

European Polytechnic Institute, Ltd.

# **THE BACHELOR THESIS**

2012

MARIE JEKLOVÁ

**European Polytechnic Institute, Ltd. in Kunovice**

**Subject: Finance and Taxes**

# **COMPARISON OF INSTRUMENTS OF COLLECTIVE INVESTMENT FUNDS**

(Thesis)

**Author:** Marie JEKLOVÁ

**Supervisor:** Ing. Ondřej ŠABATA

Kunovice, 2012



I. soukromá vysoká škola na Moravě  
**Evropský polytechnický institut, s.r.o.**  
Akademický rok 2011/2012

## ZADÁNÍ BAKALÁŘSKÉ PRÁCE

Jméno a příjmení: **Marie Jeklová**  
Studijní obor: Finance a daně

Téma práce:

### Komparace instrumentů kolektivního investování

#### Cíl bakalářské práce:

Cílem bakalářské práce je komparace instrumentů kolektivního investování. V úvodní části práce za použití české a zahraniční literatury vypracujte teoretický základ a vymezte pojmy, které se zabývají kolektivním investováním. V následující části vymezte fondy (podílové fondy a penzijní fondy) a uveďte časovou řadu vývoje zhodnocování finančních prostředků za posledních 10 let. V další části práce proveďte komparaci těchto fondů jakožto možných způsobů investování finančních prostředků. Dále proveďte komparaci modelových případů investování v České republice. Výstupem práce je návrh optimálního způsobu investování, dále vypracování e-learningového systému do výuky (samodiagnostické otázky a odpovědi, ostrý test), zhotovení článku na studentskou konferenci. Práce bude obhájena před Ústavem ekonomiky a řízení a hodnocení bude součástí bakalářské práce. Bakalářská práce bude podrobena testu na plagiátorství a výsledek bude předložen zkušební komisi pro státní závěrečnou zkoušku.

#### Osnova:

Úvod

1. Teoretický základ
2. Vymezení fondů
3. Komparace fondů
4. Komparace modelových případů investování do fondů v České republice
5. Návrh optimálního způsobu investování

Závěr

Podle zákona č. 111/1998 Sb., § 47b, odst. 3 platí, že odevzdáním práce autor souhlasí se zveřejněním své práce podle tohoto zákona, bez ohledu na výsledek obhajoby.

Vedoucí práce: Ing. Ondřej Šabata

Oponent práce: Ing. Milan Trnkal

Místo a datum zadání bakalářské práce: Kunovice, 26.8.2011

Evropský polytechnický institut,  
s. r. o.  
Osvobození 699 -1-  
686 04 KUNOVICE

Jozef Strišš

Doc. Ing., CSc.

ředitel Ústavu ekonomiky a řízení

Oldřich Kratochvíl

Ing., h. prof., Dr.h.c., Ph.D.,CSc.,MBA

rektor

I declare that I have written the bachelor thesis myself and under the supervising of Ing. Ondřej ŠABATA and I have declared in the list of literature all the sources used.

Kunovice, 2012

I thank Ing. Ondřej ŠABATA for his very useful methodological assistance that he provided me during my preparation of this thesis.

Kunovice, 2012

Marie JEKLOVÁ

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# INTRODUCTION

Most people living in the Czech Republic put their temporarily free funds to various insurance companies, banks, the accounts, but fewer are those who invest their money in collective investing, e.g. funds although at the present an offer of these is relatively rich. However, in the recent years there is an increase of the number of investors who have decided to entrust their money into the hands of portfolio-managers. Investing in funds is undoubtedly easier than private investment, provides a more secure investment in terms of unethical practices, higher profitability and better access to individual instruments, including a more diverse range of investment options. The investor is not subject to almost no demands he does not watch the markets and decide what securities to keep their finances. The greatest interest has recently been shown to invest in pension funds.

The first impulse to the creation of this work was the practice, where there was a meeting with pension funds and pension schemes. Collective investment will then become an interesting topic for obtaining further information and then to select the topic of this work.

Aim of this thesis is the comparison of instruments of collective investment funds selected and then putting investment model cases. The output is an optimal method of investing money and creating a sharp and diagnostic test that can be used in e-learning system of the European Polytechnic Institute study for the development of students' knowledge in the area of collective investment schemes. The entire thesis can serve as a convenient additional study material for students of this college.

The thesis is divided into several parts. The first section discusses the general collective investment, its types, classification, advantages and disadvantages of collective investment schemes and investment companies, which establish and manage mutual funds. Also it defines the basic concepts related to the issue of collective investment schemes. This section is devoted to the history of collective investment, at both global and at national level. Undoubted importance of history is to facilitate understanding the present situation. It also gives an overview of the distribution of funds in the Czech Republic. The second section defines and characterizes the investment, mutual and pension funds. The mutual funds are more focused on open-end mutual funds as the most used form of collective



investment in the Czech Republic, are characterized by their basic types and subsequently deals with selected equity mutual funds, bond and mixed. The pension fund provides basic theoretical information, information relating to pension and benefits paid. Now pension funds are currently the most used form of investment, largely because it is this form of investment supported and guaranteed by the state. This section also mentions the Association of Pension Funds, as an organization, which are grouped all pension funds operating in the Czech Republic.

The third part of this thesis is devoted to a comparison of selected mutual funds and pension funds comparison. The mutual funds are always together compares the two equity funds, two bond funds and two mixed. The pension fund is the comparison of all ten funds that operate on the Czech market.

The fourth section describes the test cases selected by investment funds. In this part of the thesis also compares the two test cases to invest in pension and mutual fund. Further, it compares the two test cases to invest in pension funds.

The fourth section describes the test cases selected by investment funds. In this part of the thesis also compares the two test cases to invest in pension and mutual fund offered by ISČS. Further, it compares the two test cases to invest in pension funds

The fifth part is the output of the thesis, therefore the application for optimal storage investments. The proposal is designed scream for conservative investors and for investors who are not afraid to take risks and in the open-end mutual funds. Optimal investment is also interested in the proposed pension plan.

