collecting contributions, settling claims, investing funds from contributions, and distributing surplus that may occur in the fund, in which the operator has a stake. Because the fund's policyholders are the capital owners in this business partnership, any fund potential losses are covered by the policyholders' additional contributions (The World Bank, 2012).

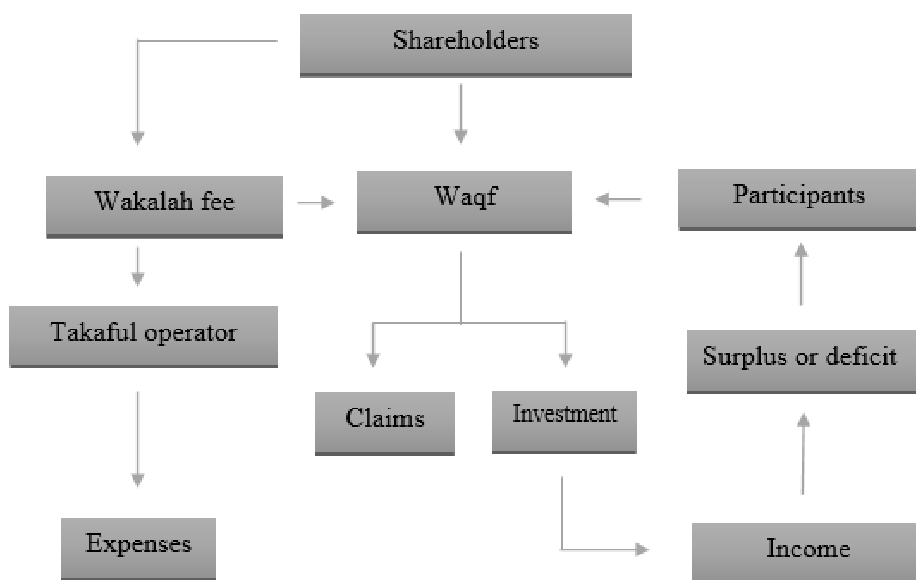
Waqf in the Islamic community represents donating to charity a fixed asset that produces financial relief continuously, such as a building or land with growing crops. It is an established tradition recognized by the Islamic community that has a goal of transferring the asset to another individual or entity. The waqf takaful insurance plan differs from the others in that its sole purpose is social and philanthropic. Relevant to the takaful business, it consists of providing relief to participants against predefined losses. Monetary donations and interest-free loans to waqf fund members are the most common forms of assistance. To become a member and receive the said assistance, an individual can fill out a proposal to be reviewed by the takaful operator.

Figure 4: Simplified Mudarabah Model



Adapted from VIS Credit Rating Company Limited. (2022).

Figure 5: Waqf Model



Adapted from Khan (2008).

The wakif, takaful operator sets the amount of the waqf and the fund conditions. Initial investment from the fund's operator is required to create the fund. As the goal of the waqf fund is purely humanitarian, any surpluses created by investing the funds in Sharia permissible assets remain within the fund to mitigate future losses and are distributed to participants of the fund. A simplified version of the waqf takaful model is seen in figure 5.

2.2 Takaful Insurance Products

This chapter discusses the types of products takaful insurance companies offer. Similarly to conventional insurance companies, the distinction is made based on the insured item. If we are insuring life, we are discussing family takaful or Islamic life insurance products. On the other hand, if we are insuring a vehicle, building, or health, we refer to it as general takaful or non-life Islamic insurance.

Islamic life insurance plans were not available to insure an individual's life when they were first introduced. The original purpose of family takaful was to financially reimburse children and those who were financially dependent on a deceased person. Today, there is a variation in the products available. Similarly to the traditional insurance system, we can discover life insurance products that are interest-free and Sharia-compliant. The basic concept underlying family takaful is mutual recompense in the event of financial hardship caused by the loss of a family member who provided for the rest of the family. Family takaful plans are based on the tabarru or donation principle.

The holy prophet showed his acceptance of life insurance multiple times, indicating that it is preferable to leave your children affluent and well-cared for rather than to leave them poor. In many ways, the goal of Islamic life insurance plans is to alleviate poverty in the event of financial troubles within a family as a result of the death of a loved one.

Family takaful plans provide the families peace of mind and guarantee that the financial impact of an unfortunate event is reduced. They are long-term fixed-period plans with an investing component. If the insured person dies or suffers a permanent disability or disease, compensation is provided to the beneficiaries (Billah, 2019). Individuals who receive compensation are known as beneficiaries of a family takaful plan and must be exposed to financial loss if the insured event occurs. Two names must be included as the beneficiaries of the takaful plan, and they may distribute the claim amount to the rest of the family in case of an unfortunate event. Family takaful schemes operate under the mudarabah contract. Individuals who wish to guarantee that the investments made by the insurance firm with their contributions are ethical or in conformity with Sharia law choose a family takaful plan.

The amount of financial benefits received is decided by when the covered event occurs relative to the period of signing the contract or when in the contract maturity the insured is

no longer able to contribute to the fund for any other reason. Contributions from the fund members are allocated into two funds, a personal account used for saving and investment and a special account used to pay out claims in case a claim is filed from the fund members. If the insured person dies before the contract matures, the beneficiaries will get the complete amount of contributions paid throughout their lifetime and their portion of the investment earnings. If the insured person is still living at the time of maturity, they will get the whole number of contributions plus a portion of the earnings from the takaful firm's investments. If a family takaful period is disrupted by illness or accident, the covered individual is reimbursed the amount of payments made up to the time of the illness or accident, plus a profit share. If an individual is unable to contribute to the fund any longer due to financial constraints, they are entitled to have the whole amount of their contributions up to that time enhanced to account for the profit share. If the payments to the takaful fund are disrupted, resulting in the individual not contributing to the fund constantly, the insured has the right to have the financial assets contributed to the fund augmented with the share in profit, and missed installments are not needed. The coverage will, however, be decreased.

We may separate family takaful into unit-linked family takaful and family-term takaful based on whether the claim amount is paid out in the event of death or not (Malik & Ullah, 2019). Claim amounts are paid out in unit-linked takaful plans when the contract expires or dies. They are long-term insurance policies that also include a component of investment. Within unit-linked takaful plans, the sorts of coverages differ. Family protection plans, child education plans, life partner plans, retirement income plans, life partner plans, and child education and marriage plans are some available options. Individuals who invest in unit-linked products have more flexibility since they can withdraw their money at any moment and participate in the company's investment decisions; in addition, the insured can change the number of contributions they make according to their financial situation (Malaysian Takaful Association, n.d.). Family term takaful, on the other hand, only pays out if the insured person passes away. Critical sickness protection, accidental death or dismemberment, family income benefit, hospital daily allowance, and other supplemental benefits can be added to the base family takaful plan. According to Mohammad Ma'Sum Billah, the family takaful products can be divided into:

- Personal accident takaful
- Critical illness takaful
- Group students' takaful
- Education takaful
- Senior citizen takaful
- Endowment takaful
- Foreign worker takaful
- Mortgage takaful
- Breast cancer takaful
- Pregnancy takaful
- Saving takaful
- Online family takaful
- Unit trust takaful

General takaful or non-life Islamic insurance offers financial protection against financial losses that result from property damage. Fire, earthquakes, floods, traffic accidents, burglary, third-party responsibility, and other natural disasters can cause property damage. The contract provisions precisely define which risks are covered. Any other takaful plans other than family takaful fall into the category of general takaful plans. It is set up in such a way that individuals protect one another from financial losses through mutual cooperation and solidarity. Individual insureds contribute to the takaful fund on the tabarru or donation principle, and the claim amount is paid out if the insured event happens. Each individual contributing to the fund accepts to carry the risk of the other fund member. All of the insurance company's investments must follow Sharia law.

General takaful is a contract of indemnity, intending to place the insured person in the same position they were at before the insured event occurred. The contracts are usually shorter term, ranging up to one year. The amount of contribution depends on the value of the property insured. However, the number of contributions can vary based on the contract duration and history of damages inflicted on the insured material asset. General takaful plans provide individuals peace of mind and guarantee that the financial impact of an unfortunate event is reduced. According to Mohd Ma'Sum Billah, the general takaful products can be divided into:

- Motor takaful
- Accident takaful
- Fire takaful
- Experience in fire takaful
- Medical takaful
- Health takaful rider
- Group takaful
- Group takaful for health care
- Hajj takaful

3 METHODOLOGY

In this section, we are going to discuss the methods and financial indicators used in the analysis of whether there is a significant difference in the financial performance of Slovenian conventional insurance firms and Malaysian takaful companies. Firstly, we are going to discuss the main ratios that will be observed in insurance companies. Next, the problem statement and hypotheses to be tested will be presented in this section, followed by a presentation of the firms whose data is involved in the analysis.

Descriptive statistics are used to describe the relationships between variables in a sample or population (Yellapu, 2018). In our analysis, descriptive statistics will be used to analyze our analysis findings, and to explain the generated data paired with t-tests and graphs of the respective analysis section.

3.1 Financial Ratios

Solvency, underwriting performance, profitability, and operating efficiency all influence an insurance firm’s financial success. The aforementioned ratios are frequently used to compare the performance of organizations in the same industry (Wild, Subramanyam & Halsey, 2009). Specifically, the observed ratios are:

- Return on equity
- Return on assets
- Proportion reinsured
- Profitability ratios
- Investment performance ratio
- Solvency ratio
- Operating efficiency ratios

The first ratio we are going to analyze is a return on equity (ROE). The return on equity holds information on the company’s financial status and performance. It shows the amount of net income generated by the capital invested by the shareholders (Fridson & Alvarez, 2011). Simple metrics for assessing return on investment are provided by return on equity. We can establish different conclusions in terms of a company's competitive advantage by comparing its return on equity to the industry average or competitors. Return on equity is significant since it indicates total profitability for the company's stakeholders. It enables investors to compare the success of several equity investments which influences their future investment strategy. Due to the cyclical nature of specific sectors, it is most useful when used to compare companies within the same industry. The formula for calculation of the return on equity ratio follows (Fridson & Alvarez, 2011):

$$Return\ on\ equity = \frac{Net\ income}{Shareholder's\ equity\ (capital)} \tag{1}$$

Even though the return on equity remains one of the most commonly used performance measures, it is insufficient and sometimes misleading to the spectator. The higher the return on equity, the higher the perceived company’s profitability, as they produce more net income per monetary unit of capital invested. These values can be distorted in a few ways. By changing the company’s capital structure and taking on more debt, the company increases its return on equity. With the increased debt comes increased uncertainty as it can be viewed as the company taking on more risk, which may adversely impact the future return on equity. Additionally, return on equity is based on accounting values and is thus subject to possible manipulation (Trainer, 2018). Due to the previously noted instances of possible manipulations that can happen regarding the company’s return on equity, it is important to observe this metric in addition to other performance measures, as it will give a more complete picture of the company’s profitability to the observer of the data.

