

**ECONOMICAL UNIVERSITY BRATISLAVA
FACULTY OF BUSINESS MANAGEMENT**

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Investing into Mutual Funds in Slovakia

Bachelor Thesis

2023

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**ECONOMICAL UNIVERSITY BRATISLAVA
FACULTY OF BUSINESS MANAGEMENT**

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Study program: Business Economics and Management

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Thesis supervisor: doc. Ing. Bikár Miloš PhD.

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Assignment of a thesis

The thesis deals with a Slovak citizen's options while investing in different types of mutual funds. As the first step, the student's task will be to specify the main goal of the thesis so that it would have been in line with the rules of creating SMART goals. Based on the main goal, the basic content structure of the theoretical part will be created. After its successive fulfilment, the student will have enough theoretical knowledge to carry out their own research in the practical part. The intention of the research part, and the thesis as a whole, is to compare the return and risk of mutual funds that are available in the Slovak Republic.

Affidavit

I honestly declare that I have prepared the final thesis independently and that I have listed all the literature used.

Date:

.....

Dominik Križan

Acknowledgment

My big thanks goes to my thesis supervisor doc. Ing. Bikár Miloš PhD. for his willingness, professional approach, advice and comments during the elaboration of this bachelor thesis.

ABSTRAKT

KRIŽAN, Dominik: *Investovanie do podielových fondov na Slovensku.* - Ekonomická univerzita v Bratislave. Fakulta podnikového manažmentu; Katedra podnikových financií – Vedúci bakalárskej práce: doc. Ing. Bikár Miloš PhD. – Bratislava: FPM EU, 2023,

Hlavným cieľom práce je analýza možností investovania do podielových fondov v Slovenskej republike z hľadiska kritérií investovania. Práca je rozdelená do 5 hlavných kapitol a obsahuje 1 obrázok a 4 tabuľky. Prvá kapitola sa zaoberá teoretickou časťou práce, v teoretickej časti práce sa venujeme finančnému trhu a podielovým fondom všeobecne. V prvej kapitole sú zhrnuté poznatky o faktoroch vplyvujúcich na vývoj fondového priemyslu, pozitíva a negatíva kapitálového trhu, klasifikácia a typy podielových fondov, charakteristika bodov investičného trojuholníka a to riziko výnos a likvidita a jednotlivé typy investorov. Druhá a tretia kapitola je venovaná cieľom práce a metódam skúmania použitých v práci. V štvrtej kapitole, sa zaoberáme praktickou časťou bakalárskej práce, táto časť je rozdelená do 3 okruhov. Prvý a druhý okruh sa venuje predstaveniu a charakteristika jednotlivých správcovských spoločností a zvolených podielových fondov, tretí okruh sa venuje analýze výkonnosti, rizika a likvidite zvolených fondov na základe magického trojuholníka a ich porovnaniu v jednotlivých bodoch. Piata kapitola je venovaná diskusií.

Kľúčové slová: riziko, likvidita, výnosnosť, faktory vplyvu vývoja fondového priemyslu, podielové fondy, investovanie

ABSTRACT

KRIŽAN, Dominik: *Investing into Mutual funds in Slovakia.* – University of Economics in Bratislava. Faculty of Business Management; Department of Business Finance – Supervisor of the Bachelors Thesis: doc. Ing. Bikár Miloš PhD. – Bratislava FBM EU, 2023,

The main goal of this bachelor thesis is analysing the opportunities of investing into mutual funds in the Slovak Republic from the point of view of the investing criteria. The thesis is divided into 5 main chapters and includes 1 picture and 4 tables. The first chapter deals with the theoretical part of the thesis, where we focus on the financial market and mutual funds in general. The first chapter summarizes the knowledge about the factors influencing the development of the funds industry, the pros and cons of the capital market, the classification and types of mutual funds, the characteristics of the points in the investment triangle, namely: risk, return, liquidity, and different types of investors. The second and the third chapters are devoted to the objectives of the thesis and the research methods used. In the fourth chapter, we delve into the practical part of the bachelors thesis, which is divided into 3 sections. The first and the second sections introduce and characterize the individual management companies and the selected mutual funds, while the third section focuses on the analysis of the performance, risk, and liquidity of the selected funds based on the magic triangle and their comparison in different aspects. The fifth chapter is dedicated to discussion.

Keywords: risk, liquidity, return, factors influencing the development of the funds industry, mutual funds, investing.

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BibliographyChyba! Záložka nie je definovaná.

Introduction

If someone is looking for a smart way to grow wealth or simply preventing your saving before the inflation while managing risk, investing into mutual funds can be a great option. Investing in Slovakia is a topic more and more relevant than in previous years and mutual funds are one of the options. They offer a convenient and accessible way for individual investors to participate in the financial markets and achieve their financial goals they currently have. Even though Slovakia has great opportunities how to invest, not many people are familiar with it and do not invest money at all and a better option for them is to have their own money on current accounts where they do not earn any money at all, or even lose their money due to high inflation that affect the whole world right now. Having money on current accounts sounds like the safest way for people in Slovakia, but collective investing provides investors with relatively high security to stable the range of profit. In Slovakia we also have other types of investment such as securities that provide investors with a higher profit but also with a higher profit which is not that suitable for people who are investing for the first time or they are behaviourally influenced. Also, the information about investing into securities is not that much publicly stated as the information about mutual funds. Investing into mutual funds is way much easier and more suitable for people who are investing for the first time or are conservative. When you are investing into mutual funds you basically entrust your property (money) to a management company, with is taking care of the funds and is obligated to provide you with all information needed as well as with safety of your property.

The main goal of our thesis is to provide you with all the information know about investing into mutual funds and the factors influencing funds industry, the comparison of chosen funds and measurements of their risk, return and liquidity of investing companies in Slovakia to find out which is most appropriate for the investor. But the final decision is always their own.

The bachelor thesis is divided into four chapters. In the theoretical part of bachelor thesis we will focus on collective investment in the first part, where we will provide you with the events that influenced Slovakia. In the second part we will focus on mutual funds from the point of view of their characteristics, set the basic terms need for the problematics of mutual funds, and their types available in the Slovak republic. Then the benefits and

disadvantages of mutual funds. The second part will also contain the key indicators of mutual funds and performance measurements such as risk, liquidity and profit through the magic triangle and types and characterization of investors that can occur on the market.

The practical part is related to the analysis and characterization of selected mutual funds in Slovakia from three different management companies with the highest profit to be a representative fund of a company and then compare each fund with the others to find the best one thanks to measurement of their liquidity, risk and return. The important information to be stated is that we do not want to promote any of these companies or tell the investors where to invest because this choice needs to be done by themselves. All the information stated is only for a better understanding of the thesis with examples.

1 Current state of problem being solved in Slovakia

The mutual fund industry in Slovakia has shown growth in recent years in terms of assets under management companies, which refers to diverse range of offers on Slovakia's mutual funds market. The mutual funds industry in Slovakia is regulated by the National Bank of Slovakia, which sets rules and regulations to ensure investor protection and market stability. These regulations govern areas such as funds registration, reporting requirements, and investment limits, aimed at safeguarding investor's the interest. Even though the investing as a whole is becoming more popular, the sustainability topic is more important for many of us and due to that in Slovakia like in many other countries, there is a growing focus on sustainability and environmental, social, and governance (ESG). Due to this fact also the funds in Slovakia adapted and started to integrate ESG considerations into their investing strategies, offering the opportunity for investors invest more socially responsible than ever before. The financial market is adapting to current trends. As doc. Ing. Božena Chovancová says: „*The financial market is a place where the supply of free funds in the form of savings of various economic entities meets the demand of various economic entities for these funds, which are used as investments*“ (Chovancová, 2002).

1.1 Factors influencing the development of the fund industry

Currently, if we look back to the beginnings of 2023 or the end of 2022, no one could predict how successful the year 2023 would be for investors. The focus of most investors was on inflation because the more states could tame inflation, the less central banks would need to resort to restrictive monetary policies and further interest rate hikes. These two factors are crucial when it comes to capital flow towards securities.