The last part describes e-learning, its advantages and disadvantages associated with the use, etc. It also includes sharp and diagnostic test that can be used in e-learning system. This test is stored in the Appendix No. 1. It can serve European Polytechnic Institute, Ltd. for the development of study skills of students in the area of collective investment schemes.

Methods used in this work include the analysis of printed and electronic documents, literature and law, as well as individual interviews with employees of insurance companies.

The key literature, from which I used a lot of information for this Bachelor thesis, is the book *The capital markets and collective investment* by authors Vaclav Liška and Jan Gazda, which describes in great detail the history of collective investment since its inception, through development and global developments in Europe. Also it deals in detail with the voucher privatization and further development of collective investment in the country. The book also contained a clear division of collective investment institutions and subsequently cutting funds. The second used the basic literature is a book called *Money, Banking, Financial Markets*, whose lead author is Stanislav Palouček. The book provided me with information on investment and mutual funds and pension funds also. The third core book from which I drew for my thesis is *social policy*, written by Vojtěch Krebs in collaboration with the team. From this book, I drew an overview of the issue of pension and pension funds.

In addition to the core literature I enjoyed more academic economic literature in Czech and English. One other sources, the Act No. 189/2004 code, on collective investment as amended. The information was also gathered from magazines and internet sources. Important information is also provided workers who mediate investing in mutual funds and pension funds into.

# **1 The Theoretical Basic**

The theoretical basis of this thesis is divided into two core areas. In this part there are basic concepts that the theme of collective investment linked and are used in the thesis. Knowledge of these concepts is crucial to understanding the content of work but also for the understanding of collective investment schemes.

The first part deals with general information on collective investment schemes. Collective investment is first defined then there are the ways of investment types and investment funds from different perspectives. Within this area are included individual advantages and disadvantages in collective investment schemes and their brief description. It is also interested in investment companies that deal with activities in the sphere of collective investment, they establish mutual funds, are therefore important factors in the area.

The second part describes the theoretical basis of the history of collective investment that is engaged in collective investment since its very beginning. Particular emphasis is placed on the 21st century when we can talk about the progressive development of collective investment, especially after World War II. In the Czech Republic there we can meet with a collective investment in early 90 years as a result of voucher privatization. At that time, the first investments funds were founded including so-called “PIAS” company. In this passage, there is captured the development of the Czech legislation dealing with investment funds and collective investment after 1990. [12, p. 50]

## **1.1 Collective investment**

One of the possibilities of investment funds is collective investment schemes. This is a business that is not part of trading. The essence of the collection is a collective investment funds (notes and coin) from retail investors, in accordance with the law subsequently invested in a wide variety of instruments. The investor is an entity that invests in, or added their funds in order to evaluate their securities. Investing carries the possibility of not only yields but also the risk of loss.

Collective investment is realized through specific institutions that are involved in this activity. The basic and most important are collective investment funds that are most used. Funds may be either an investment or mutual fund. Their successful activities are set up by specialized financial institutions, which are investment funds and investment companies. [12, p. 54]

In addition to investing in the Fund shall be used other ways of collective investment. These may be such as investment clubs, which are funds in many ways similar. Bring together groups of people, but these people, unlike the well-known funds. Each member of the investment club has a perfect view of property and management of the club and is in constant contact with other members. The members collectively decide where, how and what value they invest their money. Investment club members are fully trusted and no risk of misappropriation of assets invested and enrichment of the majority owners. Getting information is shared among all members of the company. Each member of the club is responsible for a certain segment of the capital market. For effective decision making also use information, analyzes and recommendations of investment managers and brokers. The purchases and sales of club members decide according to the collectively vote. [5, p. 313 - 314]

Institutions of collective investment may be divided from a legal point of view to:

- Open to legal status - they have the character of corporations. The investor becomes a shareholder here, the owner of the shares. He is able to attend the general meeting and exercise their rights here at the co-operations. This form is used in the world such as USA, UK, France, Belgium, Netherlands and Luxembourg.
- Open without legal personality - it is managed by an investment company. These companies are separating their property from the estate clients and manage it separately. The investor becomes a shareholder acquires interest in property, without voting rights. This form is used in the Czech Republic and in other countries as well as some French and Luxembourgian funds.
- Closed - for these institutions is the number of issued securities determined accurately. It is a precise date by which investors have the right to repurchase. On the secondary market in these securities while trading, but have generally lower liquidity. This form is used only for certain types of investments such as long-term investment in real estate in special funds for the guaranteed portfolio. [5, p. 316]

### **1.1.1 Investment companies**

Investment companies are entities engaged in activities of collective investment. To operate an investment company must ask permission from the Czech National Bank.

Investment companies establish mutual funds and manage their assets. They can also manage the assets of investment funds and other assets of mutual funds investment companies. This activity can be performed after the signing of the management.

They may also provide services such as the following:

- accounting,
- provision of legal services,
- handling inquiries and complaints from shareholders or shareholders,
- valuation of assets or liabilities of the fund,
- ensuring the fulfillment of tax obligations,
- determining the value of shares or share certificate,
- keeping records of units or shares and the list of shareholders,
- allocation and disbursement of the proceeds of fund assets,
- issuance or redemption of units or shares, including the negotiation and settlement of contracts,
- creating security and business strategy funds,
- offer of units or shares,
- promotion of services and products offered. [14, p. 2846]

In addition, the investment company, if such activity is permitted, manages client assets, keeps, and securities and reports, provides advice.

The obligation of the investment company, each investor regularly provide information on the focus of the fund's investments, portfolio investments and the composition of the financial results and usually twice a year. Investment companies may not issue bonds.