Another indicator very popularly used to measure a company's financial performance is the return on assets ratio (ROA). The significance of the return on assets ratio lies in the fact that it indicates how well the company's assets are managed in relation to the final goal of generating earnings for the company. Return on assets' usefulness can stem from the fact that it can be used as an indicator that a company is in financial distress (Sukmawati & Garsela, 2016). It is frequently used as a prediction measure of how well a firm will perform in the future, or how well the company will create income in the next years. The most commonly used formula for calculation of the return on equity ratio follows (Mankin & Jewell, 2010):

$$Return\ on\ assets = \frac{Net\ income}{Total\ assets} \tag{2}$$

The figures we see on the balance sheet can be altered to put the firm in the best light using any performance metric based on accounting values. One of the simplest methods for a company to influence the outcome of the return on assets ratio is to temporarily reduce current assets, hence raising the return on assets result. Companies can modify fixed assets too, by using various types of depreciation. For instance, accelerated depreciation impacts the net fixed assets and can increase the return on assets ratio (Bragg, 2022). It is critical to remember that businesses go through cycles throughout the year, and we must be mindful of the many seasonal factors that might affect sales during the accounting period. Because net income is calculated during the accounting period, which is normally one year, return on average assets (ROAA) is calculated by taking the normal average of assets at the beginning and end of the accounting period.

Reinsurance is a significant component in the operations of every insurance business. To be able to expand their services, conventional insurance companies transfer some of the risks the company is taking to a different entity specialized in insuring the insurer. However, this is differently viewed as the conventional way of running a reinsurance business is prohibited in Islam due to it containing Sharia-prohibited elements. Nevertheless, for takaful companies to be sustainable in the future they must engage in reinsurance. Here, the takaful companies seek out reinsurance on a different basis. Rather than risk transfer, risk sharing is practiced by the companies. The degree to which a company relies on reinsurance can be measured by the proportion reinsured ratio (Medved, 2021):

$$Proportion\ reinsured = \frac{Gross\ written\ premium(contributions) - Net\ premium}{Gross\ written\ premium(contributions)} \tag{3}$$

According to Koller (2011), profitability ratios are the most reliable and relevant measurements in the insurance industry that show the company's ability to increase

revenue. In this master thesis, the loss ratio, expense, and combined ratio are the profitability ratios that are observed.

The loss ratio is a measure that can indicate the level of risk the insurance company is taking on or what percent of payouts is settled. A loss ratio may indicate the need to improve risk management in the company and can thus be a financial distress signal. A high loss ratio for conventional insurance may indicate that the company is not charging adequate premiums for the risk it is assuming, or it is a measure of the underwriting performance of the insurance company. For takaful insurance companies, the loss ratio can indicate that it is necessary to put additional financing into the company in the form of a benevolent loan. It is calculated as (Medved, 2021):

$$Loss\ ratio = \frac{Net\ Claims\ incurred}{Net\ written\ premiums\ (contributions)} \quad (4)$$

To complement the loss ratio the expense ratio is used to indicate the financial performance of an insurance company. It is computed by dividing the costs of providing insurance services by the net premiums generated or contributed donations (in the case of takaful firms) (Dhiab, 2021). Advertising fees, staff pay, and fees (in the case of takaful firms) are all expenditures that insurance companies incur. This ratio must be monitored, since it may suggest that the insurance company is charging too low premiums (or getting insufficient contributions from members) in relation to the company's responsibilities. It might also suggest that the business has to cut expenditures to remain sustainable in the future. The expense ratio is calculated as follows:

$$Expense\ ratio = \frac{Expenses\ incurred}{Net\ earned\ premiums\ (contributions)} \quad (5)$$

The combined ratio is the fundamental indicator of an insurance company's profitability. It is determined by combining the loss ratio with the expense ratio, providing the observer with a complete view of the insurance company's payouts and earnings (Medved, 2021). If the ratio is less than one, the firm is generating more premiums or collecting more contributions on an annual basis than it needs to pay for claims and costs. A combined ratio higher than one indicates the insurance company was suffering a loss during the observed period. Within observing the profitability of the insurance firm, we use net earned premium. Net earned premium is simply gross premium net of reinsurance. The combined ratio is calculated using the formula below.

$$Combined\ ratio = Claims\ ratio + \ Expenses\ ratio \quad (6)$$

An important indicator of every insurance company’s financial success is the efficiency of its investment policy. As previously stated, when gathering premiums or contributions, the insurance companies generate excess liquidity. The mobilization of financial resources is one of the most significant roles played by insurance firms. As a result, they are also

important institutional investors. The job of insurance firms is to supply money to the financial market in the capacity of institutional investors. This in turn is very significant to the country and its economy, as it provides growth to the financial markets. Based on the fact that the takaful companies operate with additional investment limitations, it will be insightful to observe how the investment performance differs from conventional insurance companies. The formula used for calculating investment performance is (Medved, 2021):

$$Investment\ performance\ ratio = \frac{Investment\ return}{Average\ assets} \quad (7)$$

The company's solvency or long-term solvency means unrestrained fulfillment of all obligations at the latest at the due date (Coulon, 2020). In other words, a corporation must have adequate long-term financial sources to fulfill the solvency condition. A company's solvency is regarded as soundness. It is a crucial measure of the company's health and capacity to make the company's activities sustainable in the long run. Long-term liquidity is often defined as solvency, whereas short-term solvency is defined as liquidity. It essentially shows a company's capacity to pay its obligations at various intervals. The solvency ratio assists in the risk management assessment of non-absorbable claims (Horngren, Sundem & Stratton 1996). When assessing the financial viability of enterprises in the same sector, it is a highly valuable metric. The solvency ratio is calculated as (Medved, 2021):

$$Solvency\ ratio = \frac{Assets - Liabilities}{Net\ written\ premiums\ (contributions)} \quad (8)$$

The operational efficiency ratios are the last set of ratios examined in this master thesis. The operating efficiency ratios show how well a corporation does in managing its assets. We will be focusing specifically on the insurance firms' accounts receivable turnover, which reflects the firm's credit policy strength (Gorczyńska, 2011), and total asset turnover, which displays how well the company uses assets to generate sales (Brigham & Houston, 2006). These ratios are extremely valuable since they show the degree of activity inside a firm and its ability to manage resources. The following are the formulae for calculating account receivable turnover and total asset turnover.

$$Account\ receivable\ turnover = \frac{Sales}{Account\ receivables} \quad (9)$$

$$Total\ Asset\ Turnover = \frac{Sales}{Total\ assets} \quad (10)$$

The student t-test is a part of inferential statistics that will be used to see if there is a significant difference in the observed relative financial indicators between takaful Malaysian enterprises and traditional Slovenian insurance companies. The t-test is a statistical test that

compares two groups' means. It is commonly used in hypothesis testing to examine if a method or modification has an effect on the population of interest or if two groups differ in a meaningful way. This is a good way to test hypotheses with small numbers of samples (Kim, 2015). The t-test will be carried out over the same period and with the same sample size between the two countries observed. The choice of the t-test is dependent upon a few variables. Considering that we are observing two samples related only to the fact that they operate in the same industry, we will be utilizing an unpaired heteroskedastic t-test. The means and the variances observed in the samples are different, while the sample size remains the same. Formulae utilized are (Kim, 2015):

$$t = \frac{\overline{X_1} - \overline{X_2}}{S_{(1+2)}\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \quad (11)$$

$$S^2_{(1+2)} = \frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2 +}{n_1 + n_2 - 2} \quad (12)$$

Where $S^2_{(1+2)}$ indicates a pooled variance of the two samples, n_i indicates sample size, and $\overline{X_\iota}$ indicates the mean of the samples.

3.2 Problem Statement

The purpose of this thesis is to prove or disprove the existence of a substantial difference in the relative financial indicators of conventional and Islamic insurance companies. Utilizing the results of this research, one can conclude the relative developments and financial soundness within the analyzed companies. The thesis's secondary goal is to present and provide awareness of the Islamic faith-based manner of operating an insurance company as flexible and profitable as it is likely to develop in Western countries in the future.

Hypotheses that will be tested:

- H01: The return on equity of takaful Malaysian companies and traditional Slovenian insurance companies is not significantly different
- H02: The return on assets of takaful Malaysian companies and traditional Slovenian insurance companies is not significantly different
- H03: The proportion reinsured by takaful Malaysian firms and traditional Slovenian insurance companies is not significantly different
- H04: The profitability ratios of takaful Malaysian companies and traditional Slovenian insurance companies are not significantly different
- H05: The investment performance ratio of takaful Malaysian companies and traditional Slovenian insurance companies is not significantly different
- H06: The solvency ratio of takaful Malaysian companies and traditional Slovenian insurance companies is not significantly different

- H07: The operating efficiency ratios of takaful Malaysian companies and traditional Slovenian insurance companies are not significantly different

3.3 Data Collection

Comparable financial ratios will be observed over nine years, from 2012 to 2020, using the online database of financial data Fitch Connect and the financial statements posted on the respective official websites of the insurance companies. Fitch Connect is a global database of over 33,000 banks and 11,000 insurance firms from over 120 countries. A company's financial statements are a vital measure of its performance (PricewaterhouseCoopers, 2020). They are made public to reach a bigger audience and give information to potential investors and partners.

Due to data restrictions, the study will include a range of insurers, including life, non-life, and composite. Companies included in the analysis are as follows.