The year 2023 started with growth, primarily in China, influenced by the abandonment of policies implemented during COVID-19. Central banks raised interest rates, leading to more expensive loans, ultimately slowing down inflation, decreasing mortgage demand, slowing down price growth, and keeping unemployment rates stable. However, all these consequences do not always create an ideal situation as expected. Governments aimed to boost the economy through stimulus packages, but investors were concerned that strong consumer demand would hinder inflation from reaching the desired level. Additionally, there

were concerns that a robust economy, government support, and low unemployment were actually delaying the recession that was necessary for economics (Interesse, 2023).

A similar situation is occurring in Europe. After months of hesitation, the European Central Bank (ECB) also decided to raise interest rates. This decision has shaken both stock and bonds markets, with even heavily indebted countries experiencing sharp increase in bond yields. The ECB has called for emergency meeting addressed to high yields, but it has limited options at its disposal. It halted quantitative easing: „ ... *is an expansion of the central banks balance sheet and the monetary base by means of central bank asset purchases*“ (David G. Mayes, 2019) , and restarting those measures would be questionable given the high inflation in the eurozone. Reducing interest rates is not considered as an option.

The high yield on government bonds signifies an expensive cost of borrowing, which is particularly problematic for countries like Greece and Italy. „In the past year, the yield on the 10-year bond in Greece has risen to the 3.99%, and Italy to 3.85% even before ECB raised the rates, Slovakia stays a bit less with 3.48%“ (worldgovernmentbonds, 2023). Paying 1% yield on loan is reasonable, but paying 4 is less favourable, although still manageable. However, paying 6%, 8%, or 10% for economies with a dept-to-GDP ratio well over 100% will be a significant problem.

This fragmentation within the EU's financial market complicates the situation since the EU countries are violating the Maastricht criteria: „ ... *restriction of the maximum 60% dept to GDP ratio...*“ (Polasek Wolfgang, 2003). It remains a question how aggressively the ECB will be in raising rates. On the one hand, it needs to send a clear signal that it is committed to fling inflation. On the other hand, it faces strong political pressure, as it cannot afford to let Southern European countries “collapse“.

Tightening monetary policy and conflicts in our neighbouring countries raise concerns about a recession. It is also important to note that continental Europe has a very robust, healthy, and well-prepared financial sector, which is a prerequisite for smooth economic functioning. Other sectors, such as the energy sector, have experienced record profits. Even if it happens which happened we should as Europe be well prepared but in Slovakia the energy prices have risen up. As consumers, we may need to tighten our belts slightly, but companies, from the fundamental perspective, are not in a bad position.

The current declines in financial markets have a relatively strong panic-driven nature, affecting almost all sectors and companies, regardless of some experiencing revenue and

profitability growth. The current situation creates interesting buying opportunities, as seen in the graph from Morningstar:

Picture 1. : Morningstar graph



Source: (Morningstar, 2023)

1.2 Advantages and disadvantages of collective investment

Collective investing is right now one of the most popular forms of investing all around the world but it is important to note that everything has its benefits as well as its disadvantages. It is crucial for investors to carefully review and understand the risk and potential returns of a particular fund before investing, and consult with a qualified financial professional for personalized investment advice. Among advantages of collective investing we can set:

- *Diversification*, the old saying says: „Do not put all apples into one basket.“ „The term diversification indicates the process of spreading the risk over a number of different investments, and probability across different markets, in order to mitigate investment risk“ (Khair Alshaleel, 2022). Mutual funds can achieve diversification by investing in diverse range of securities from different issuers in their portfolio. This allows smaller investors to access the same level of diversification that may typically only be available to wealthier investors. By spreading the investors' money across multiple securities, mutual funds can reduce the potential risk of loss resulting from issues faced by specific companies or institutions,

- Expert rapport, a professional investment manager has access to a wide range of information, including analytical reports and experienced stock traders, to make informed decisions on which investments to buy or sell. Fund managers conduct thorough economic and financial research, analyse economic reports of companies, brokerage reports, marketing reports, and other financial data. Professional investment managers are considered valuable and costly due to the significant time and resources required for independent management of personal investments and analysing numerous securities in the financial market (Steigauf, 2003).
- *Liquidity*, „Although mutual funds offer daily liquidity, funds are meant to be a longer-term investment“ (Tyson, 2016), mutual funds provide a convenient and swift process for investors to exchange their investments in the form of share certificates for cash. In the case of open mutual funds, the Act on Collective Investment ensures that shareholders have immediate access to their funds. As per this law, the management company is obligated to conduct a buyback of units at the current price, and the funds must be paid to the shareholder within a maximum of 14 days. This ensures that investors can easily liquidate their investments and access their funds in a relatively short timeframe, providing flexibility and liquidity to their investment portfolio (Chovancová, 2005).
- According to doc. Ing. Božena Chovancová CSc.: „return is all the income from an investment from the moment we put funds into it until the time of last possible income from this investment“ (Chovancová, 2002). The return from investing into mutual funds, even more conservative, can still reach interesting percentage for investors due to the benefit of diversification.

It is important to note that mutual fund returns are not guaranteed and can vary based on various factors such as market conditions, investment strategy, fees, and expenses. Mutual funds as any other investment comes with a risk, including the potential loss of principal. It is essential to carefully research and understand the risk and fees associated with any mutual funds before making an investment decision.

- *Specific risk*, this impact the inherent characteristics of the investment, as it entails the investor having to anticipate the possibility of the issuer defaulting on its obligations and becoming insolvent, resulting in delayed or unfulfilled return. Some of the specific risks are: managerial risk refers to the level of risk associated with the quality of a company's management, which can impact the overall

financial performance of the company, either positively or negatively. This risk is particularly heightened in newer companies where the management may lack experience, and can arise due to human errors, as well as the potential fraud (Chovancová, 2002). Next up is the risk of inflation and according to Slavomír Steingauf: „*the risk of inflation is a "nightmare", especially in the long-term perspective. With long term perspective, it is very important to compare the return on investment with the rate of inflation*“ (Steingauf, 2003). We believe that for each investor it is important to make money or at least prevent it from inflation which is highest in these past years, which also made it even more difficult for mutual funds to keep up with the inflation.

- *Market risk* is frequently linked to broader economic, political and social events that can significantly influence the investor behaviour. In a more specific context, market risk reflecting the magnitude of profits can be influenced by the characteristics and dynamics of the market which the investment operates. The risk can be divided into different types of market risks such as: the interest rate risk is influenced by fluctuating profitability of individual financial assets, with changes in market interest rates directly impacting the prices of securities. When interest rates increase, securities prices tend to decline, whereas when interest rates decrease, securities prices tend to rise. Other type of market risk can be:
 - Reinvestment risk is also influenced by changes in interest rates, but in contrast with the typical relationship between interest rates and investments, it works in the opposite direction. When interest rates decrease, investors may face losses as they reinvest their earning at lower rates, resulting in reduced potential returns.
 - The potential risk associated with government economic policies and legislative changes can have political and legal implication for investors, factors such as the stability of political system, the length of the election cycle, and the various activities and decisions made by the government or discouraging them. Additionally, with the increasing globalization of markets, investing has become more international in nature. This means that investors must also consider issues related to the liberalization of individual markets when making investment decisions (Chovancová, 2005).

1.3 Basic classification of mutual funds

Mutual funds are a widely popular investment vehicle that offer individuals the opportunity to invest a diversified portfolio of securities managed by professional investment managers. One key aspect of mutual funds is their classification, which helps investors understand the different classes of funds available on the market. Mutual funds can be categorized based on various criteria. Understanding the basic classification of mutual funds is crucial for investors as it provides insight into the characteristics associated with each type of fund. We will provide an overview of the basic classification of mutual funds. According to the law of Slovakia and Act about collective investing and Yadnya Investments: *„depending upon the fund schemes, mutual funds are classified as:*

- *closed,*
- *open,*
- *and special mutual funds“* (Yadnya Investments, 2017).

1.3.1 Closed mutual funds

According to prof. Božena Covancová, PhD,: *„ a closed mutual fund is a fund whose shareholder does not have the right to be paid shares from the property in this mutual fund at his request. Of course, this does not mean that the security holder is not entitled to a payment“* (Božena Chovancová, 2012). We can say that closed mutual funds are a type of investment fund that pools together funds from multiple investors to invest in a diversified portfolio of securities, similar to other mutual funds. However, closed mutual funds have a fixed number of shares that are traded on stock exchange or in the over-the-counter market which can be characterized by Michael J. Kramer as: *„ ...a decentralized market in which market participants trade stocks, commodities, currencies, or other instruments directly between two parties and without a central exchange or broker“* (Kramer, 2022). In other words, where mutual funds are bought and sold like individual stocks.