### **1.1.2 Advantages and disadvantages of collective investment**

#### **Advantages:**

- Diversification of risk - this is the distribution of investments in the portfolio to a greater number of securities that yield is independent of each other, in order to spread risk. The word portfolio means that all of the securities are owned by one company or person.
- Reduce transaction and information costs - economies of scale obtained funds by trading with instruments in large quantities.
- Easier access to markets and instruments - is facilitated primarily through funds to retail investors. They can invest in instruments around the world and also in instruments with high rates. Participate in and purchases of such titles, which would be received in the individual investment.
- Increased security - funds are specialized and institutions that are regulated by the state which provides high security against property losses arising from unethical practices.
- Professional management of entrusted property - employment of experienced and capable managers and fund managers should lead to professional property management. This is necessary to ensure good working conditions and daily access to the latest information. Investment companies are equipped with modern systems to continually monitor developments on global financial markets.
- Increased liquidity - an open-ended funds, which buy in shares from a shareholder or shareholder of the units at a price derived from the current value of fund assets. The fact that the fund is obligated to repurchase stock or participation certificate is provided liquidity to the investor.
- Possible tax advantages - they can get investors who invest in securities in different countries through investment fund, and thus can be used by the benefits of tax havens, the absence of withholding taxes and favorable tax rates.
- Simple and convenient investment - the investor provides its cash and all other activities it provides for the fund. In addition, the investor may use a variety of products and services provided by the fund.
- The higher rate of return - typically achieve higher returns than they received as deposit money with commercial banks. [8, p. 95]; [18, p. 31 - 32]

In addition to benefits for retail investors is this investment good for economy of the state. Long-term invested funds are invested in a large investment that has a positive effect on economic growth.

Disadvantages:

- Conflict of interest between investors and portfolio managers - the mutual fund shareholder can not intervene in the management of the fund or otherwise participate in it, and can be damaged its interests.
- Amount of the fees - the investor is obliged to pay fund management fees of its resources. They would be influenced and achieved yields comparable to similar funds.
- Below average performance of the fund - The fund is usually stated in %. This expression is a level of appreciation of fund assets over time. If revenues do not meet the needs of the investor, it may decide to change the fund.
- Investment restrictions of freedom - according to which the investor chooses the fund is selected, only the area of its investments, it means that the decision whether to invest in stocks, bonds, real estate or other areas. An investor can not determine, for example, which will buy shares.
- The risk of loss of investment value due to market movements - this risk can not avoid.
- The risk of fraud and losses due to fraudulent and illegal transactions - will never be completely ruled out, but is hampered by government regulation and legislation.
- The absence of national insurance schemes - in the collective investment is disadvantage compared to other forms of investment. [12, p. 53 - 54]

## **1.2 The history of collective investment**

To determine the exact origins of collective investment it is now impossible. Already since the created money, individuals began to pool their funds for more efficient joint investment.

The beginnings of investment that resembled today's collective investment date back to the 19th century. One of the first states where the collective investment began to apply is Belgium. It was in 1822, slightly later in Switzerland, France and Great Britain. Here we began to collectively invest in the stock market like today. In 1868 he was based in London, The Foreign and Colonial Government Trust, which was the first forerunner of mutual funds, which are known today. In 70 years, then in England and Scotland, especially in very many similar trusts which were forerunners of closed funds. [5, p. 321]

The collective investment in the U.S. took place in the early 20 century. On 21st March 1924 there was in Boston in the U.S. based Massachusetts Investors Trust of Boston open-ended mutual fund, which began to issue and redeem shares of the Fund and not yet listed on a stock. Collective investment and business in the capital markets have been regulated in the U.S. several laws issued by Congress. It was particularly Securities Act of 1933 and the Investment Company Act of 1940, which was revised in 1970 and later in 1996. [5, p. 322]

In Europe there has been extensive development of collective investment until after World War II, mainly in France. In the 30th years closed-end funds are based, which were quoted on the Paris Stock Exchange. Use is mainly institutions. In the 50th years in France open-ended funds were established. The first type benefits only employees of larger enterprises and thus supports the corporate savings. In other countries, collective investment developed slowly. Another center for collective investment became Luxembourg. Legal form of collective investment here was determined by the law issued in 1985. After 2000 year it was dominated by the European capital market for a total of 5 countries. They are France, Germany, Italy, Luxembourg and the United Kingdom. These countries together create roughly 80 % of European industry. In Central and Eastern Europe receives only collective investment in the 90 years. [12, p. 50]



In Asia, enters the scene collective financial investment only in 80s the 20<sup>th</sup> century and especially in Japan. In Japan, was founded in 1957 by Association Investment Trusts Association, which supported the development of collective investment schemes and encourages Japanese investors to invest in securities. The number of undertakings for collective investment in Japan grew rapidly. In the 80 years has ranked among the most developed country in the European funded industry. Another hub in Asia has become China, especially Hong Kong. The first investment funds appeared here in 1991. Laws that were issued between 1997 and 1998 enabled the rapid and stable development of collective investment in China. Other important pence in the collective investment in Asia, the former British colony of Singapore, Taiwan, Australia, New Zealand, Philippines, South Korea, Malaysia and Thailand. [5, p. 334 - 336]

Development of collective investment in the Czech Republic can be divided into three stages:

- Voucher privatization period (1993 - 1999) - privatization funds formed a closed type.
- Refining market period (1999 - 2002) - this is a transitional period during which disappeared unserious subjects. They were set up new entities that were not linked to the voucher privatization, and investors put their money into their assets. They were created as open-end mutual funds.
- Period open-end mutual funds (from 2002) - which is today dominated by the collective investment market mutual funds open crown type. [5, p. 334 - 336]

The Czech Republic begins with a collective investment as a result of voucher privatization. The state privatized 90% of companies with a total book value of nearly \$ 10 billion. Citizens of the Republic could buy the investment points registered in the coupon books. Through these points could either invest in shares of privatized enterprises, or they can be placed in the privatization funds. At that time they were set up investment funds. The investment bank founded in 1990 by a company called First Investment. It was the first investment company in the country. This company created the Investment Development Fund, the Czech and Moravian Property Fund Property Fund. A year later founded his investment company as well as other banks. These companies create funds in which to invest public. Ministry of Finance granted the license 429 investment privatization funds. [1, p. 167]

In the first and the second wave of coupon privatization occurred from 1992 to 1995, investment funds gathered a huge amount of money. In the first wave that was 72 % in the second wave of investment 63.5 % of the total amount of coupons. The so-called third wave of voucher privatization funds regrouped stock portfolio and assembled packages, which also sold to large investors. This third wave of voucher privatization took place from 1995 to 1997. [14, p. 51]

Most of the privatization funds were closed-end and during privatization could only buy shares, which increased their risk. For many funds, there was a failure to comply with legislative requirements and ineffective asset management. Many funds began to convert to holding companies, which were common stock companies that had a different line of business other than collective investment schemes. This transformation is holding of a company and avoiding strict regulation and supervision by the state. These factors had a negative impact on shareholders and stakeholders. Collective investments lost much public trust.