Malaysian takaful insurance operators:

- Syarikat Takaful Malaysia Keluarga Berhad
- Allianz Malaysia Berhad
- AIA PUBLIC Takaful
- Great Eastern Takaful
- Prudential BSN Takaful
- Etiqa Family Takaful
- Sun Life Malaysia
- Hong Leong MSIG Takaful
- Zurich Takaful Malaysia Berhad
- AmMetLife Takaful Berhad

Slovenian conventional life insurance operators:

- GENERALI zavarovalnica d.d.
- GRAWE zavarovalnica d. d.
- Zavarovalnica Sava d.d.
- Zavarovalnica Triglav, d.d.
- Merkur zavarovalnica d.d.
- Prva osebna zavarovalnica d.d.
- Modra zavarovalnica, d.d
- Coface PKZ zavarovalnica d.d.
- Triglav, Zdravstvena zavarovalnica, d. d
- Vzajemna zdravstvena zavarovalnica, d. v. z.

4 ANALYSIS AND DISCUSSION

In this section of the thesis, we will present the data on the Slovenian insurance companies and Malaysian takaful insurance companies mentioned in the previous section and analyze trends in their financial indicators to study whether there is a significant difference between basic takaful and traditional insurance companies' indicators. The interval we will observe is limited to a period of nine years, from 2012 to 2020.

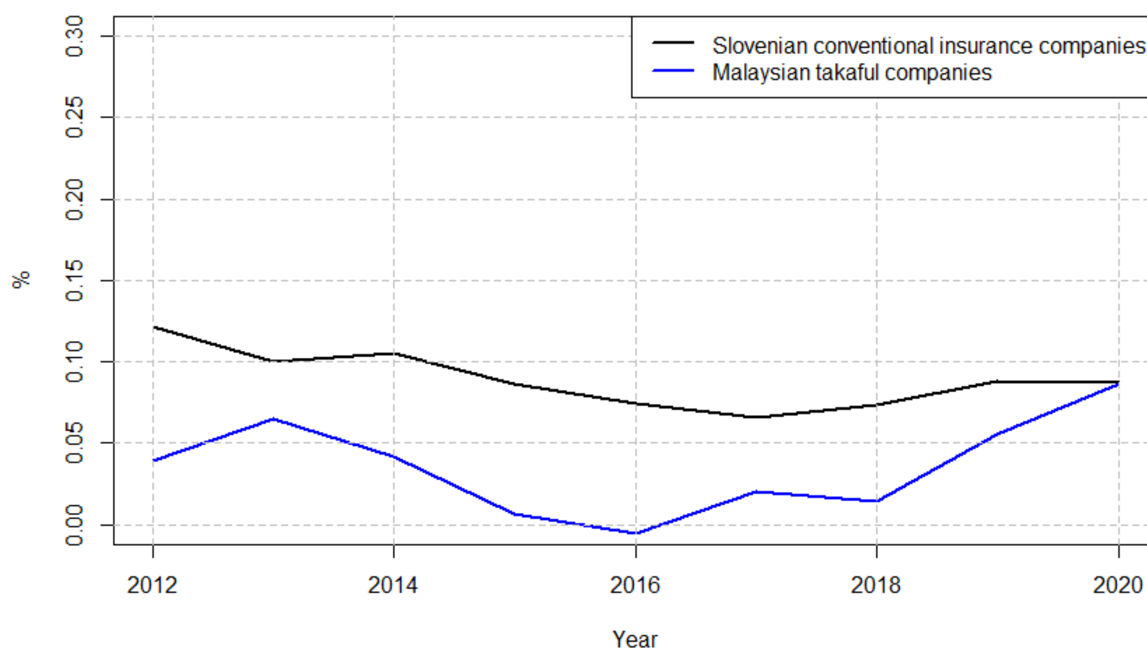
We will begin with a trend analysis of financial indicators and conclude with a t-test that will summarize the collected data, provide a final review, and prove or disprove the hypotheses set out in the thesis's problem statement section.

4.1 Return on Equity

Figure 6 and Table 3 below summarize the calculated data on the return on equity for Malaysian takaful companies and Slovenian conventional insurance companies in the period 2012 to 2020. This metric measures a company's ability to generate additional value for its shareholders. A favorable business result is produced by adding value to the organization and achieving a profit. The company should have the highest possible return on equity, as this implies that the company is producing more money with the capital invested. We can conclude that overall, the Malaysian takaful companies included in the research have had a lower return on equity in comparison to their conventional counterparts in Slovenia. A noticeable drop in the profitability measure has been noticed for Malaysian takaful companies in 2016. The drop was caused because multiple companies included in the research experienced losses during the period, causing a negative return on equity for the ten Malaysian takaful companies included in the research. When we look past the drop in return on equity experienced by the observed Malaysian takaful companies in 2016, we can see that after that difficult period, the observed companies have experienced a steady rise in the return on equity metric, almost matching their Slovenian conventional counterparts in the final year of the observed period. The observed takaful companies' net income has steadily improved from 2014, as well as their equity, resulting in an increase in this profitability indicator.

The overall higher profitability of Slovenian traditional insurance businesses and the variation in return on equity experienced by the observed takaful firms cannot be overlooked. However, the average return on equity for traditional insurance businesses in Slovenia has been steadily declining since 2014. Even if we consider the reduction, the overall conclusion is that Slovenian traditional insurance companies are more profitable on average and less volatile than the observed Malaysian takaful insurance companies.

Figure 6: Return on Equity for Malaysian Takaful Companies and Slovenian Conventional Insurance Companies in the Period 2012 to 2020



Source: Fitch Connect (2022).

Table 3: Return on Equity for Malaysian Takaful Companies and Slovenian Conventional Insurance Companies in the Period 2012 to 2020

Return on equity	2012	2013	2014	2015	2016	2017	2018	2019	2020
Malaysia	0,0396	0,0652	0,0414	0,0069	-0,0057	0,0204	0,0145	0,0557	0,0860
Slovenia	0,1216	0,1005	0,1049	0,0861	0,0742	0,0659	0,0732	0,0883	0,0873

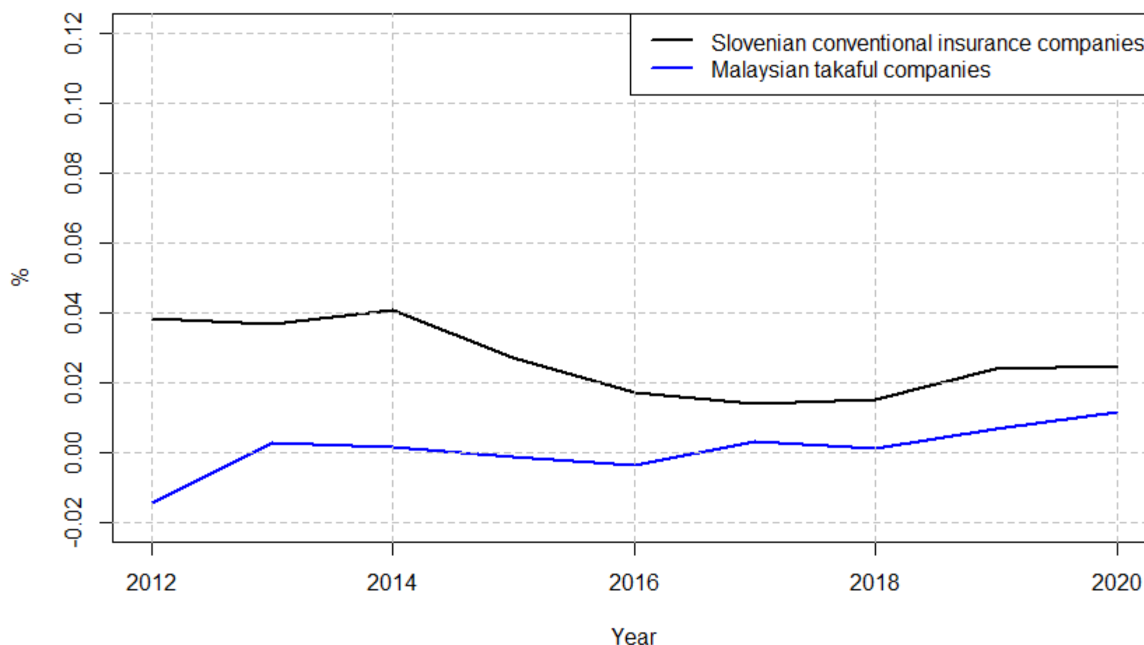
Source: Fitch Connect (2022).

4.2 Return on Assets

The results of the business analysis of ten Malaysian takaful firms and ten Slovenian conventional insurance companies, specifically return on assets, are shown in Table 4 and Figure 7 below. The return on assets demonstrates how well the organization and its management utilize available resources. A high return on assets is desirable since it demonstrates that the company is operating well and profitably with the available assets. At first inspection, the graph below supports the conclusion made in the preceding paragraph about the observed companies' return on equity, namely that, on average, the observed Slovenian traditional insurance companies outperform Malaysian takaful enterprises in terms of business results. The decline in net income in 2016 has had an impact on the return on assets for the takaful enterprises analyzed. Similarly, after the crisis period,

the firms' performances have steadily improved. The rise, however, did not overshadow the overall better performance of Slovenian traditional insurance businesses.

Figure 7: Return on Assets for Malaysian Takaful Companies and Slovenian Conventional Insurance Companies in the Period 2012 to 2020



Source: Fitch Connect (2022).