One potential advantage of closed funds is that they may offer the opportunity to invest in specialized or niche investment strategies that may not be easily accessible through other investment vehicles. Additionally, closed funds can provide a potential income

generation through regular distributions of dividends or interest payment from their underlying investments.

1.3.2 Open mutual funds

Thanks to prof. Ing Božena Chovancová we can say that an open mutual fund is a type of investment fund that allows shareholders to buy and sell shares of the fund at any time. The shareholders have the right to receive payments in the form of shares from the assets held within the mutual fund, upon request. This makes open mutual funds highly liquid, as the investor can enter or exit the fund as desired.

Open mutual funds can be established for a fixed or indefinite period, depending on the investment goal and strategy of the fund. The number of shares issued by an open mutual fund may be limited in advance, which is typically stated in the funds statute or offering documents. This limitation helps manage the fund's size and liquidity, and may be implemented to ensure effective management of the fund's investment. It is worth noting that not all open mutual funds are publicly traded securities. While some open mutual funds are listed on exchanges and can be bought and sold like stocks, others are not traded on public exchanges and can only be bought or sold through the fund company or other authorized intermediaries. The trading arrangements and liquidity of an open mutual fund can vary depending on its structure and regulation.

In Slovakia, the standard form of open mutual fund is known as the Undertaking for the Collective Investment in Transferable Securities (UCITS) fund, which complies with the requirements of the European Community directive no. 2009/65/EC. This directive sets forth regulations and standards for mutual funds operating in the European Union, aimed at protecting investors and promoting harmonization within the investment fund industry (Božena Chovancová, 2012).

1.3.3 Special mutual funds

A special mutual fund is characterized by Božena Chovancová as a: *„type of fund that is nationally regulated, which means that it is not regulated by legally binding act of the European Union for the field of collective investment“* (Božena Chovancová, 2012). This

means that the regulations governing these funds are specific to the country or region where they are established and operated. Special mutual funds may have unique investment strategies or focus on specific sectors, themes, or asset classes. We believe that they may specialize in investing in environmentally sustainable companies known as ESG companies, the term ESG is: „*Broadly defined as the analysis of companies environmental, social and governance practices, ...*“ (Bradley, 2021). emerging markets, or disruptive technologies. These funds may offer investors the opportunity to gain targeted exposure to specific investment themes or strategies that may not be available in other types of mutual funds.

Due to specialized nature of these funds, they may have different risk profiles, fees, and investment requirements compared to the traditional open and close mutual funds. As special mutual funds are regulated at the national or regional level, they may be also subject to different regulatory requirements and oversight compared to other types of mutual funds that are regulated by the European Union. Investors should be aware of the regulatory framework and investor protection applicable to special mutual funds in Slovakia.

1.4 Types of funds and their characteristics

Here we deal with various types of funds available in the world and also in Slovakia. According to Chovancová Božena we can examine not only legal aspects of these funds but also highlight the differentiating factors such as risk levels, territorial location of investments, and methods of prior profit sharing.

One of the key classifications discussed is the division of funds based on the type of investment instruments. This classification serves as the foundation for understanding the different types of funds available in the whole market. We are also provided with detailed information on various types of funds based on their investment instruments, shedding light on their unique characteristics and potential risk.

When it comes to analysing mutual funds from the territorial standpoint, we can categorize them into three main types: domestic, territorial, and global mutual funds. This classification takes into consideration the geographical scope in which these funds invest and operate. Domestic mutual funds primarily invest in securities of companies within the country in which the funds is based. These funds focus on the domestic market and aim to generate returns from investment made within the country's borders. „*Domestic funds*

expenses are lower but the average is always above 1 percent“ (Haslem, 2010). Territorial mutual funds, on the other hand, have broader investment approaches as they invest in securities from multiple countries within a specific region or territory. „ Say global and international mutual funds can represent a world of opportunities for investors“ (Duncan, 2015). Global mutual funds have the broadest geographical scope as they invest in securities from multiple countries across the world, without any specific regional or territorial limitations.

In addition to the territorial classification, mutual funds can also be differentiated based on the method of distribution of their profit. Capitalization funds reinvest the profits generated by the fund back into the fund, leading to an increase in the fund’s net asset value. On the other hand dividend funds distribute the profits generated by the funds to investors in the form of regular dividend payments, providing them with the source of income (Chovancová, 2005).

Types of funds according to Ministry of Finance of the Slovak Republic:

- Money market funds,
- Bond funds,
- Stock funds,
- Mixed funds,
- Secured funds,
- Real estate funds,
- Funds of funds,
- And Exchange-Traded funds (Ministerstvo financií Slovenskej republiky, Neznámi).

1.4.1 Money market funds

Money market funds are low-risk mutual funds that invest in short-term securities like Treasury bills, commercial papers, and certificates of deposit. They aim to provide stability, preserve capital, and generate income through interest. They are considered safe and offer liquidity, making them a convenient cash management tool (Chovancová, 2005).

1.4.2 Bond funds

Bond funds primarily invest in bonds, offering potential higher returns compared to money market funds. They carry a moderate level of risk and are suitable for medium-term investment horizons. They provide regular interest payments and potential capital gains, but investors should consider fees and hold investments for a few years to realize meaningful appreciation (ASS, 2020).

1.4.3 Stock funds

Stock funds invest in equity securities and offer exposure to the stock market. They have a higher risk but also the potential for higher returns over the long term. They are suitable for investors seeking potential appreciation of their savings, but a longer investment horizon is recommended to mitigate short-term market fluctuations (Národná rada Slovenskej republiky, 2011).

1.4.4 Mixed funds

Mixed funds allocate assets across various classes like bonds, shares, and Treasury bills to achieve a balance between returns and risk mitigation. They provide diversification, capturing gains from different markets, and sectors while minimizing the impact of poor performance in a single class. The investment horizon and performance are influenced by the asset allocation strategy and external factors (Ministerstvo financií Slovenskej republiky, Neznámi).

1.4.5 Secured funds

Secured funds guarantee the return of deposited money or a minimum return by investing in safer securities like government bonds, offsetting potential losses with riskier investments. They have a predetermined investment horizon and provide assurance to

shareholders, but early withdrawal may incur exit fees (Ministerstvo financií Slovenskej republiky, Neznámi).

1.4.6 Real estate funds

Real estate funds pool money to invest in a diversified portfolio of real estate assets. They offer diversification, liquidity, and professional management compared to direct ownership. However, they also carry risks, including market risk, interest rate risk, and liquidity risk (Božena Chovancová, 2012).

1.4.7 Funds of funds

Funds of funds are investment vehicles comprising multiple mutual funds. They offer simplicity, diversification, and convenience by providing exposure to multiple underlying funds. However, multiple layers of management fees can impact over all returns (Chovancová, 2005).

1.4.8 Exchange-traded funds

ETFs are publicly traded funds that aim to track specific stock indexes or focus on particular region or industries. They offer high liquidity, low management fees, transparency, and diversification. They can be bought or sold on stock exchanges throughout the trading day, providing flexibility to investors (Ministerstvo financií Slovenskej republiky, Neznámi). „*ETFs open up a world of new possibilities to investors, whose investment habits have thus far been honed only on investing in pure equity, debt and recently in derivatives*“ (Thamaraipandy, 2017).

1.5 Measurement of risk, return and liquidity

Measurement of risk, return and liquidity are essential concepts in finance and investing. Understanding these concepts is crucial for investors and financial professionals as they make informed decisions about allocating their resources and managing their

portfolios. Risk, return and liquidity are closely interconnected. According to Barana D.: *...investors, ... are trying to find an investing alternative, that brings them a maximum return, maximum safety (minimum risk) and maximum liquidity“* (Baran, 2003). But as we know higher returns come with higher level of risk. Balancing risk, return and liquidity is crucial for managing investment portfolios effectively and achieving financial goals. This refers to so-called: *„...magical triangle that is located in a certain investment space and time“* (Chovancová, 2002).