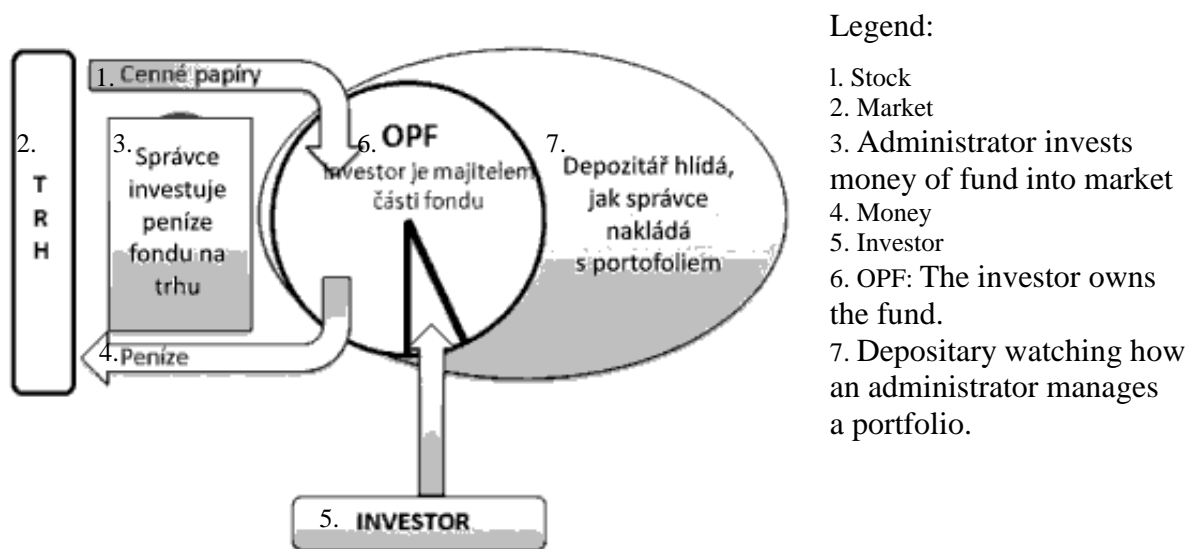
Amendment to the Investment Companies and Funds Act 1998 ordered the conversion of existing investment and mutual funds closed-end funds to open-end mutual funds by 2002. The amendment set strict rules for the operation of funds and reduce risks associated with their activities. [14, p. 52] are gaining confidence crown the newly created open-ended mutual funds in which shareholders have begun to upload their finances. It begins a period of stable growth in assets in open-end mutual funds. [5, p. 340]

Since 2004, when the Czech Republic entered the European Union, has been valued the new Act No. 189/2004 Coll. on Collective Investment. This law is in line with EU legislation. It allows creation of standard and mutual funds, special funds but also real estate, funds, derivatives, venture capital, securities, special fund, fund of funds and funds mixed.

In the Czech Republic until 2004 exercised supervision over the activities of investment companies from the Securities Commission and parts of the Ministry of Finance. Since 2004, investment companies went under the full control of the Securities Commission. From 1<sup>st</sup> April 2006 is fully responsible for the oversight of investment companies, the Czech National Bank. [7, p. 333]

The assets of each collective investment fund must be registered under the Act and handled shall be controlled by the depositary. Depositary of the fund can be worked only by bank that has a license for this activity from the Czech National Bank, and closes with an investment fund or investment company with a contract for the performance of the depositary. This Agreement is concluded for a definite period and notice period is 6 months. Funds whose investment manager is a company must also have the same depositary. The depositary is engaged in the maintenance of current accounts and investment company's funds. Responsibility of the Fund is to save the account depositary raised funds. All payments and withdrawals must fund transfers through the Depositary and to enable him carry out the controls. Depositary makes sure that all the activities of investment companies and funds have been carried out in accordance with the law and the fund. If the depositary to identify shortcomings in the activities or violations of the law is obliged to discuss with the investment company or fund and immediately report this to the regulator. The problem may be that the bank can act as a depositary for its own investment companies and funds. In this case, may lead to efforts to solve problems within the whole.

The following diagram illustrates a system that is proven and well-protected funds invested in the fund before breaking-down of some investment company.



Scheme No. 1: Investing in the funds and the relationship between investors, managers and distributors. (2011)

Source: [13, p. 154]

Collective Investment in the Czech Republic does not reach such a position as a collective investment in advanced bridegroom.

### **1.3 Distribution of Funds**

Investment funds can be divided according to different criteria, allowing their classification.

According to the composition of the portfolio is divided into funds to:

- Securities funds - can be further divided by type of securities in which they invest as equity funds, bond funds, money market funds, funds of funds, etc.,
- Real estate funds - invest primarily in real estate in the Czech Republic are available to investors three Czech funds in which they may invest in CZK, and two with Slovak investment in EURO,
- Special Funds - Funds can be designated for the public, such as special funds, securities, real estate and other special funds, or be designed for a limited number of investors, an example is a special fund for qualified investors. [5, p. 317]

In many countries, the split is rather tentative. They are often set up joint funds whose portfolio consists of securities, but also real estate, sometimes movable assets such as precious stones or precious art objects. [5, p. 317]

According to the profit sharing funds are divided into:

- Pension (income) funds - are focused primarily on the highest possible payment of income that is dividends on shares of units that depend on the economic performance of the Fund. The total revenue, which consists of an investor, reaches only normal returns.
- Growth-funds - the main targeted funds are to reinvest profits, thereby increasing the value of fund assets and increases the current value of shares and participation certificates.
- Funds balanced (balanced) - is a combination of growth and pension fund, which aims to increase both the fund and payment of pensions. Investors are provided to both current and capital income in the statute such a fund is clearly the way will be treated to the achieved economic results. [8, p. 298]