Table 4: Return on Assets for Malaysian Takaful Companies and Slovenian Conventional Insurance Companies in the Period 2012 to 2020

Return on assets	2012	2013	2014	2015	2016	2017	2018	2019	2020
Malaysia	-0,0146	0,0026	0,0014	-0,0013	-0,0037	0,0032	0,0011	0,0067	0,0116
Slovenia	0,0384	0,0369	0,0408	0,0270	0,0172	0,0138	0,0150	0,0239	0,0247

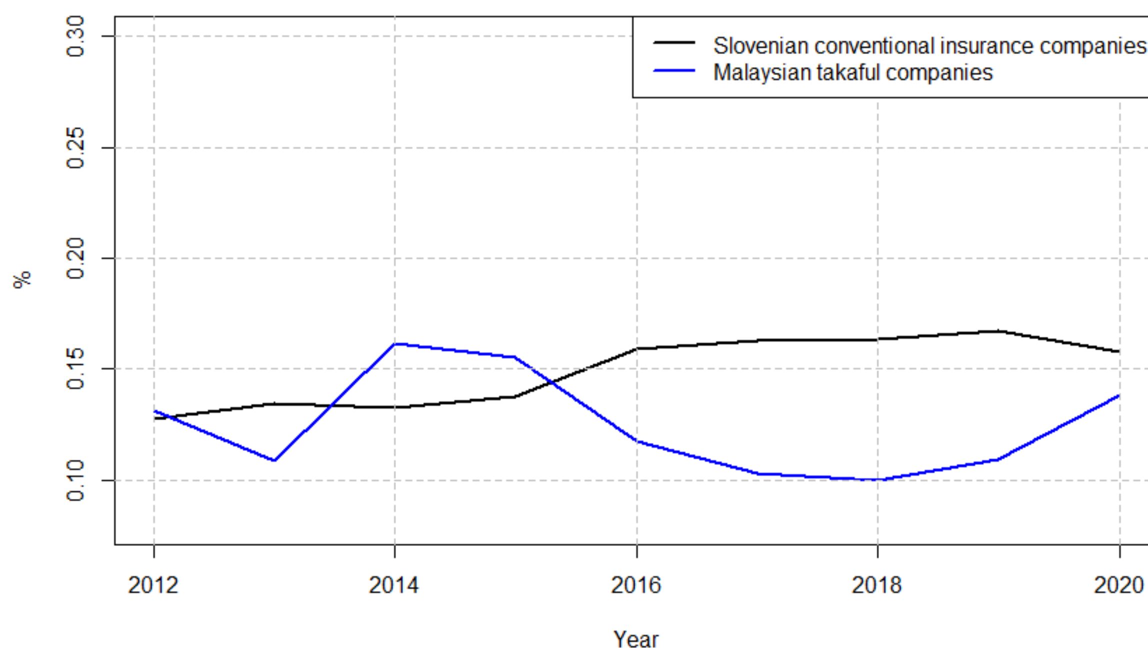
Source: Fitch Connect (2022).

Since 2014, the observed Slovenian insurance companies have experienced a decline in return on assets. The amount of assets has continuously increased, however in the cases of a few observed companies the net income did not follow the rise. COVID-19 partially influenced return on assets stagnation in some of the observed Slovenian insurance firms' in the later years of the observed period. In terms of return on assets criteria, Slovenian traditional insurance firms are more profitable than Malaysian takaful insurance companies.

4.3 Proportion Reinsured

Figure 8 and Table 5 below summarize the analysis of the degree of reliance on reinsurance of the observed Slovenian conventional insurance companies and Malaysian takaful companies.

Figure 8: Proportion Reinsured Ratio for Malaysian Takaful Companies and Slovenian Conventional Insurance Companies in the Period 2012 to 2020



Source: Fitch Connect (2022).

Table 5: Proportion Reinsured Ratio for Malaysian Takaful Companies and Slovenian Conventional Insurance Companies in the Period 2012 to 2020

% Reinsured	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Malaysia	0,1313	0,1086	0,1616	0,1553	0,1176	0,1032	0,0997	0,1094	0,1382
Slovenia	0,1276	0,1347	0,1329	0,1379	0,1593	0,1631	0,1633	0,1671	0,1581

Source: Fitch Connect (2022).

The proportion reinsured ratio indicates how much the insurance firm relies on reinsurance to offset the risk associated with its operations. Reinsurance, also known as retakaful in the case of Islamic reinsurance, assists insurance companies in their operations and helps them expand their scope of business. Overreliance on reinsurance, on the other hand, is not a good indicator since it can mean that the firm is passing too much of its gross written premiums or contributions to the reinsurer and may even signal an insurer's risk of insolvency (Bill, Hamwi & Hudson, 2001).

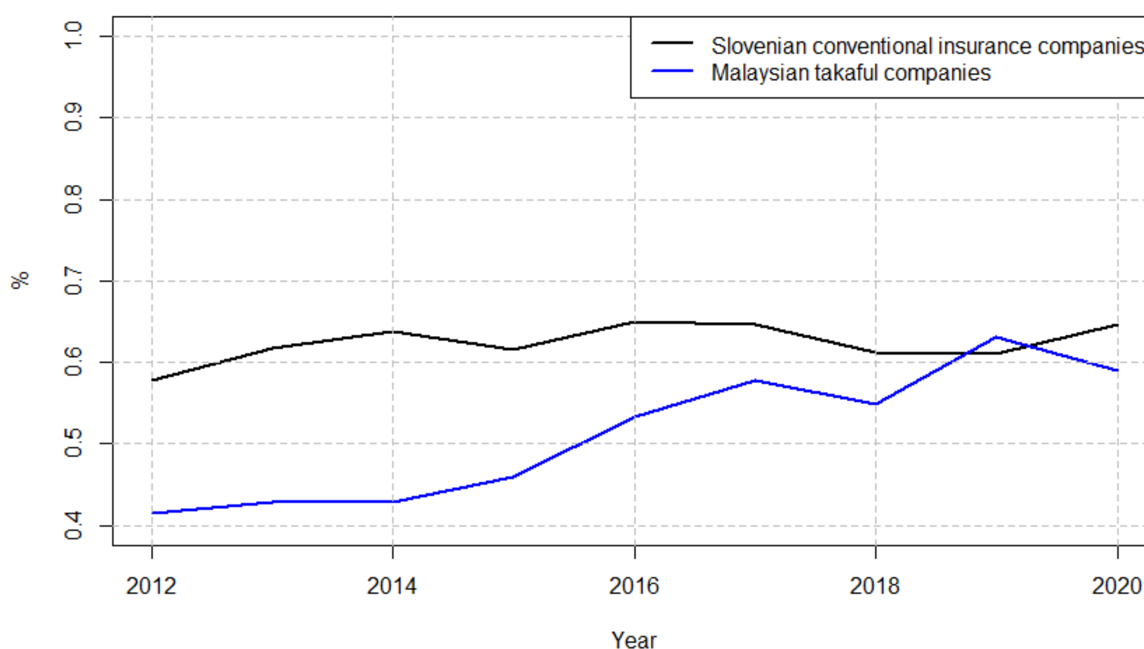
The proportion reinsured ratio is highly fluctuating over the observed period for the examined businesses, making conclusions more challenging. The observed Malaysian takaful enterprises had a stronger reliance on retakaful operations at the start of the observed period. However, in the latter part of the observed timeframe, this was reversed. We can see that Malaysian takaful enterprises have expanded the percentage of reinsurance in their operations in recent years. Some of the observed takaful firms have lately boosted their ceded business by a large amount, which might imply some potentially harmful practices. However, the standard deviation suggests that the fraction reinsured of the examined

Slovenian insurance firms has been more stable than the one observed in the Malaysian takaful companies.

4.4 Profitability Ratios

Figure 9 and Table 6 below summarize the calculated data on the claim or loss ratio for Malaysian takaful companies and Slovenian conventional insurance companies in the period 2012 to 2020. The claim or loss ratio shows us whether the company can finance the claims it has incurred. The claim ratio trend has been increasing for the observed Slovenian conventional insurance companies and Malaysian takaful insurance companies. However, we can notice that overall, the Malaysian takaful companies have enjoyed a smaller share of incurred claims in relation to their net written premiums. The information on claim ratios is most useful in combination with the expense ratios for the insurance company, giving us a complete picture of whether the insurance company can finance the expenses it is producing.

Figure 9: Claim Ratio for Malaysian Takaful Companies and Slovenian Conventional Insurance Companies in the Period 2012 to 2020



Source: Fitch Connect (2022).

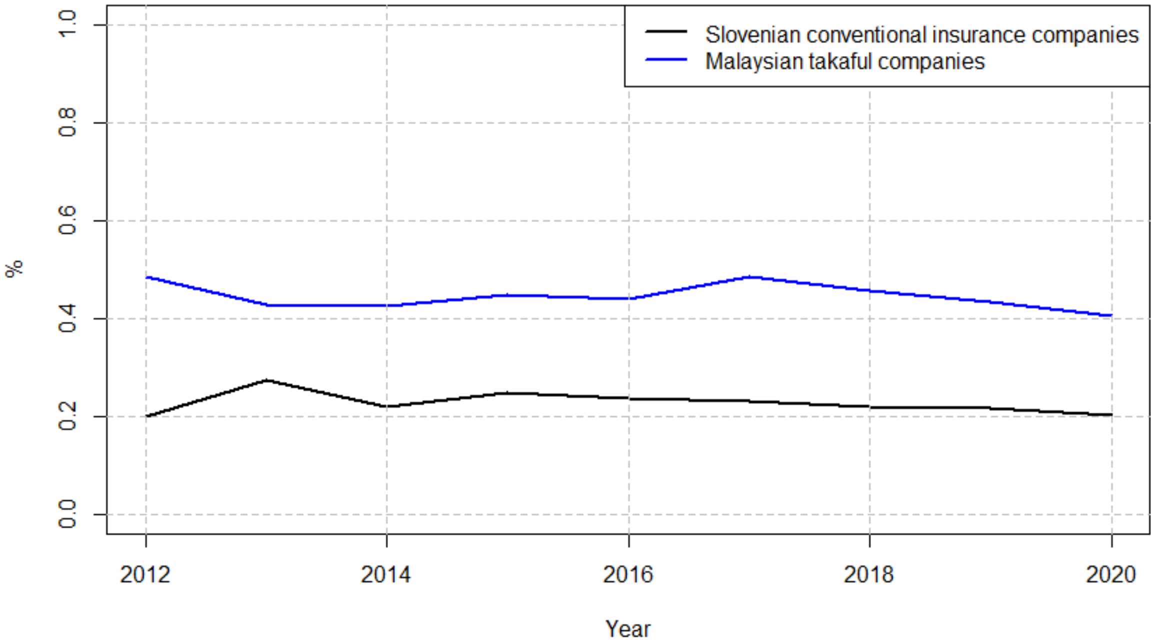
Table 6: Claim Ratio for Malaysian Takaful Companies and Slovenian Conventional Insurance Companies in the Period 2012 to 2020

Claim (loss) ratio	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Malaysia	0,4151	0,4289	0,4287	0,4597	0,5338	0,5771	0,5489	0,6315	0,5906
Slovenia	0,5774	0,6175	0,6385	0,6158	0,6496	0,6465	0,6128	0,6111	0,6458

Source: Fitch Connect (2022).