Picture 2.: *The Magic Triangle*



Source: (Istockphoto, 2020)

The Magical Triangle of Investing represents the trade-offs and considerations that investors need to carefully balance when considering their investment portfolios. Managing risk, seeking appropriate returns, and evaluating liquidity need are crucial aspects of effective portfolio management. Achieving the right balance among these three elements is essential for investors to meet their financial goal while managing the level of risk they are comfortable with.

1.5.1 Risk

„For investor, risk represents a possible alternative that the actual return might be lower than originally expected“ (Steigauf, 2003). Risk also refers to the uncertainty and variability of returns associated with an investment. The difference of risk according to Albach: „Risk refers to uncertainties that can be measured using statistical methods. Uncertainties are *random phenomena that cannot be measured exactly, it is only possible to make assumptions about them*“ (Albach, 1990). All investments come with some level of risk, and different investments have varying levels of risk. We can say that one of the riskier are stock funds and on the other hand the safer (less risky) or more conservative option are bond funds. Investors use various strategies to manage risk, such as diversification, asset allocation, and risk management tools, to balance risk with potential returns. It is important for investors to carefully assess and understand the risk tolerance associated with their investments, and consider their risk tolerance, investment objectives, and time horizon when making investment decisions. Risk is an inherent part of investing.

According to „Picture 1“ we can state the first out of three relationships between 3 peaks of The Magical Triangle of Investing: **the relationship between risk and return**, as you can see a higher risk refers to a higher return, but riskier investments typically involve greater volatility and uncertainty, which can lead to a larger fluctuation in their value.

1.5.2 Return

Returns refers to potential gains or profits an investor can expect from an investment. An investor seeks returns as a reward for taking a risk. Different investments offer different levels of return potential, „there is inverse relationship between risk and return. It's said that more risk more return“ (Negi, 2020).

Returns do not only refer to potential gains, they basically set the difference between the investment at the start and at the end of the period subtracted from all the fees, interest rates, dividends and so on.

According to Steigauf S. we can divide returns into two parts:

- **Returns from investment income:** the dividends and interest earned from the investment portfolio of a fund, net of costs and expenses.

- **Returns from net realized profits:** refer to gains that are actually realized when bond and share positions are closed, resulting in a profit. This occurs when an investor sells their bonds or shares at a higher price than their original purchase price, locking in a profit (Steigauf, 2003).

1.5.3 Liquidity

According to Pavlát V. liquidity „expresses the ability (speed) to convert securities back into financial cash“ (Pavlát V., 2003). But this explanation does not refer only to securities, but to any type of assets. It refers to ability to convert assets into cash quickly and without significantly affecting the price. „It exists at least two ways in which liquidity constraints can affect funds' performance“ (Galoppo, 2021):

According to „Picture 1“ we can state the last two relationships between 3 peaks of The Magical Triangle of investing: **the relationship between liquidity and risk**, as you can see on the 1st picture out of 3, the higher the liquidity the risk also lowers, which also refers to a low return and that is our second and also the last relationship is: **the relationship between liquidity and return**, it states that the higher liquidity the lower the return.

1.6 Types of investors

There are different types of investors who participate in the financial market, each of them with their unique characteristics, investment goals, and risk tolerance. According to Matthew Dearth and Swee Yong Ku we can say that: „Different products are available to suit the needs of different types of investors, ...“ (Matthew Dearth, 2023). Understanding the various types of investors, we can do by finding their own nature or type, so that investor people can better understand which type of investment is the most suitable for them. We can say that the most crucial aspect of investing is a risk, because the risk most of the time highly influences our decisions, and we start to act based on our emotions and not on our rational thinking. That is why we can distinguish investors based on their relationship to risk according to Ručinský R. as (Ručinský, 2002):

- Conservative investor: prioritize lower-risk investments that provide more stable and predictable returns, with a focus on protecting their own investment than

seeking high levels growth. But according to Michael C. Thomsett: „... *even a conservative investor may use long calls to take advantage of the depression in stock prices*“ (Thomsett, 2009).

- Investor with a balanced profile: seeks a middle ground between risk and return in their investment, they aim for combination of capital growth and income generation while managing risk within their comfort zone.
- Growth-oriented investor: typically prioritize investments with the potential for higher returns, even if they come with the increased volatility and risk.
- And Dynamic investor: proactive investor in making investment decisions and may have a more aggressive approach compared to the other types of investors, they seek to take advantages of short-term opportunities, and actively manage their portfolio for potential high returns even under condition of risk.

2 Aim of the work

The trend of investing is gaining momentum in Slovakia, as it is becoming more and more popular among individuals who are seeking to grow wealth, protect their money against the current high inflation or secure their financial future. Despite the traditionally conservative mindset towards investing among Slovaks, there has been a noticeable shift in recent years with more people showing an increased interest in investing and building trust in various investment options such as mutual funds which emerged as a popular choice for Slovaks as they offer a conservative approach to investing.

The primary aim of our bachelor thesis is to comprehensively review the theoretical concepts related to investing, conduct a detailed analysis, and provide an evaluation of various selected mutual funds in Slovakia. This analysis will be based on the key criteria of the Magic Triangle of Investing according to its peaks: risk, liquidity and return. Based on the analysis performed we will try to identify the most favourable fund for a Slovak investor on the market.

To reach the primary goal of the thesis we set partial goals from the theoretical part, summarizing all theoretical information about the current state of investing in Slovakia starting with the factors influencing funds industry, with its advantages and disadvantages, characterization of funds as a whole and characterization of mutual funds, and, last but not least, explanation of the Magical Triangle of Investing as the main idea of our work and based on that define the risk, liquidity and return and relationship between each of them for the further analytical part.

From the practical or analytical part we used all theoretical data and transferred them into practice by setting selected fund management companies and their mutual funds according to the pre-selected criteria to have relevant information. With the chosen funds we were able to partially fulfil the main goal of our thesis and make analysis of the peaks of the Magical triangle, namely the risk, return and liquidity.

In the final part of our thesis we summarized all analytical information gained throughout, and set the most reliable fund among them for the past 3 years as the period we selected.

3 Work Methodology

In order to fulfil the objectives of our bachelor thesis, we employed several approaches and methods for processing the gathered data and information. These methodologies proved instrumental in various stages, including data collection, interpretation, information application, and knowledge integration in the practical part. Additionally, they facilitated the evaluation and formulation of conclusions throughout the course of our work. Based on the acquired knowledge, the following research methods have been determined:

1. The first method, knowledge extraction from literature, involved extensive research procedures and exploratory approaches. These approaches greatly aided us in developing both theoretical and practical components of the thesis. By delving into the specialized literature relevant to the topics addressed in our work, we acquired in-depth insights and a comprehensive understanding. Moreover, we collected valuable information and data from diverse internet sources, as well as sales prospectuses provided by individual management companies. These resources significantly contributed to the content of both the theoretical and practical sections.
2. Summarization, as the method utilized, played a crucial role in consolidating the acquired information. It involved synthesizing and integrating various pieces of information gathered throughout our research process into a coherent framework for the bachelor thesis. This method allowed us to present a cohesive analysis and effectively communicate the findings. Furthermore, it facilitated the assessment of risk using the Sharp ratio, a widely recognized measure.
3. Analytical-synthetic methods, the approaches employed were particularly valuable in comprehending and processing the factors influencing the market. By applying these methods, we gained insights into the current state of not only Slovak but also other markets and formulated understandable information about the factors in play. This facilitated a thorough examination of the practical aspects of our work, leading to a well-informed conclusion.
4. Selection, it was employed during the process of choosing mutual funds and management companies for our analysis. Through a careful selection, we aimed to provide the most relevant and representative results in the practical part of our

thesis. This method ensured that our findings accurately reflected the characteristics and performance of the chosen funds and management companies.

5. Statistical and mathematical methods formed primarily the practical part of the thesis. These methods enabled us to conduct detailed analysis of individual funds and assess their performance. By utilizing statistical measures such as standard deviation, we estimated the level of risk and volatility associated with the fund. Additionally, standard deviation served as a crucial tool for determining the risk profile of each funds, measuring the deviation from its meant return.
6. Finally, to enhance the overall completeness and depth of our work, we incorporated our personal observations, opinions, insights, and experiences into the thesis. By incorporating empirical elements, we aimed to enrich the content and provide a more holistic perspective on the subject matter.