According to an investment strategy and benchmark portfolios equity funds are divided into to:

- Passively managed funds - they are called index funds, whose structure is closely related to the portfolio composition of the benchmark.
- Actively managed funds - the structure of the portfolio is made up of these funds based on the free account and the fund manager does not depend on the comparative index. [5, p. 318]

Distribution by degree of commitment by the portfolio funds are divided into:

- Funds with a fixed portfolio structure - the structure of the portfolio is already established in the development fund and does not change.
- Funds with a diverse portfolio - the portfolio of instruments are not tightly defined and their structure has renewed the strategy and the market situation.
- Funds with a diverse portfolio partly - part of the instruments in the portfolio is fixed and another part through changes in the strategy and the current market situation. [9, p. 650]

According to focus on investment funds can be:

- regional - for example, North American Fund Shares,
- sector - such as biotechnology fund,
- theme - for instance luxury fund (investing in companies that produce exclusive products). [5, p. 317]

According to ensure future rates of return on the funds are divided into:

- Guaranteed funds - are funds that the management company known as secured or guaranteed funds. These funds are capital protected, which means that investors are protected against the decline in value of its assets invested in the fund. Investing in hedge funds is particularly suitable for those who do not want to take the risk.
- Unsecured funds are those that are not offered a guaranteed or secured. [9, p. 650]

European Federation of Investment Companies and Funds (EFICF) issued to its members fund classification methodology, which is binding on members of the UNIS in the Czech Republic. Czech UNIS that combines professional institutions for collective investment

was established in 1990. According to the classification Union states we have two main criteria for dividing funds. [12, p. 56]

According to market risks are divided into funds to:

- Equity funds - the fund portfolio is constantly formed at least 66 % of assets invested in stocks.
- Bond Funds - constantly invest in bonds. Part of their investments may also invest in shares, but their share must not exceed 10 % of fund's assets.
- Money market funds - constantly invest in bonds or money market.
- Mixed funds - investing in different assets in different markets. They do not set any limits that would determine the proportion of shares and bonds in their portfolio.
- Funds of Funds - fund permanently invests at least 66 % of its assets in units and shares of other funds. [12, p. 56]

According to the geographical risk division is as follows:

- The Czech Republic,
- Euro zone countries,
- Europe (including the Euro zone),
- North America,
- Asia and the Pacific,
- Other regions,
- Global (in investing in more regions or regions besides the above).[12, p. 56]; [9, p. 652]

Classification of the fund is always expresses in two components. One component is the risk of the market and the second component is the geographic risk. The order of ingredients is not critical.

## **1.4 Distribution of Funds in the Czech Republic**

In the Czech Republic pursuant to Act No. 189/2004 Coll. on collective investment funds can be divided into two groups on the standard funds and special funds.

- Standard funds are open-ended funds only, and Directive No. 85/611/EEC corresponds to the listing to comply with EU regulations on collective investment schemes. They are legally defined and permitted instruments to which they can invest. They are strictly bound by a number of safety provisions that are aimed at spreading and limiting risk. In the Czech Republic are the only open-end mutual funds. These funds are well suited to invest for the general public.
- Special funds are inadequate funds comply with the EU and therefore not free beyond the scope of the European passport. [7, p. 329] They are less legislatively and legally restricted funds are so risky. These funds are found in both open and closed type with different investment focus. The nominal value of their shares or units is relatively high. They may invest primarily experienced investors and institutions. Special funds are further divided into those collected from the public and investment funds with investments from qualified investors. [8, p. 297]

This table is used to clear the characteristics of funds in the Czech Republic. This table is clearly defined, whether it is an open-end funds, closed-end mutual funds or investment funds.

<b>Investment politics/form</b>	<b>Open-ended mutual fund</b>	<b>Closed-end mutual fund</b>	<b>Investment fund</b>
1. Standard funds	yes	no	no
2. Special funds			
2.1 Intended for the public			
Special fund securities	yes	yes	yes
Special real estate fund	yes	no	no
Special fund of funds	yes	yes	yes
2.2 Intended for a limited range of subjects			
Special qualified investor fund	yes	yes	yes

Table No. 1: Characteristics of funds in the Czech Republic (2011)  
Source: [7, p. 329]

Four kinds of special funds:

- Special fund securities inserts its investment mainly in investment securities and money market instruments traded on public markets, government bonds

and bank bonds, mortgage bonds and securities investment funds open. One person may have investments worth more than 20 % of the special fund.

- A special real estate fund may only be an open-end mutual fund. It focuses on real estate investment and participation in real estate funds. Real Estate Company can only own 3 properties and may hold shares in another company. The value of property may not exceed 20 % of fund's assets.
- A special fund of funds invests primarily in securities of other funds (in their units and their assets) and only in funds intended for the public. Do not invest in funds whose investment is more than 10 % of their assets in securities of other funds, ie funds into other funds. Investing in a fund may not exceed 20 % of the fund assets.
- Special fund for qualified investors replaced after the amendment of Act No. 189/2004 Coll. On collective investment as amended, in 2006 the original four specialized funds for qualified investors. These four funds are: fund derivatives, a special fund asset, mixed fund, venture capital fund. Securities issued by a special fund for qualified investors can buy only qualified investors such as banks, savings and credit cooperatives traders in securities investment companies and investment funds, pension funds, insurance companies, State Central Bank, etc. Furthermore, the buy a legal or natural person who has experience with trading in the securities market and shall submit a written statement. The maximum number of 100 shareholders or shareholders of a special fund for qualified investors. Exceeding this limit may be authorized by Czech National Bank. Initial investment per investor must be one million CZK. Within one year since the founding of the fund equity be at least 50 million CZK. Securities issued by the Fund, does not dream to be offered to the public. This fund is regulated minimally, its activities are governed by the fund. Supervision of a qualified investor fund provided by the depository. ČSOB depositories of funds control activities performed in approximately one third of qualified investors in the Czech market. Qualified Investor Fund may be either the holding fund or investment fund and the local government, or investment fund manage Investment Company. [7, p. 329]; [34]



## **2 Definition of funds**

This theoretical part deals with defining the Funds, which will serve well in the next section when comparing funds. The definition refers to investment trusts and unit trusts and pension funds as well, of which nowadays is quite considerable interest.