The expense ratio for Malaysian takaful firms and Slovenian conventional insurance companies in the period 2012 to 2020 is summarized in Figure 10 and Table 7 below. The expense ratio gives us an indication of whether the insurance company can finance the expenses it is incurring when selling its insurance products. Contrary to the previous metric, the observed Malaysian takaful companies are incurring higher expenses in comparison to their net earned premiums. The ratio of incurred expenses is significantly higher in Malaysian takaful insurance firms in comparison to the observed Slovenian conventional insurance companies.

Figure 10: Expense Ratio for Malaysian Takaful Companies and Slovenian Conventional Insurance Companies in the Period 2012 to 2020



Source: Fitch Connect (2022).

Table 7: Expense Ratio for Malaysian Takaful Companies and Slovenian Conventional Insurance Companies in the Period 2012 to 2020

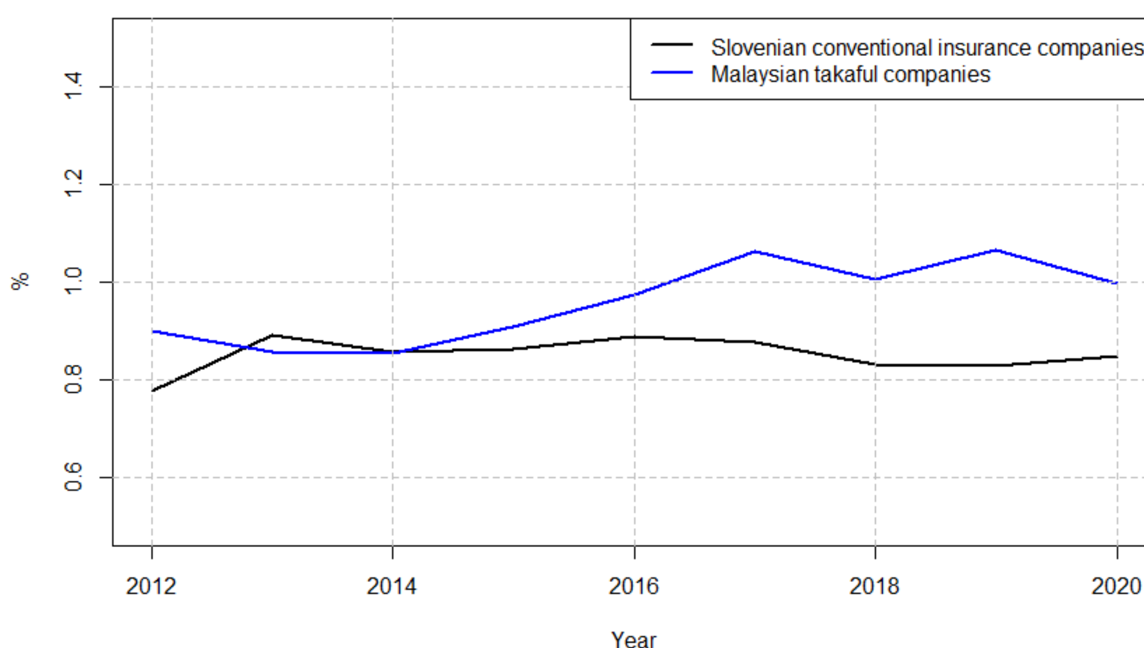
Expense ratio	2012	2013	2014	2015	2016	2017	2018	2019	2020
Malaysia	0,4843	0,4289	0,4249	0,4485	0,4403	0,4859	0,4565	0,4333	0,4051
Slovenia	0,1982	0,2732	0,2183	0,2466	0,2372	0,2307	0,2189	0,2157	0,2015

Source: Fitch Connect (2022).

A complete picture of the profitability of the observed enterprises is summarized in Figure 11 and Table 8. Here we can observe the complete picture of the success of the company's operations embodied in the combined ratio. The combined ratio is a simple sum of the claim or loss ratio and the expense ratio. However, it tells us whether the insurance company can finance the overall expenditures it is incurring with the premiums or contributions it is gathering. A positive result from the insurance company's risk-taking activity is represented by an indication of less than 100% combined ratio. Otherwise, if the combined ratio is larger than 100%, the outcome is negative, i.e., losses and expenses exceed the total insurance

premiums. The high combined ratio might be the result of charging a lower insurance premium or gathering a lower amount of contributions from members than is appropriate for the risk involved. Additionally, it indicates that the claim amounts are possibly too high for the company to cover. We may conclude that the observed Slovenian conventional insurance firms are more profitable than the observed Malaysian takaful insurance companies by combining the above two ratios. During the two years of the examined period, the mean combined ratio of the observed takaful enterprises was more than 1, suggesting that several firms suffered losses during that time. The overall profitability picture has improved in the latter years of the examined period, as the Malaysian takaful firms' combined ratio has decreased.

Figure 11: Combined Ratio for Malaysian Takaful Companies and Slovenian Conventional Insurance Companies in the Period 2012 to 2020



Source: Fitch Connect (2022).

Table 8: Combined Ratio for Malaysian Takaful Companies and Slovenian Conventional Insurance Companies in the Period 2012 to 2020

Combined ratio	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Malaysia	0,8994	0,8578	0,8536	0,9081	0,9741	1,0630	1,0055	1,0648	0,9957
Slovenia	0,7756	0,8908	0,8568	0,8624	0,8868	0,8772	0,8317	0,8268	0,8474

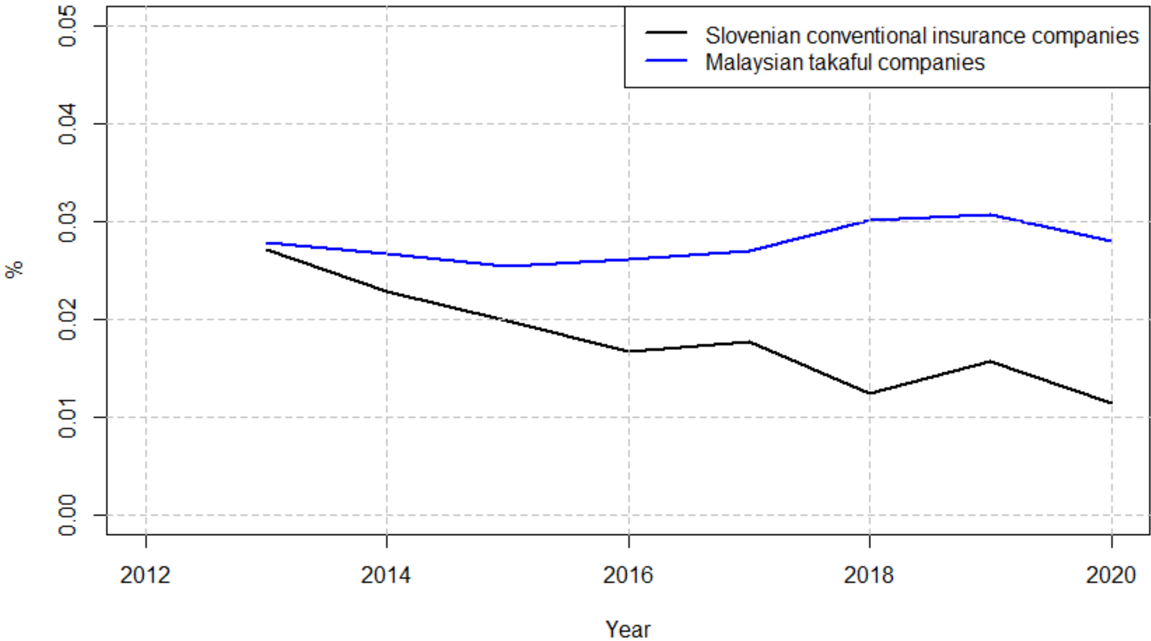
Source: Fitch Connect (2022).

During the 9-year period studied, the Slovenian enterprises included in the analysis did not have a mean combined ratio of more than 1. This suggests that the Slovenian conventional insurance firms have maintained a profit, on average, throughout the period under analysis and have outperformed the Malaysian takaful insurance companies.

4.5 Investment return ratio

The coefficient of investment efficiency is a key sign of a successful firm. Figure 12 and Table 9 show the investment performance ratio for the sample Slovenian conventional insurance firms and Malaysian takaful insurance firms. A greater level of the investment performance ratio indicates that the firm is investing more heavily and more successfully. Given that insurance businesses use their excess cash in assets on the financial market, it is an important signal of good management for insurance companies. We must consider the restrictions that the takaful enterprises are subject to while observing this indication since they may cause a poor level of return on investment.

Figure 12: Investment Performance Ratio for Malaysian Takaful Companies and Slovenian Conventional Insurance Companies in the Period 2012 to 2020



Source: Fitch Connect (2022).

Table 9: Investment Performance Ratio for Malaysian Takaful Companies and Slovenian Conventional Insurance Companies in the Period 2012 to 2020

Investment performance ratio	2013	2014	2015	2016	2017	2018	2019	2020
Malaysia	0,0278	0,0267	0,0255	0,0261	0,0270	0,0301	0,0307	0,0280
Slovenia	0,0271	0,0228	0,0198	0,0167	0,0177	0,0123	0,0157	0,0115

Source: Fitch Connect (2022).