By employing these diverse research methods, we ensured a comprehensive and rigorous analysis of the investment in mutual funds in Slovakia. The integration of theoretical concepts, practical insights, statistical analysis, and empirical observations allowed us to present a well-rounded and insightful bachelor thesis.

4 Results of work

The situation in Slovakia, whether it pertains to the financial or social aspect, is facing challenges and is not particularly favourable. This can be attributed to various factors such as the COVID-19 pandemic, as well as the continuing war in Ukraine, which has regional implications. These events have had far-reaching effects on the economy and society not only in Slovakia but all around the world. In addition, the global and financial market conditions have an impact on Slovak investors. Slovaks, known for their conservative investment approach, have been discouraged from investing due to the prevailing unfavourable circumstances and seeing market in decline as a threat not the opportunity. On the other hand, those who have been investing in various ways have experienced a decline in confidence in the investment landscape.

However, it is important to remember that investing is a long-term journey, and we know that the markets tend to rebound and recover over time. As the situation stabilizes and economic conditions improve, the funds that are currently at zero or experiencing decline are expected to gradually recover. That is why we decided to focus on the current state of risk, return, and liquidity of a different mutual funds in Slovakia in the next part of our bachelor thesis.

4.1 Management companies and their mutual funds

Investing into mutual funds can be a practical way to grow your wealth and achieve financial goals. With several options available in the market right now, we decided to choose management companies that can provide us at least 3 basic types of funds such as: bond funds, stock funds and mixed fund. The following criteria was that each fund will be our domestic fund and not a fund from abroad, and the last criteria was that these companies will be ordinary members of the Slovak Association of Management Companies (Slovenskej asociácie správcovských spoločností „SASS“). In the end we end up with Eurizon Asset Management (Eurizon AM), SLSP Asset Management (SLSP AM) and Tatra Asset Management (TAM). These companies have established track records and offer diverse investment strategies to suit different risk profiles and investment objectives. We will explore the benefits and considerations of investing in mutual funds.

Eurizon Asset Management is a leading asset management company that offers a wide range of mutual funds to investors in Slovakia and globally. With the history dating back to 2001, Eurizon AM has a strong presence in the European asset management industry and is known for its expertise in managing investment portfolios across different assets. One of the key advantages of investing in mutual funds with Eurizon is their diversified investment approach, which aims to spread risk across a broad range of securities and markets. This allows investors to access various investment opportunities and benefits. Eurizon AM also place a strong emphasis on sustainable investing factors into their investment processes (Eurizon asset management, 2021).

Tatra Asset Management is well-established asset management company that offers a diverse range of mutual funds to investors in Slovakia. With the history back to 1998, TAM has a long-standing reputation as one of the most popular asset managers in the Slovak region. One of the notable strengths of TAM is its local market knowledge and expertise in the Central and Eastern European regions. In addition to their investment expertise, TAM is also known for their excellent client service and investor education initiatives. They provide comprehensive information and tools to help investors make informed decisions, and their dedicated client service team is readily available to make address any inquiries or concerns for they clients. This is really useful if you are a new investor or if you want to just be informed about your investment (TATRA ASSET MANAGEMENT, , 2023).

Even though we are speaking about SLSP Asset management, on 16.12.2022 all the havings of SLSP AM was transferred to Erste Asset Management GmbH (EAM) but for better understanding we will still use the term SLSP AM when we are talking about the funds. EAM operates across multiple countries, including Austria, Czech Republic, now Slovakia and more. EAM manages a diverse range of investment products, including mutual funds, pension funds, discretionary mandates, and other investment vehicles. Same as Eurizon AM, EAM also puts emphasis on responsible investing and in the future will be interesting to compare funds of these to management companies.

These individual management companies we will compare in our bachelor thesis according to their investing instruments and preferences mentioned above.

Table no. 1 Overview of the chosen mutual funds and their management companies

	Eurizon AM	TAM	SLSP
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<i>Bond fund</i>	Eurizon - Active bond funds	TAM – Dlhopisový fond	AM SLSP – Eurový dlhopisový fond
<i>Stock fund</i>	Eurizon AM Slovakia – Akciové portfólio	TAM – Americký akciový fond	AM SLSP – Fond budúcnosti
<i>Mixed funds</i>	Eurizon AM Slovakia – Dynamické portfólio	TAM – Dynamic Balanced Fund	AM SLSP – Aktívne portfolio

Source: Own processing according to the Slovak Association of Management Companies

In „Table no. 1“ you can see all the selected funds for our bachelor thesis and it is important to note that these were the only funds and management companies available to our comparison of return, risk and liquidity according to the Slovak Association of Management Companies and our criteria. We would love to compare more types of funds or management companies, but there was no other compatibility of management companies or funds, there was no other company that would have a specific type of fund.

4.2 Characteristics of mutual funds

In the previous chapter of our bachelor thesis we set all our funds and management companies according to the chosen criteria. In this chapter we will provide you with the information about each type of funds and their characteristics as they will be part of our comparison of return, risk and liquidity in our practical part of the bachelor thesis. Each mutual fund is special and unique in the portfolio structure and is different from the other funds.

It is important to note that when we are considering investing into mutual funds, one must review all the aspects and documents concerning the mutual fund you are going to invest in. Documents such as prospectus contain essential information about the fund’s investment objectives, strategies, risk, fees and historical performance, that is why we will use it also in this bachelor thesis as source of information.

Bond funds most of the time invest in fixed-income securities, such as government bonds, corporate bonds, mortgage-backed securities and many more, to generate income and

potentially achieve capital appreciation. We can say that bond funds are more likely used by conservative investors who seek lower average risk levels.

Stock funds are an opportunity for investors with a higher risk tolerance, as the investment into stock funds or shares of publicly traded companies. Stock funds provide investors with a higher potential of return, but they are also a highly volatile which represents higher risk as mentioned. Stock funds portfolio can be managed to invest all 100% of shares to stock, but in general we can say that 80 or more percent are generally invested into stocks and 20% or less percent to bonds.

Mixed funds are getting more and more popular and most of the management companies provide their clients with this option. Mixed funds are basically a combination of any investment strategy and it only depend on an investor which of the strategy or portfolio is the most suitable for them. In our bachelor thesis we will compare the mixed mutual funds with a different portfolios and types of funds they invest into. For example *AM SLSP Aktívne portfolio* is a type of mixed funds where maximum of 30% can be invested in the stock funds and the share of bonds is not limited in any way, which means that AM SLSP Aktívne portfolio can be a 100% bond fund. On the other hand is a *Eurizone AM Slovakia – dynamické portfólio*, they mainly invest in unit certificates of shares, bonds cash mutual funds, short-term investment funds, and more, and what is important to point out is that they have an obligation that the value of capital securities and equity mutual funds minimum is 20% and a maximum is 70% of the total value of the fund's assets, but on average it is around 45%. The third and a last of our funds is *TAM – Dynamic Balanced Fund* which is the only one that invests in real estate funds where on average around 20% will be invested there and around 40% in stocks, the rest could be invested in bonds or monetary investments (Tatrabanka, 2023) (Tatrabanka, 2023) (Tatrabanka, 2023) (ERSTE-AM, 2023) (ERSTE-AM, 2023) (ERSTE-AM, 2023) (Eurizon, 2023) (Eurizon, 2023) (Eurizon, 2023).

4.3 Risk, liquidity and return of mutual funds

In this part of our bachelor thesis we will take a closer look on each from the point of view risk, return and liquidity. It is important to take a closer look at each of these aspects as they are one of the key points for investors while choosing a suitable investing strategy for their investment. Risk, liquidity and return are three peaks of the Magical Triangle of the

Investing, and each peak has a relationship with the other ones. As we may know now from the theoretical part, it is impossible to have an investing strategy with a high return, low risk and high liquidity for each investor it is crucial to choose at least one aspect that is important for him and will be focusing on. After setting the optimum aspects for the investor he can search for a suitable investing strategy and an appropriate type of fund.