The investment funds referred to in this part of the work only the basic theoretical data and the distribution of investment funds open and closed type. Czech legislation does not establish an open investment funds, therefore we operate only closed-end investment funds, which are small investors but very little used.

Mutual funds are also characterized by this section in general, the closer the two types of mutual funds according to the distribution of closed and open-end mutual funds. In the Czech Republic are available for investors, these two models, however, are more attractive for them to open-end mutual funds and are therefore used in a much greater extent. Therefore, this part focuses on open-end mutual funds more comprehensively, provided further division of the mutual funds into several basic types, which are then further specified. Following are selected specific mutual funds, and that the two equity mutual funds (IKS Akciový PLUS, ISČS Sporotrend OPF), two bond mutual funds (IKS Dluhopisový PLUS, ISČS Sporobond) and two mixed mutual funds (IKS Balancovaný – dynamický, ISČS Fond řízených výnosů). Each of these funds is presented in detail here.

Another part of this chapter is devoted to pension funds and also provides basic theoretical information about these funds, but also inform the pension scheme as well as pension benefits. He mentions also the Association of Pension Funds, which is primarily a voluntary association of pension funds operating in the Czech Republic. Individually also represents all pension funds operating in the Czech Republic. These include: Penzijní fond České spořitelny, Penzijní fond České pojišťovny, Penzijní fond Komerční banky, ING Penzijní fond, Allianz penzijní fond, Generali penzijní fond, Aegon Penzijní fond, AXA penzijní fond and two pension funds ČSOB – ČSOB Penzijní fond Progres and ČSOB Penzijní fond Stabilita, these two funds are from the early 2012 merged into one fund, called ČSOB Penzijní fond Stabilita. It focuses on all pension funds operating in the Czech Republic, because this kind of investment is in the last decade has been sought.

## **2.1 Investment funds**

Investment funds are legal entities. They are established as joint stock companies. Their activity is focused on collective investment schemes. They publish and sell their shares. These are securities that represent a share of the property company. Investors inject money into funds that buy shares of these funds so they become shareholders. Means of shareholders invest further funds in the financial market with their own focus. Retail investors as shareholders have a right to participate at the General Meeting and exercise their rights here, especially the right to co-operations. Shareholders are also entitled to a dividend (it's share of the profits distributed by the Company), upon liquidation, right of first refusal, right to information. According to the company's share in the assets may be the majority shareholder (majority) and minority (minority). [14, p. 2843]

Investment funds are divided into:

- Open-end investment funds
- Closed end funds.

### **2.1.1 Open investment funds**

In Mutual funds can sell shares to investors for an indefinite period until the fund exists. A shareholder may at any time request the redemption of fund shares, the fund is obliged to meet him and purchase the shares at the current price. In the Czech Republic can not be open to investment funds for legislative reasons, as are joint stock companies. Each joint-stock company in the Czech Republic must register their capital in the Commercial Register, and is therefore unacceptable that its value fluctuated, as is common with open-ended investment funds.

### **2.1.2 Closed-end funds**

In the Czech Republic, establishing legislation allows only closed-end funds and fixed term up to 10 years. The Fund may issue shares only the same nominal value. Number of issued shares is generally limited and determined since the establishment of the Fund. An investment fund may not issue interim certificates, priority shares, shares on favorable terms to their employees or those who have already retired. Nor may issue bonds, enter into contracts on transfer of profits or operating agreement. His investment fund assets can manage himself or his administration may delegate certain investment companies. This must be enshrined in the Treaty of asset management investment fund. Activity fund allows the Czech National Bank. In the Czech Republic are those funds set up solely as a public limited company. With these funds the shareholder has the right to require reverse repurchase shares. Closed-end funds

## **2.2 Mutual Funds**

Mutual funds are not separate legal entities, that is, unable to manage their assets, but must be established and managed Investment Company. Permit the establishment of the Czech National Bank. The mutual fund itself does not create any new type of investment, but only brings together the existing investment instruments, which are stocks, bonds and money market instruments. The mutual fund may invest through units or investment certificates. These are securities that investors buy the investment company. Shares are securities that represent the assets of the fund and investors are buying them to become shareholders in the fund and its income. However, they have the right to intervene in the activities and fund management. If the Fund ceases to be in accordance with the wishes of the shareholder, may sell their units and thus leave the fund. The property fund is the property of all owners of units and is assigned according to the value of units they own. Investment company manages that property its own behalf but on behalf of shareholders. Mutual fund assets must be separated from property Investment Company.

There are two types of mutual funds, whose formation and activities of Czech legislation allow:

- Closed-end mutual funds,
- Open-ended mutual funds.

### **2.2.1 Closed-end mutual funds**

In terms of issue of new units a closed fund is limited in two ways. May sell only a certain number of units, which is pre-defined. Sale ends reaching the specified number of units issued. The second limitation is that the units may be issued only by a certain time, which is set in advance. After this time the sale ends.

Closed-end funds do not provide for redemption from holders of units. The shareholder may, however, units that own to sell to another buyer. Closed funds are established for a predetermined period when that period expires, the company that manages the fund, request a transfer to an open-ended mutual fund. But it is not possible to open-ended mutual fund changed the fund closed. Another option is to terminate operations and pay shareholders. [9, p. 174]

### **2.2.2 Open-end mutual funds**

Open-end mutual funds are the most used form of collective investment schemes. These funds are no limits on the emission units. Because there is no set number of issued shares, there is no limit on the number of shareholders. Open-end fund is not obliged to meet the demands of shareholders on redemption of units. The Mutual Fund shall be maintained a liquidity guarantee to cover the requirements of shareholders on redemptions. Liquidity is an indicator by which to determine how quickly you can turn an investment into cash. With higher liquidity increases the possibility of a faster sale. Fund Manager is legally obliged to redeem units within one month from the date of the shareholder asked. Many investment companies that have implemented this repurchase of up to several days. [3, p. 7]

Depending on the fund's investment strategy used is to be expected revenues, but also it is necessary to calculate the risk associated with investments. Investment risk is the probability that it will reduce the investment value. Risk and return are closely related. The more the investor is willing to risk, the higher the expected return on successful course of business.