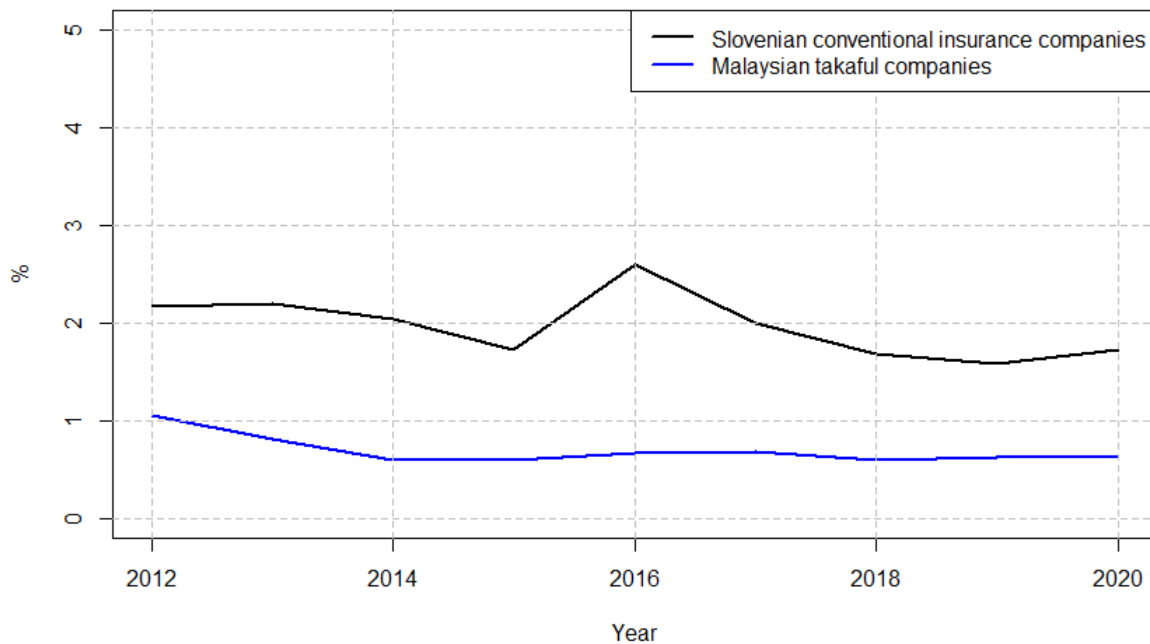
Figure 12 shows a clear and significant variation in investment performance among the averages of the two groups of sample companies. Even with the rather strict, restrictions Sharia law places on takaful insurance firms, the businesses have a very profitable and efficient investing strategy. When comparing the sample Malaysian takaful insurance firms

to the Slovenian conventional insurance companies, the amount of return on investment, as compared to the average assets of the insurance company, is often twice as high. Both of the sample firms' recent averages indeed show a negative tendency, which we may be able to ascribe to the COVID-19 pandemic-related economic crisis. The investment performance indicator for Malaysian takaful firms also shows a lower standard deviation that demonstrates that the rate of investment return remains stable during the observed time.

4.6 Solvency Ratio

The average outcome of the solvency ratio from 2012 to 2020 for the observed Malaysian takaful firms and the observed Slovenian conventional insurance companies is summarized in Figure 13 and Table 10. Solvency shows a company's ability to meet long-term debts. It is one of the most crucial business indicators for all companies, including insurance firms. It is a very valuable metric since it informs stakeholders about the company's strength and long-term viability. According to the collected data, the solvency margin of Slovenian conventional insurance companies heavily overturns the solvency ratio for the observed Malaysian takaful insurance companies.

Figure 13: Solvency Ratio for Malaysian Takaful Companies and Slovenian Conventional Insurance Companies in the Period 2012 to 2020



Source: Fitch Connect (2022).

Table 10: Solvency Ratio for Malaysian Takaful Companies and Slovenian Conventional Insurance Companies in the Period 2012 to 2020

Solvency ratio	2012	2013	2014	2015	2016	2017	2018	2019	2020
Malaysia	1,0581	0,8096	0,5966	0,5938	0,6622	0,6806	0,5905	0,6237	0,6301
Slovenia	2,1700	2,1988	2,0394	1,7303	2,5965	1,9997	1,6797	1,5790	1,7188

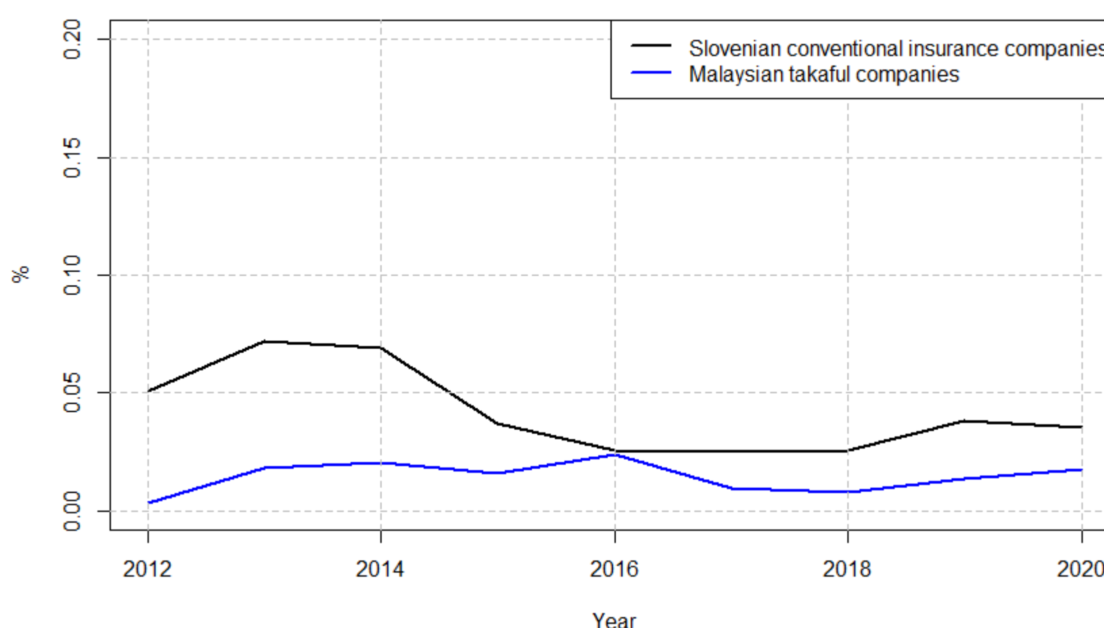
Source: Fitch Connect (2022).

The observed Malaysian takaful companies have enjoyed a subtle rise in the solvency margin during the research period, but the overall result of the sample shows a general picture of the low viability of the industry. The standard deviation in the solvency margin of sample takaful companies has been lower than the same in the sample of the Slovenian conventional counterparts, indicating higher volatility in the solvency of the company, but overperforming the sample takaful companies.

4.7 Operating Efficiency Ratios

The total asset turnover ratio, commonly known as the efficiency ratio or turnover ratio, measures how quickly assets are circulated in a business process. Table 11 and Figure 14 below show the average total asset turnover for the observed sample firms. The basic guideline is that the turnover ratio should be as high as feasible, i.e., the time it takes to turn over the total categories of assets should be as quick as possible. A big aspect of the profitability picture is the capacity to create a large quantity of sales income from a small number of assets.

Figure 14: Total Asset Turnover for Malaysian Takaful Companies and Slovenian Conventional Insurance Companies in the Period 2012 to 2020



Source: Fitch Connect (2022).

Table 11: Total Asset Turnover for Malaysian Takaful Companies and Slovenian Conventional Insurance Companies in the Period 2012 to 2020

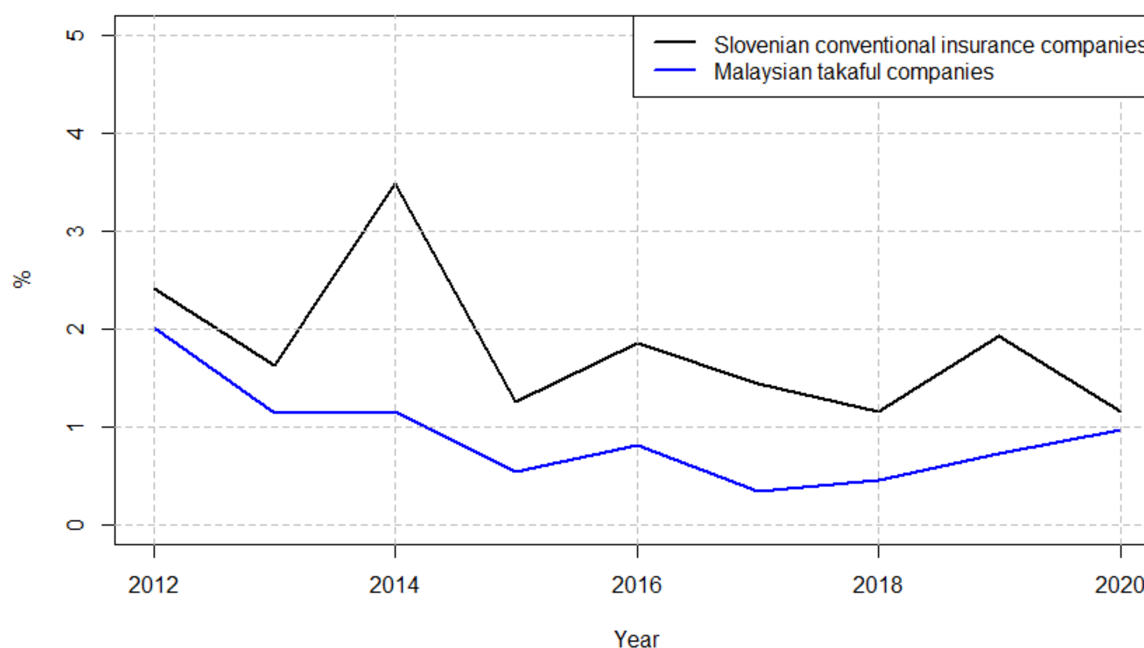
Total asset turnover	2012	2013	2014	2015	2016	2017	2018	2019	2020
Malaysia	0,0033	0,0181	0,0204	0,0158	0,0238	0,0093	0,0080	0,0138	0,0176
Slovenia	0,0505	0,0721	0,0690	0,0369	0,0256	0,0248	0,0255	0,0381	0,0351

Source: Fitch Connect (2022).