We will be comparing our chosen mutual funds according to risk, liquidity and return, in the time horizon of 3 years, which might sound like a not eligible information, but we believe it is enough and the information will be relevant. On the other hand, if we would not choose 3 years, but more, there is no possible combination of funds and we would be forced to compare even fewer companies with fewer types of funds.

4.3.1 Risk

One of the factors we will be comparing is also the risk of mutual funds, as different investment strategies may have a varying level or measure of risk associated with the respective fund.

Mutual funds are influenced by various types of risk. As we have already discussed in the theoretical part, another significant factor in a fund is its volatility, which can also be referred to as the fluctuation of the fund over a certain period of time , for example: from the start of the funds, last 10, 5 or 3 years as we will be comparing in our thesis or just a few months or days. Volatility depends on the investment strategy of the fund, meaning it is derived from the volatility of individual assets in which the fund is investing. For our bachelor thesis, we calculated risk as the standard deviation. We decided to use this method mainly to incorporate the knowledge we gained during our studies, as well as to unify the materials and prospectus data. We initiated the process of calculating the standard deviation by first calculating its sample standard deviation, and then enriched it with the coefficient of variation, for which the daily net asset value of the fund was useful and important. As we mentioned earlier, fluctuation or volatility is significant when investing into mutual funds, and we utilized calculations and determined the universal relationship as the lower risk equals lower volatility. We summarized all the calculations and obtained the final unit of risk for the selected funds in our bachelor thesis. The results are visible in table below.

Formula for standard deviation:

$$SD = \sqrt{\frac{\sum(r_i - r_{avg})^2}{n - 1}}$$

r_i = actual rate of return

r_{avg} = average rate of return

n = number of time periods

Table no.2 Mutual funds risk measures

	Eurizon AM	AM SLSP	TAM
<i>Bond funds</i>	Eurizon - Active bond fund	AM SLSP Eurový dlhopisový fond	TAM – dlhopisový fond
Risk	6.76%	5.06%	2.73%
<i>Stock funds</i>	Eurizon AM Slovakia – Akciové portfólio	AM SLSP - Fond budúcnosti	TAM – Americký akciový fond
Risk	12.15%	12.63%	17.94%
<i>Mixed funds</i>	Eurizon AM – Dynamické portfólio	AM SLSP – Aktívne portfólio	TAM – Dynamic Balance Fund
Risk	9.65%	6.76%	9.42%

Source: own processing

When comparing the risk levels of different types of funds, we can observe variations in their respective risk profiles.

Bond funds are generally considered as less risky compared to stock funds, as they primarily invest in fixed income securities such as government and corporate bonds. Among bond funds listed, TAM – dlhopisový fond has the lowest risk at 2.73%. That means that the portfolio is composed of relatively stable fixed income securities, or it is due to that TAM - dlhopisový funds has more than 50% of assets invested in bonds, which we cannot say about Eurizon – Active bond fund which invests only around 36% to bonds which is resulting in 6.76% risk level for this fund. This indicates that Eurizone – Active bond fund is having a riskier portfolio or adopts a more aggressive investment strategy compared to other bond

funds. In AM SLSP Eurový dlhopisový fond, the risk level is resulting in 5.06%. The level of risk for Eurizon Active bond fund and AM SLSP Eurový dlhopisový fond is disproportionately high, as TAM – dlhopisový fond has managed to keep the level of risk relatively low despite all the risk currently present in the market.

On the other hand, stock funds are known for their higher risk levels as they invest in equities or stocks of companies, which are subject to market volatility and fluctuation. Even though the situation in the past 3 years was not bright and it still is not we generally know that stock fund risk level can easily reach over 10% as we can also see in our results. Among the stock funds listed, TAM – Americký akciový fond has the highest risk at 17.94%, This suggests that the fund's portfolio is heavily exposed to the risk and volatility of the US Stock markets where we can say the situation is even worse right now than in Slovakia currently. AM SLSP- Fond budúcnosti follows with a risk level of 12.63%, while Eurizon AM Slovakia – Akciové portfolio has a risk level of 12.15%. This indicates that both AM – SLSP – Fond budúcnosti and Eurizon AM Slovakia – Akciové portfolio may have relatively high exposure to the risk associated with the stock market, but not in such a range as TAM – Americký akciový fond.

Mixed funds, as the name suggests, have a combination of both bonds and stocks in their portfolios, which can offer a balanced approach to risk and return. Among the mixed funds listed, AM SLSP – Aktívne portfolio has the lowest risk at 6.76%, indicating that it may have a more conservative allocation to both bonds and stocks, or they adapted to the situation on the market very quickly and used their advantage of possibility of investing 100% to bonds. TAM – Dynamic Balanced Fund follows with a risk level of 9.42%, while Eurizon AM – Dynamické portfolio has a risk level of 9.65%. Because both of the funds names say “Dynamic“ in them, we predicted that both of the funds will have a slightly higher exposure to risk level compared to the AM SLSP – Aktívne portfolio, we expected TAM – Dynamic Balanced Fund to have a way more lower risk level as they can invest on average almost 20% to real estate funds which have been viewed the safest option for investing for the past 3years.

As we may know the standard deviation is not the only the way how to calculate the risk level of individual funds. Another way how to calculate risk level is the Sharp Ratio. According to Fernando Jason: *„the sharp ratio compares the return of an investment with its risk. It's a mathematical expression of the insight that express returns over a period of time may signify more volatility and risk, rather than investing skill“* (FERNANDO, 2022).

We decided to show the Sharp Ratio of each fund. Sharp ratio is one of the most used methods of identifying the risk level according to all prospects of the funds mainly according to returns. The Sharp ratio is set on a scale from 1 to 7, where one is the least risky and 7 is the riskiest. In a table you can see below, the Sharp ratio in individual funds we decided to sum up according to the Slovak Association of Management Companies and Finančný kompas website.

Sharp ratio formula:

$$\text{Sharp ratio} = \frac{R_p - R_f}{\sigma_p}$$

R_p = return of portfolio

R_f = risk-free rate

σ_p = standard deviation of the portfolio's excess return

Table no.3 Sharp ratio

	Eurizon AM	AM SLSP	TAM
<i>Bond funds</i>	Eurizon - Active bond fund	AM SLSP Eurový dlhopisový fond	TAM – dlhopisový fond
Sharp ratio	3	2	2
<i>Stock funds</i>	Eurizon AM Slovakia – Akciové portfólio	AM SLSP - Fond budúcnosti	TAM – Americký akciový fond
Sharp ratio	5	4	6
<i>Mixed funds</i>	Eurizon AM – Dynamické portfólio	AM SLSP – Aktívne portfólio	TAM – Dynamic Balance Fund
Sharp ratio	4	3	4

Developed based on: (Finančnýkompas, 2023) (Finančnýkompas, 2023) (Finančnýkompas, 2023) (Finančnýkompas, 2023) (Finančnýkompas, 2023) (Finančnýkompas, 2023) (Finančnýkompas, 2023) (Finančnýkompas, 2023) (Finančnýkompas, 2023) (Finančnýkompas, 2023) (Finančnýkompas, 2023).

We believe the Sharp Ratio is a great method to set a risk level for a funds as it takes into consideration also its return. Even the percentage level of risk as it is, is important that the return of the fund is also relevant for the investors. This Sharp Ratio is also set from the starting point of the fund existence and can change over time, our observation is only based on the last 3 years and does not take into consideration the return of the funds. That is why you can see a slight difference when comparing these two tables.

In the end is important to note that risk levels can change over time, and be influenced by various factors, as market conditions, economic environment, and fund management strategies. We suggest consulting with the fund management company all the risk aspects and risk levels of the funds, as they are professionals and all calculations and observations are made only for the purpose of the bachelor thesis.

4.3.2 Return

The term return typically refers to the gain or profit earned from an investment or a business activity. It represents the increase in value or income generated from an investment relative to the original amount invested or the cost incurred. But mutual funds are not always profitable, sometimes the financial market is not pleasant for mutual funds and loss can occur as one of the risk aspects when investing generally.