With investing in mutual funds these costs are associated:

- Entry charges - are paid for the initial investment, is used to cover fund distribution, or as a reward for the intermediary for the conclusion of the transaction. For an entry fee payment due the investor service and quality advice. Entry fee is calculated as a percentage of the invested amount and the composition of the fund's assets.
- Exit fees - exit fees are usually charged. Sometimes, replacing the entry fees and are graded according to the length of investment (the investment period is longer, the lower the fee to be zero).
- Manage and management fees - is a reward for the manager and the amount is determined as percentage of administered amount also depends on the type of the Fund and Society (riskier funds have higher fees). Usually is 1.5 % to 2 %. The management fee is not charged as a separate item, but it is already reflected in the published price of the share certificate.
- Other ongoing costs of the Fund - as an example it is permissible to be the depository fee. [13, p. 155]

TER - Total Expense Ratio is a measure of total cost. It includes not only manage fees, but also other ongoing costs of the Fund. When comparing the price of funds, this indicator is far more important than the management fee, which is often much lower. For equity funds in developed markets, the TER usually 1.5 % to 2.5 % in the Czech Republic achieved with conventional funds, the TER of 3.5 %. [13, p. 156]

According to the distribution of profit can be divided into open-end mutual funds:

- Income funds - these are funds that are paid at regular intervals or dividend income to the shareholders, a share of distributed profits. Yield funds are typically funds investing mainly in bonds and bank deposits.
- Growth Funds - are funds that do not pay income. The shareholder receives sale proceeds of units. Typical growth funds are funds with higher risk and dynamic equity and balanced funds. Most funds in the Czech Republic are one of the growth funds. [3, p 12]

According to the investment focus can be divided into open-end funds into several basic types:

- Money market funds,
- Bond funds,
- Equity funds,
- Mixed funds,
- Funds of funds,
- Real estate funds,
- Hedge funds. [12, p. 56]

The following chart shows the mutual funds market in the Czech Republic, which is divided by type. This market includes domestic and foreign funds. The chart can be seen that in the Czech Republic might have on the market in 2011 represented the largest bond funds and 27 %, the second largest representation was 22 % in hedge funds. Then followed by equity funds with 16 %, mixed funds, 15 %, money market funds with 11 %, funds of funds with 8 % and the last real estate funds with the presence of only 1 %. It follows that the mutual funds market in the Czech Republic mainly invested in bond funds.

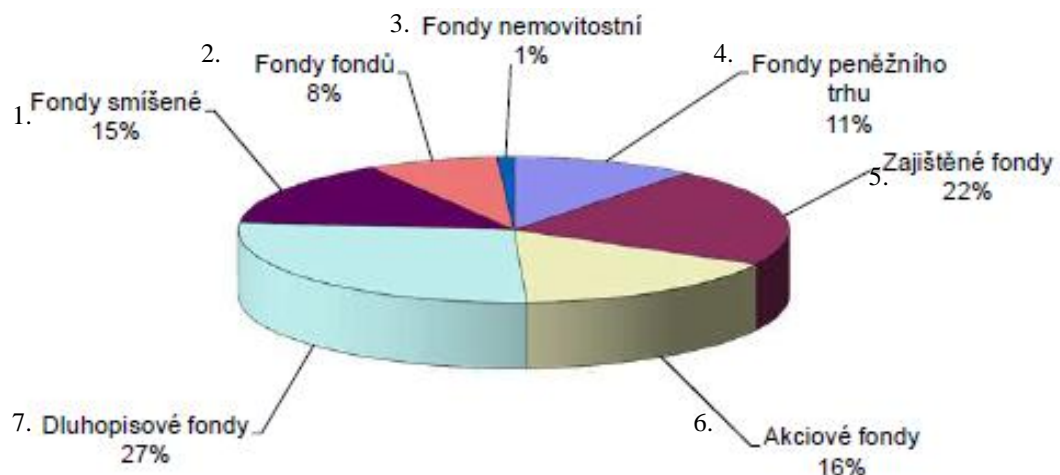


Chart No. 1: The market mutual funds in the CR according to type - both domestic and foreign funds (31. 12.<sup>th</sup> 2011)  
Source: [19]

Legend: 1. Mixed funds, 2. Funds of funds, 3. Real estate funds, 4. Money market funds, 5. Hedge funds, 6. Equity funds, 7. Bond funds

## **Money market funds**

These funds invest in short-term financial documents on the money market. They are usually short-term bonds that are highly secure, or commercial paper, certificates of deposit and short-term securities. Revenues are relatively stable and relatively low risk, but they are generally low compared with other investment funds. Most of these revenues tend to be higher than on term deposits in banks. The investment is less than one year. Entry and exit fees for these funds are usually very low, often their value is also zero. Therefore, it is also beneficial short-term investments. Investing in a money market fund is suitable for investors who do not have in this area almost no experience. As a result of short-term investments of these funds very quickly respond to economic developments and changes in interest rates. Their high flexibility, however, burdens the central bank, which deals with control of money supply. Money market funds allow shareholders to quickly convert their deposits, often this can be done by telephone. Rapid transfer of deposits is a major advantage offered by money market funds as other markets do not allow this. Many of these funds are linked with other capital funds, enabling them to flexibly adapt to the situation and the clients are becoming more interesting. Another advantage is that these funds can write checks, which are covered by the value of the funds that are stored on the money market fund account. These funds serve its clients with accurate information on changes in the balance and composition of the portfolio.