Figure 14 demonstrates the sample of Slovenian conventional insurance companies' overall high-quality performance regarding the total asset turnover ratio. In comparison to the sample of Malaysian takaful insurance businesses, the sample of Slovenian insurers uses the entirety of their assets more effectively, as evidenced by the fact that they generate greater pre-tax operational profit per asset. However, the conventional counterparts also exhibit greater variance in total asset turnover. A lower but more consistent amount of total asset turnover is shown by the sample of Malaysian takaful insurance businesses. The overall asset turnover of Malaysian businesses is rising, as they are using their assets more effectively to produce a profit.

Figure 15 and Table 12 below demonstrate the accounts receivable turnover for Slovenian conventional insurance businesses and Malaysian takaful enterprises from 2012 to 2020.

Figure 15: Account Receivable Turnover for Malaysian Takaful Companies and Slovenian Conventional Insurance Companies in the Period 2012 to 2020



Source: Fitch Connect (2022).

Table 12: Account Receivable Turnover for Malaysian Takaful Companies and Slovenian Conventional Insurance Companies in the Period 2012 to 2020

Accounts receivable turnover	2012	2013	2014	2015	2016	2017	2018	2019	2020
Malaysia	2,0148	1,1459	1,1601	0,5369	0,8064	0,3435	0,4511	0,7212	0,9686
Slovenia	2,4103	1,6219	3,4804	1,2565	1,8541	1,4460	1,1504	1,9224	1,1583

Source: Fitch Connect (2022).

It is a metric of financial activity that assesses how well the company collects its receivables. The ratio of accounts receivable turnover reveals how frequently accounts receivable are turned over in a given year, generating income from the company's primary business operation, selling insurance products in this case. A higher accounts receivable turnover ratio is more beneficial for the insurance company, as its credit policy is shown as more efficient. On the other hand, a low accounts receivable turnover shows a poor credit policy of the company and indicates issues within the company in collecting funds. This adversely impacts the profit status of the company, lowering its overall financial success if the issues, with the credit policy, are not addressed.

Looking at the graph that indicates the turnover of the receivables of the observed companies, we can conclude that the sample of Slovenian insurance companies dominated its counterpart religion-based insurance in this example as well. We can see a significantly better credit policy applied in the sample of Slovenian companies, which shows us that they are overall more successful in collecting their receivables from the main operations of the company. An outlier in 2014 occurred due to a significant decrease in accounts receivable in the Slovenian conventional insurance companies. After this event, the amount of receivables has returned to a more normal and predictable state for the overall average of Slovenian conventional insurance companies. Although the volatility is also much higher in the Slovenian conventional insurance companies, we can conclude that their financial performances are more successful. Their Malaysian takaful insurance counterparts do exhibit growth and a positive recent trend in collecting their receivables, which shows us the potential and strive to improve as the industry gains more ground.

4.8 T-test Results

To test whether there is a significant difference among the financial performance indicators, we have utilized the unpaired heteroskedastic t-test. The samples observed are independent of each other and have differing variances. Table 13 below summarizes our results.

Table 13 reveals that the Slovenian conventional insurance companies enjoy a better return on equity in comparison to the sample Malaysian takaful insurance companies. The mean of the return on equity for the takaful insurance companies is significantly lower, indicating that the companies, on average, produce less net income per monetary unit of their capital. There is a significant difference between the return on equity for the samples, as shown by the result (2 tailed) the value 0,000144 which is less than 0,05 (ρ = 5%). We reject the findings indicated by hypothesis $H0_1$, in other words, there is a significant difference in return on equity ratio between Takaful insurance companies from Malaysia and conventional insurance companies from Slovenia.

Table 13: A T-test Result for Malaysian Takaful Companies and Slovenian Conventional Insurance Companies in the Period 2012 to 2020

Measure	Type of company	Mean	Standard deviation	VAR	T-test	ρ-Value (two-tailed)
Return on equity	Malaysian Takaful	0,035995	0,029734	0,000884	-4,6144	0,000144
	Slovenian Conventional	0,089103	0,017550	0,000308		
Return on assets	Malaysian Takaful	0,000780	0,007287	0,000053	-6,1092	0,000015
	Slovenian Conventional	0,026409	0,010261	0,000105		
Proportion insured	Malaysian Takaful	0,124988	0,022775	0,000519	-2,64262	0,017734
	Slovenian Conventional	0,149336	0,015661	0,000245		
Claim ratio	Malaysian Takaful	0,512704	0,081014	0,006563	-3,95461	0,001135
	Slovenian Conventional	0,623902	0,023507	0,000553		
Expense ratio	Malaysian Takaful	0,445289	0,026882	0,000723	18,39347	<,00001
	Slovenian Conventional	0,226702	0,023419	0,000548		
Combined ratio	Malaysian Takaful	0,957994	0,081571	0,006654	3,613336	0,002333
	Slovenian Conventional	0,850604	0,035997	0,001296		
Solvency margin	Malaysian Takaful	0,693919	0,152643	0,023300	-10,6284	<,00001
	Slovenian Conventional	1,968029	0,325633	0,106037		
Account receivable turnover	Malaysian Takaful	0,905384	0,507353	0,257407	-3,00111	0,00846
	Slovenian Conventional	1,811163	0,749947	0,562420		
Total asset turnover	Malaysian Takaful	0,014451	0,006521	0,000043	-4,28396	0,000569
	Slovenian Conventional	0,041958	0,018125	0,000329		
Investment performance	Malaysian Takaful	0,027743	0,001868	3,489536	4,972518	0,0002
	Slovenian Conventional	0,017959	0,005242	0,000027		

Source: Fitch Connect (2022).

To get a full glimpse of asset utilization to create post-tax net income for the company, return on equity should be supplemented by return on assets. According to Table 13, the sample Malaysian takaful insurance businesses had a lower average return on equity than the

Slovenian conventional insurance companies. The idea that Slovenian traditional insurance businesses employ their assets more effectively and hence generate more profit for the company is supported by a very large difference in the mean samples. The return on assets of Malaysian takaful insurance companies is extremely poor.

To gauge how dependent the observed firms are on the reinsurance and retakaful activities, we have observed the proportion reinsured ratio. For most of the observed period, the Slovenian conventional insurance companies have exhibited a higher proportion reinsured in comparison to the Malaysian takaful insurance companies, as shown in Figure 8 and Table 13. Overdependence on reinsurance may indicate that the company is overextending a significant portion of its profits to reinsurance companies. Utilizing the t-test for the proportion reinsured of the sample companies shows us that on average during the observed period of 2012 to 2020, there is a significant difference in the proportion reinsured is considered significant, as indicated by the value of less than 0,017734, which is less than 0,05, and so the null hypothesis $H0_3$ is rejected.

Three ratios, the claim ratio, also known as the loss ratio, the expense ratio, and the combined ratio, have been tracked for the profitability analysis segment. The company's claim ratio provides insight into its underwriting efficiency. Every insurance business should understand and use the claim ratio since it is one of the most important ratios and shows if the firm is charging policyholders sufficiently high premiums or gathering enough contributions for participants to cover the claims it has incurred, in turn. The sample Slovenian conventional insurance companies have exhibited a higher claim ratio in comparison to the Malaysian takaful insurance companies in the period from 2012 to 2020, and the difference has been proven to be significant. A high claim ratio may signal signs of distress in a company as it might have a poor risk management policy. The t-test reveals a two-tailed ρ value of 0,001135, indicating that the difference is considered significant. The expense ratio, on the other hand, is, on average, double in the sample Malaysian takaful insurance companies compared to the Slovenian conventional insurance companies. This difference is also proven to be extremely significant by the t-test results of the two-tailed ρ value of less than 0,00001. The sum of these two indicators, the claim ratio, and the expense ratio, gives us the ultimate insight into the profitability of the insurance company. A profit is made by the insurer based on the insurance business if the combined ratio is less than one (or 100 percent), indicating that the company has excess funds after it has paid off all its expenses and has covered all of the incurred claims. On average, both the Slovenian conventional insurance companies and Malaysian takaful insurance companies have operated with a combined ratio of less than 1 during the observed period. However, the difference is significant and in favor of the Slovenian conventional insurance companies. We reject the null hypothesis $H0_4$, the profitability ratios of takaful Malaysian enterprises and traditional Slovenian insurance companies are significantly different. The two-tailed ρ value stood at 0,002333, and it supports that there is a significant difference in the combined ratio between the observed sample companies.

The engagement of insurance firms as institutional investors in the financial markets is one of their primary operations. As a result, the investment performance ratio serves as a good indicator of financial performance for the insurance sector. A profitable insurance firm makes use of its resources to drive business, hence raising its profit margin. For the average level of assets, the company has, the sample Malaysian takaful insurance companies have enjoyed a higher investment performance ratio compared to their Slovenian conventional insurance counterparts. This may indicate that the sample takaful companies hold a low amount of assets, on average, or have a significantly better investment strategy than the sample conventional insurance companies. The null hypothesis $H0_5$ is rejected; the investment performance ratio of takaful Malaysian enterprises and the traditional Slovenian insurance companies is significantly different, proven by the two-tailed ρ value of 0,0002, which is significantly lower than 0,05.

Solvency is a very significant indicator of the financial soundness of an insurance company. In observing the analysis results, we can conclude that the sample of the takaful industry in Malaysia overall shows a general picture of the low viability of the industry. As measured with the formula provided by Medved, the result indicates that the sample of the takaful industry in Malaysia is not stable in the long run. The difference is considered to be extremely significant proven by the two-tailed ρ value of less than 0,00001. We reject null hypothesis $H0_6$.

Activity or operating efficiency ratios make up the last group of ratios seen on the sample firms' financial reports we have observed. These ratios gauge how quickly the business turns over the assets shown on its balance sheet to produce revenue. The total asset turnover ratio, the first operating efficiency ratio observed, demonstrates how effectively a firm utilizes all of its assets to produce pre-tax income from its core business operations. Slovenian conventional insurance companies have enjoyed a higher turnover of their assets, indicating a better activity level to generate insurance sales. The difference is very significant and proven by the two-tailed ρ value of 0,000569. The accounts receivable turnover ratio shows us whether the credit policy of the company is maintainable in the long run. A low accounts receivable turnover ratio shows us that the company is not charging its clients and needs to adapt its credit policy. The credit policy of Slovenian insurance companies has been proven the more successful among the samples of the two groups of companies. The null hypothesis $H0_6$ is also rejected, the operating efficiency ratios of takaful Malaysian enterprises and traditional Slovenian insurance companies are significantly different, supported by the two-tailed ρ value for accounts receivable turnover ratio of 0,0002, which is significantly lower than 0,05.