When calculating the returns of the selected mutual funds, we took a comprehensive approach by summarizing all available information at our disposal. This involved carefully examining various data points and financial metrics related to the performance of the funds. For calculating the returns of individual funds, we utilized historical daily exchanges, which allowed us to capture the fluctuations in the market over time and obtain an accurate representation of the funds' performance. The time interval we selected for our analysis spanned from January 1, 2020 to January 1, 2023, which encompassed a significant period of three years. This timeframe allowed us to capture a substantial amount of data and assess the funds' performance over an extended period, which is essential for obtaining a more comprehensive understanding of its overall returns. To calculate returns, we employed a widely used methodology. We took the initial value of the investment at the beginning of the time period and the ending value at the conclusion of the time period. We then calculated the ratio of the ending value to the initial value and subtracted 1 to obtain the total return of the fund. This approach allowed us to capture the percentage change in the investments value

over the specified time period and determine the funds' overall performance. To ensure the accuracy of our calculations, we cross-verified our findings with the statistical data provided by the management companies. This verification process helped us confirm the correctness of our results and establish their alignment.

In the end to present our findings in a clear and organized manner, we compiled the results into a table, which provides a comprehensive overview of the calculated returns of the mutual funds under analysis. This table may serve as a useful reference for further analysis of the performance of the mutual funds from different management companies in Slovakia.

Table no. 4 Return of mutual funds

	Eurizon AM	AM SLSP	TAM
<i>Bond funds</i>	Eurizon - Active bond fund	AM SLSP Eurový dlhopisový fond	TAM – dlhopisový fond
Total return	-12.25%	-15.54%	-6.14%
Return p.a.	-4.22%	-5.47%	-2.09%
<i>Stock funds</i>	Eurizon AM Slovakia – Akciové portfólio	AM SLSP - Fond budúcnosti	TAM – Americký akciový fond
Total return	22.72%	2.16%	27.35%
Return p.a.	7.05%	0.71%	8.39%
<i>Mixed funds</i>	Eurizon AM – Dynamické portfólio	AM SLSP – Aktívne portfólio	TAM – Dynamic Balance Fund
Total return	1.69%	-4.14%	-4.36%
Return p.a.	0.59%	-1.40%	-1.47%

Developed based on the knowledge of the Slovak Association of Management Companies

When comparing the performance of the mutual funds, it's crucial to take into account a multitude of factors that can impact their returns. These factors include the type of funds, prevailing market conditions, economic trends, and the specific strategies and holdings of the funds. Among the bond funds, none of the funds was profitable. According to the table we can say that among all the funds, TAM – dlhopisový fond experience suffered the smallest loss compared to the other funds. On the other hand, AM SLSP Eurový dlhopisový fond was impacted by the highest loss in the period of time 3 years. There are several reasons for this dismissal performance. For example, declining bond prices, rising interest rates, and credit risk associated with the underlying bonds held by the funds or the economic factors and changes in the bond market can significantly impact the performance of bond funds, resulting in lower returns for the investors. All the mentioned attributes, which could have contributed to the negative performance of the mutual funds, have unfortunately materialized, or are currently unfolding in the dynamic landscape of the financial market over the past 3 years.

We will go from a big minus to a big plus at least with two out of three stock funds. Eurizon AM Slovakia – Akciové Prtfolio has delivered a total return of 22.72% and an annualized return of 7.05% making it our second profitable fund in stock funds category. The positive performance could be attributed to a fund's portfolio of stocks that have experienced price appreciation. This also applies to TAM – Americký Akciový Fond which generated a total return of 27.35% and an annualized return of 8.39% as the fund with the highest return among selected funds. It is important to note even these funds are set as our domestic funds most of their portfolio is invested in stocks abroad as you may know also from the name Americký Akciový Fond "American Stock fund". These funds were hit with huge loss at the start of the time period due to the start of the pandemic COVID-19, but thanks to their portfolio managers they managed to rise and use the favourable stock market conditions abroad and were not experiencing the poor return affected by the war in Ukraine, which we cannot say about AM SLSP – Fond Budúcnosti. AM SLSP – Fond Budúcnosti has shown a total return of 2.16% and annual return of 0.71%, this may be the result because as mentioned in the COVID-19 pandemic and the war in Ukraine, Fond Bucúcnosti experienced adverse market condition, the selection of the stock was not effective as in the previous two funds and that resulted in lower returns from the funds holding and the total performance is way less than the current inflation.

The mixed funds, including Eurizon AM – Dynamické portfolio, AM SLSP – Aktívne portfolio, and TAM – Dynamic Balanced Fund, have shown mixed performance,

with some funds generating positive returns and others incurring losses. The Eurizon AM – Dynamické Portfolio was the only one with the positive return of 1.69% and an annual return of 0.59%. compared to the other dynamic portfolio TAM – Dynamic Balanced funds which generated loss of -4.36% and annual loss of 1.47%. So we can say that the managers of Eurizon did better management of the portfolio for the past 3 years. Both of these funds invest a significant portion of their assets in stock, which inherently comes with a higher level of volatility. As a result, we anticipate that TAM – Dynamic Balanced Fund would not experience a decline in value as pronounced. This expectation was based on the fact that TAM – Dynamic Balance Fund also allocates a portion of its portfolio to real estate investments, which are generally considered more stable in term of volatility and potential return. However, contrary to our expectations, TAM – Dynamic Balanced Fund actually experienced a greater loss than AM SLSP – Aktívne portfolio, with total loss of – 4.14% and an annual loss of 1.40%.

This result was surprising, as we had hoped that mixed funds, which are characterized as stable or moderately aggressive, would at least achieve some level of positive returns. Instead, it appears that over the past three years, funds that are considered riskier have delivered higher returns, while those that are expected to be stable have suffered significant losses, such as bond funds. Of course, it is important to note that the performance of these funds is influenced by various factors, including the overall market conditions not only in Slovakia but also globally. The past three years have seen significant fluctuations and changes in financial markets worldwide, which have impacted the performance of these funds. The management of portfolios by the fund management companies may have either contributed to better or worse results for investors.

4.3.3 Liquidity

Liquidity in mutual funds refers to the ease with which investors can buy or sell their mutual funds shares without incurring significant costs or delays. It relates to how quickly and easily an investor can convert their mutual funds shares into cash or other assets. Liquidity in mutual funds is important because it allows investors to easily enter or exit their investments, providing flexibility and convenience. Mutual funds typically offer daily liquidity, meaning investors can buy or sell shares on any business day. The liquidity of mutual funds are determined by the types of assets it holds and its redemption policies which

are stated in sales prospectus. Some mutual funds may have redemption fees or holding periods as a way to manage liquidity risk. Redemption fees are charges imposed on investors who redeem their shares within a certain period of time. Holding periods refer to the length of time that investors must hold their shares before they can redeem them without incurring a fee. These measures are designed to deter short-term trading and help manage liquidity risk in the funds.

In our bachelor thesis, we have decided to determinate liquidity based on summarized information from prospectuses of individual companies, specifically from the perspective of the speed of payment of funds to the investor. Companies nowadays do not pay out money in cash, but only to the investors' regular accounts. Additionally, we will compare the fees associated with the redemption of certain value from the investment, as this is also one of the aspects that can influence the investors' decision on whether it is worthwhile to redeem funds from their investment. Almost every funds management company states that the redemption of units is "immediate", so we have decided to define this as one day, of course, each company has its own conditions for "immediate" redemption, which we will outline in the comparison of individual companies. It is important to emphasize that we are comparing companies and not individual funds, because companies have the same conditions for all their funds that are we comparing.

Table no.5 Liquidity

	Eurizon AM	AM SLSP	TAM
Liquidity	2 day	1 day	1 day
Fees in 1 st year	3%	1.80%	3%

Developed based on: (ERSTE-AM, 2023) (ERSTE-AM, 2023) (ERSTE-AM, 2023) (Eurizon, 2023) (Eurizon, 2023) (Eurizon, 2023) (Tatrabanka, 2023) (Tatrabanka, 2023) (Tatrabanka, 2023).

As we have already observed from the table above, the individual attributes are almost identical in the various management companies, but upon closer examination, we can discover that there are indeed some differences. First, we will delve into the liquidity of the different companies.