4.9 Additional findings and future outlook

The takaful industry in Malaysia plays a very important role. It has been established that Malaysia's takaful institutions have a favorable influence on the country's socioeconomic factors. A rise in profit before taxes, employment, and charitable giving has been observed (Abdou, 2014). We have concluded that there is a significant difference in the financial performance indicators of sample conventional Slovenian insurers and sample Malaysian insurers. Most often, this difference has been in favor of the conventional insurance counterparts. The study was conducted on ten Malaysian and ten Slovenian insurance companies but can be seen as a representative of the state of the sector in each respective country.

The strong regulatory environment and favorable market conditions for the insurance companies operating in Slovenia have enabled them to have a strong performance during the observed period. Continuous modifications are being made to the Insurance act in Slovenia to harmonize with European directives, ensuring the insurance companies are observed closely to ensure transparency, and customer and company protection. However, the market is becoming more consolidated recently, increasing the barrier to entry for potential new market players.

According to an interviewee from the Mosque of the Islamic community in the Republic of Slovenia, the opposition to the concept of Islamic insurance is apparent in Slovenia. In conducting the short interview, the interviewee noted that the Islamic community in Slovenia is dealing with several other issues and that, given the current situation, the offer of Islamic insurance products seemed incredibly unachievable. They additionally said that they lack faith in the insurance industry in Slovenia to develop takaful products that would meet the needs of the Slovene Muslim community and other people who could be interested in ethical insurance. This demonstrates that informing the public about takaful products would be essential if Slovenian insurance firms were interested in offering Islamic insurance products on the Slovenian market.

There are notable differences between traditional and takaful insurers even within the country of Malaysia. Tests of constant returns to scale and variable returns to scale have shown that the takaful business is less efficient (Abdou, 2014). Even though Malaysia's takaful market is one of the most established in the world, it still needs to expand to take advantage of scale efficiencies. Recent poor takaful business performance can be attributed, in part, to a general drop in profitability brought on by relatively weak domestic equities market performance (Bank Negara Malaysia, 2021). Takaful operators will need to increase the penetration rate for their products, which is now four times lower than that seen in Malaysia's traditional insurance businesses functioning to operate at full efficiency (Ismail, 2012). Takaful products are only accessible to small portions of the public due to their rising complexity and cost. The takaful firm's offerings would need to be made simpler and more accessible to Malaysian customers. Additionally, improvements will have to be made in the

future in consideration of the high costs of takaful insurance. The takaful companies of Malaysia still fail to take advantages of using technology to maximize their return. Simply put, technical and cost inefficiencies restrict the Malaysian takaful insurance sector. The conventional insurance sector in Malaysia makes better use of its resources and funds. There is no evidence that the country's regulatory structure makes it challenging for takaful companies to expand and become more profitable, yet the growth hinders. A number of important factors, such as the sturdy, robust regulatory infrastructure and the favorable climate established by Bank Negara Malaysia, are supporting the healthy expansion of the takaful business in Malaysia. Due to a favorable regulatory environment and growing demand, the Malaysian takaful industry is predicted to continue growing. However, businesses will face challenges in order to determine how to make their products more appealing to customers while also lowering the relative costs of producing their products.

CONCLUSION

This master thesis aims to compare the most important financial indicators of traditional and takaful insurance businesses to observe whether there is a significant difference in the financial performance indicators of takaful, Islamic faith-based, insurance, and conventional insurance we are familiar with today. Utilizing the results of this research, one can conclude the relative developments and financial soundness within the analyzed companies. The thesis's secondary objective is to showcase and raise awareness of Islamic faith-based insurance as flexible and attractive future development in Western nations. The analysis was conducted on financial reports of a sample of ten Slovenian conventional insurance companies and ten Malaysian takaful insurance companies. The observed period of analysis was from 2012 to 2020. The analysis was limited to the specific companies and the specific time with the availability of financial statements of insurance companies.

Based on relative financial ratios that can be seen on insurance firms' financial statements, an analysis of the sample companies' financial performance was conducted. The return on equity ratio, return on assets ratio, proportion-reinsured ratio, claim ratio, expense ratio, combined ratio, the ratio of investment performance, solvency margin, the ratio of total asset turnover, and the ratio of accounts receivable turnover are the financial performance indicators used in this thesis. The overall conclusion of the thesis is that for every relative measure of financial performance, the performance of the sample Malaysian takaful insurance companies differs from the performance of sample Slovenian conventional insurance companies. The statistical significance of the return on assets and return on equity ratios of the traditional insurers shows that, according to the descriptive statistics, they outperform takaful operators in terms of financial performance and management effectiveness. The performed t-test shows a substantial difference in favor of the sample Slovenian conventional insurance firms. Positive trends in recent years suggest that the sample Malaysian takaful insurance businesses may be able to enhance their position and become more competitive with their traditional competitors. Compared to their conventional

competitors, faith-based businesses rely less on reinsurance operations. This could be due to the relative scarcity of retakaful firms, even in nations where takaful insurance is more widely used. Because traditional reinsurance firms do not operate under the same standards as takaful firms and may participate in actions seen by such firms as immoral, their usage is permitted but could be limited.

The sample Malaysian takaful insurance businesses showed a lower level of claim ratio than the sample Slovenian conventional insurance companies, which demonstrated that a conservative underwriting policy was maintained by them. It has been demonstrated that faith-based insurance businesses take on less risk and may be more selective in whom they choose to give insurance services by maintaining lower claim percentages. Contrary to the claim ratio, the sample takaful companies have significantly higher expense ratios than the sample conventional insurance companies, indicating that the faith-based companies spend more money on the underwriting of insurance policies, even though these policies are, on average, lower in number. The combined ratio, on the other hand, favors Slovenian conventional insurance firms substantially more since they have a much lower combined ratio. This tells us that the traditional insurance firms in Slovenia make more money when they carry out the insurance company's core functions. The increased capital base held by the corporations helps to sustain the traditional insurance companies' stronger soundness. The corporations' greater financial security is made possible by their larger capital bases.

The investment opportunities have proven effective in Malaysia's example of Islamic insurance. Even taking into account the Sharia law restrictions placed on the companies, which forbid them from investing with businesses that have riba, maysir, gharar, and other restrictions on their basic operations, they have managed to maintain a higher investment performance ratio than Slovenia's traditional insurance firms. It is important to express to the companies possibly wanting to introduce elements of Islamic insurance that the investment opportunities will not be extremely scarce, which is supported by their significantly higher investment performance ratio.

The traditional insurance businesses in Slovenia are more effective, according to the operational efficiency ratios found for the sample companies. It has been demonstrated that the overall asset turnover ratio and the account receivables turnover ratio are significantly different. The Slovenian traditional insurance businesses are favored. This suggests that to generate pre-tax operational profit, Malaysian takaful insurance firms must enhance their credit policy and usage of all of their assets.

Overall, the data backs up the assertion that traditional Slovenian insurers outperform Malaysian takaful operators in terms of observed financial performance measures.

The secondary goal of the thesis was to present the takaful insurance industry as an attractive business avenue that companies may want to venture in. It will be difficult to introduce an alternative kind of insurance in Slovenia because there are only traditional insurance firms operating there, most of which are private joint stock businesses. Introducing the new form of insurance, Islamic insurance would generate a niche market. However, the introduction

of products into the Slovenian insurance market would attract even consumers not engaging in the purchase due to religious reasons, because when the investment funds of policyholders are in excess, the profits are extended to the policyholders.

A takaful insurance company would undoubtedly encounter fierce market competition. The best strategy to guarantee a milder transition is first to satisfy consumer demand by offering a takaful window, rather than transitioning or founding a total takaful insurance firm, but only by expanding the company's offering of traditional insurance products to include certain takaful products. This will not have a huge financial impact on the corporation but would show that it is responding to customers who want insurance that is more morally or religiously motivated.

Every takaful insurance provider is required to have a Sharia board and adviser, both of whom are experts in the subject. Every takaful item must be verified to be Sharia compatible. The fact that the Slovenian educational system does not provide this sort of professional training and that the services would need to be outsourced is a considerable difficulty. The business offering takaful products would also need to spread awareness of the offer, gain customers' confidence, and obtain their understanding that the products are genuinely Sharia compliant. Before the insurance business decides to offer alternatives to traditional types of insurance products, market research into the area where the takaful firms want to operate is crucial.

Introducing a new type of insurance may seem very challenging in the present, but the insurance companies need to be aware of the needs of the consumers, as there is a large probability that the companies will face higher demand for Islamic insurance products in the future.

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APPENDICES

Appendix 1: Povzetek (Summary in the Slovene language)

To magistrsko delo se osredotoča na primerjavo pomembnih finančnih kazalnikov konvencionalnih in takaful zavarovalnic. Namen je ugotoviti, če obstaja pomembna razlika v finančni uspešnosti tradicionalnega zavarovalniškega sektorja in takaful zavarovalniškega sektorja v smislu plačilne sposobnosti, likvidnosti, dobičkonosnosti, uspešnosti sklepanja zavarovalnih polic in učinkovitosti poslovanja. Sekundarni cilj magistarske naloge je predstaviti način poslovanja takaful zavarovalnic, ter njihove prednosti kot sta fleksibilnost in dobičkonosnost, glede na to, da lahko njihov razvoj pričakujemo tudi v zahodnih državah. Finančne kazalnike smo spremljali v 9-letnem obdobju, od leta 2012 do leta 2020, s pomočjo spletne knjižnice finančnih podatkov Fitch Connect in spletnih strani posameznih zavarovalnic. Vzorci raziskave so sestavljeni iz desetih klasičnih slovenskih zavarovalnic in desetih takful družb iz Malezije. Na podlagi te poučenih kazalnikov posameznik lahko sklepa o relativnem razvoju industrije in identificira področja, na katerih so potrebna izboljšanja. Kot rezultat, to magistrsko zainteresiranim posameznikom ponudi sliko finančnega položaja takaful zavarovalnic v Maleziji in klasičnih zavarovalnic v Sloveniji.