Among the companies listed, Eurizon AM, stands out as it attributes a value of 2 days after receiving a redemption request from investors. This means that if an investor submits a request for redemption, Eurizon AM will credit the corresponding value to the investor's account on the following business day. However, if the redemption request is received on a non-business day, such as a Saturday or Sunday, the process may be extended, and the value may not be credited until the following Tuesday. Similarly, if the request is received on a Friday, the redemption will be processed and the value credited on the subsequent Monday. In contrast, AM SLSP and TAM, two other companies listed, follow a slightly different process. If they receive a redemption request on a business day before 12:00, the units will be paid out on the same day as the request was received. However, if the request is received after 12:00, the units will be paid out on the following business day. Likewise, if the request is received on Friday after 12:00 or over the weekend, the units will be paid out on the following Monday. Despite the fact that some companies claim to offer "immediate" payment, it is worth noting that in practice, the actual processing time for redemption may still take up to 2 days, similar to the timeline followed by Eurizon AM.

From a broader perspective, it is also important to carefully consider the fees associated with mutual funds, as they can significantly impact on the overall decision making. In the case of the mentioned management companies, Eurizon AM, TAM and AM SLSP, there are notable differences in their fee structure, the table shows the first year of investment, but based on the information obtained from the prospectus we can say that Eurizon AM and TAM both charge a 3% exit fee for the first year of investment and both have a unique feature. Eurizon AM has a 3% fee for the 60-months investment period, after 60-months period the fee is reduced to 0%, whereas TAMs fee decrease over time. For instance, TAM charges a 2% fee for a 2-years investing period, 1% for a 3-year investment period, and 0% for investment longer than 3 years. On the other hand, AM SLSL stands out with a more investor-friendly fee structure. Despite charging 3% fee for a 1-year investment period, the fee drops to 0% for an investments held for 3 years or longer. When comparing the average fees over a 3-year investment period, AM SLSPs fee of 1.80% is lower than TAMs average fee of 2%. It's worth nothing that while a fee difference of 0.20% may seem small, it can add up over time, especially for investors redeeming units with higher values. Therefore, carefully evaluating the fee structure of management company is crucial in making informed investment decision.

5 Discussion

The main objective of our bachelor thesis is to conduct a comprehensive review of theoretical concepts related to investing, followed by a detailed analysis and evaluation of the selected mutual funds in Slovakia. This analysis is based on the three key criteria of the Magical Triangle of Investing, which are risk, liquidity, and return. By analysing these criteria we find out that mutual funds do not provide a profit and investment can be in loss after a certain time period which confirms the statement that investing is not for short-time period, which is also said by Mittaš Marek: *„If you want to save for a car that you will need in a year, avoid mutual funds. If you plan to save money for retirement, ... , this is the way to good return“* (Mittaš, 2019).

Even though mutual funds are categorized into different types based on their general characteristics, it is not always guaranteed that these characteristics will be strictly adhered to. During our research period, we observed that some funds, despite being classified as conservative funds with a low volatility, were not able to maintain a consistent positive return. This finding that factors beyond the funds classification may impact its performance. On the other hand, our analysis also confirms that funds that are considered riskier, and thus have higher volatility, tend to exhibit higher returns. This was particularly evident when comparing stock funds, bond funds, and mixed funds. Despite their higher volatility, these types of funds generally displayed better performance in terms of return. Even though stock funds experience high returns we cannot say this about bond or stock funds which were highly influenced by the external factors. Which is also confirmed by finreport.sk: *„... as of December 31, 2022, year-to-year lower by -4,3% due to the decrease in the value of assets of bond and mixed funds“* (Sadovská, 2023).

The situation in Slovakia over the past 3 years has been impacted by multiple challenges, both from an economic and psychological perspective. The country, along with the rest of the world, has been grappling with the effects of the ongoing COVID-19 pandemic. The pandemic has caused widespread disruptions to businesses, supply chains, and consumer spending, resulting in sharp decline in economic activity and negative impact on Slovak economy. As the country was trying to recover, another major event emerged that further escalated the situation. The war in Ukraine, although not taking place directly in the Slovak territory, has had a significant impact on economy. The combined impact of the COVID-19 pandemic and the war in Ukraine has led to record-high levels of inflation and

interest rates in Slovakia. Inflation has surged due to disruption in supply chains, higher costs of goods and more. The central bank has responded to the inflationary pressure by raising interest rates to high inflation, but this has also had implications for borrowing costs for businesses and households, further impacting the overall economic situation. But according to TREND: „*The rate of inflation in the OECD region will decrease to 6.3 percent in 2023 from 9.4 in 2022 and will fall to 4.3 percent in 2024*“ (TREND, 2023). And we hope they are right.

Despite the unfavourable situation, we would like to remind all investors not to panic and to remember two basic things. The first is that investing is not for short-term gains, and the second is to view this situation as an opportunity to reinvest in their investments and see it as a “discount“. But according to Toma Branislav, people see it in a different way: „... *in uncertain times, people tend to limit their investments first*“ (Toma, 2023). The market situation, despite the events in Ukraine, is begging to stabilize, and the markets are returning to the pre-COVID-19 pandemic growth trend.

From the point of liquidity, we find out management companies have the same approach when it comes to liquidity 1 or 2 days and are differentiated only by exit fees.

Conclusion

Collective investment, or mutual funds investing, is already a well-known topic in financial markets and continues to evolve. Mutual funds began to emerge in Slovakia at the end of the 20th century. Currently, there are many options and increasing number of financial instruments in Slovak investment market. Unfortunately, the situation with the COVID-19 pandemic and the war in Ukraine has significantly impacted financial market and has also has an effect on mutual funds.

In the practical part, the thesis focused on comparing the risk levels and returns of various mutual funds. We utilized the standard deviation as a measure of risk and calculated it for each fund using the formula. The results showed variations in the risk profiles of different types of funds. Bond funds generally exhibit a lower risk compared to stock funds, as they primarily invest in fixed income securities. Among the bond funds analysed, TAM – dlhopisový fond had the lowest risk, indicating a relatively stable portfolio composed of bonds. Eurizon – Active bond fund had a higher risk level, suggesting a riskier portfolio or more aggressive investment strategy. Stock funds had higher risk levels due to their investments in equities, which are subject to market volatility. TAM – Americký akciový fond had the highest risk among the stock funds, indicating a high exposure to the risk and volatility of the US stock market. AM SLSP – Fond budúcnosti and Eurizon AM Slovakia – Akciové portfolio had relatively high exposure to stock market risk but to a lesser extent compared to TAM. Mixed funds provided a balanced approach to risk and return, combining both bonds and stocks in their portfolios. AM SLSP – Aktívne portfolio exhibited the lowest risk among the mixed funds, suggesting a more conservative allocation. TAM – Dynamic balanced funds had a slightly higher risk level, while Eurizone AM – Dynamické portfolio had the highest risk among the mixed funds. We also provided the level of risk according to the Sharp Ratio which takes into account both risk and return. The Sharp Ratio level of different funds provided additional insights into the risk levels. The ratios showed similar trends to the standard deviation, with lower ratios indicating a lower risk.

When considering return of the mutual funds, it is important to note that the selected time frame in this period included significant market fluctuations and economic challenges, which impacted the performance of the funds. Among the bond funds, none of them generated positive returns. TAM – dlhopisový fond experienced the smallest loss, while AM SLSP Eurový dlhopisový fond had the highest loss. The decline in bond prices, rising interest

rates, and credit risk contributed to the negative performance of the bond funds. Stock funds exhibited mixed performances, with Eurizon AM Slovakia – Akciové portfolio and TAM – Americký akciový fond generating positive returns, while AM SLSP – Fond Budúcnosti incurred a smaller positive return. The favourable stock market conditions abroad contributed to the positive returns of the selected funds. Mixed funds showed mixed performances as well, with Eurizon AM – Dynamické portfolio being the only one with a positive return. AM SLSP – Aktívne portfolio and TAM – Dynamic Balanced Fund incurred losses, with TAM experiencing a greater decline due to adverse market conditions and less effective stock selection.

In conclusion, the risk levels and returns of mutual funds are influenced by various factors, including investment strategies, market conditions, and economic trends. Investors consider both risk and return when selecting mutual funds, and consulting with funds management companies is advised. The findings of this thesis provide insight into the risk profiles and performance of selected funds but should be interpreted within the context of the specific time period and market conditions analysed.

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