## **Bond Funds**

These funds invest the money of shareholders for the most part to the debtor of the securities. Bonds are securities in which the issuer agrees to repay a specified sum of money and interest at maturity. Other forms of investment in bond funds have a predetermined amount, which must not be exceeded. The proportion of shares in the portfolio of these funds can not exceed 10 %. Bond funds carry a higher risk, but also have higher yields than money market funds. The recommended period of investment in these funds is one year. Investments are long term deposits. Some bond funds specialize in investing only in selected debtor documents. [12, p.56]

They are specialized funds to:

- Government bonds - those undergoing the least risk, but achieve the lowest yields, but they are long-term stable,
- Municipal bonds,
- Mortgage notes,
- Bonds well-known companies - the risk is relatively high,
- Risk bonds - are very high risks, achieve relatively high yields. [6, p. 160 - 161]

### **Equity Funds**

These are funds that focus their investments on permanent shares in which they invest at least 2/3 of property. It belongs to the most risky investment funds. It brings long-term yields higher than bond funds or money market funds. Recommended investment period is more than 5 years, which allows to eliminatjng the adverse impact of short-term changes in the market. Some equity funds invest in many different industries, while others specialize only in selected sectors of the economy such as shares of pharmaceutical companies, technology companies, telecommunications companies, etc. The closer specialty funds, it has a higher return from a long period, but also undergoes more risk. [5, p. 319]

### **Mixed funds**

These are funds that invest deposits shareholders in various securities on the various markets. The composition of shares or bonds in their portfolios is not limited. If the shareholder decides to invest in this type of fund, it is important to know the fund's investment strategy. Mixed funds deliver average returns and issue to the average risk. The recommended period of investment of least is three years.

### **Funds of funds**

These are funds that 2/3 of its resources to invest in shares and other funds. The risk is mitigated by the fact that more funds are distributed. This is quite safe. Through shareholder's funds of funds allowed to invest their small amount into the fund, which require high initial investment. Fund of funds investor becomes a high initial investment, which is composed of smaller amounts from multiple stakeholders. [12, p. 56]



## **Real Estate Funds**

More than 50 % of its deposited property investment and also to investments in real estate companies to build manage or sell. Real estate funds are essentially a variation of mutual funds. According to the returns, investment in real estate funds suitable for investors who want to invest long term. In the Czech Republic may invest in real estate funds since May 2006 pursuant to Amendment No. 189/2004 Coll, on collective investment and amendments to Act No. 21/1992 Coll. On Banks, this is effective since 1.<sup>st</sup> 7. 2007. The first company that made investing in real estate fund, the Czech Savings Bank and in 2007 the Fund REICO. Until then, it was possible to invest in real estate only in the way that the investor bought shares of a company that dealt with trade in real estate. It was a real estate and development company. REICO fund requires a minimum investment of CZK 1 000. It also allows for regular investments. This fund focuses its activities on investing in commercial real estate. For real estate funds is not possible to determine the daily market value of the share certificate, because real estate is not traded on exchanges and other financial markets. Valuation of the Fund shall be made according to evidence-based revenues, which are in lease contracts. Revaluation of real estate is not published to avoid speculation. [7, p. 326]

## **Secured funds**

They have known also as hedge funds. They are guaranteed funds, which have protected capital. Investors are protected against the decline in value of its invested assets. Investing in hedge funds is well suited for those who do not want to take the risk. The primary advantage for them is ensuring their investments against possible consequences of the economic downturn. Rather take the low liquidity.

Guaranteed funds are also known as structured funds. They invest more financial documents, which are grouped into one product. The part of the portfolio inserted into securities of debtor-quality fixed income. This investor deposits are secured and payment is made possible guarantee deposits. Another part of their funds invested in the documents through which the Fund acquires an attractive yield. Funds to achieve good yields, reveal many different investment strategies. From this also depends on the focus funds. [2, p. 1]

The main advantage of hedge funds is that their revenues are directly dependent on the overall economic development. The disadvantage of hedge funds is less transparency and degree of regulation and higher fees.

The recommended period of investment and maturity of the hedge funds are around five years. Guarantee is only guaranteed at maturity. 100 % guarantee deposited amount means that the investor will recover in the event of adverse financial market developments exactly the amount you invested. Most funds offer their investors capital protection. This means that the funds secured guarantees investors 100 % return on investment input and also the share of the income funds. The investor is guaranteed due to return on the investment surrenders possible higher appreciation of their investments. Shareholder usually has the opportunity to recover their invested funds before the agreed maturity, but then gets paid the current value of his share.

Secured hedge funds or private funds are the type that drives a person professionally engaged and actively investing funds. Hedge funds with the specifics of the area are punctuated by investing in the funds. Since its inception, they experienced waves of growth and decline in the interest of investors. It is assumed, however, that their popularity will soar. [2, p. 5]

In the Czech Republic, most hedge funds closer to special funds of qualified investors who are in the Act on Collective Investment provided new. Guaranteed funds have begun to establish in the Czech Republic recently. One of the first flows of funds was established in 2004. It is a hedge fund called Vltava Sicav, favors a wide distribution of the portfolio and buying undervalued shares. The investment horizon is three or more years. The Fund concentrates its funds about 80 investors. [7, p. 327]

### **2.2.3 Selected mutual funds operating on the Czech market**

Among the five largest providers of mutual funds in the Czech Republic belongs to ČSOB, Česká spořitelna, Komerční banka, ING and UniCredit Group.

I chose to compare a total of six funds from mutual funds, two of them are equity funds, two bonds and two mixed. Intermediaries are of Česká spořitelna and IKS. The selected

funds are IKS Akciový PLUS, ISČS Sporotrend OPF, IKS Dluhopisový PLUS, ISČS Sporobond, IKS Balancovaný – dynamický and ISČS Fond řízených výnosů.

### **Equity Funds**

Equity funds are funds with high volatility, offers an opportunity to achieve higher yield. They are suitable for long-term investment that is five or more years. A substantial portion of its assets placed in stocks, other assets such as bonds form or treasury bills.

Selected Funds:

- IKS Akciový PLUS,
- ISČS Sporotrend OPF.

#### IKS Akciový PLUS

It is a global fund ranks among the special funds. It was founded in 2000. It focuses on trading stocks with the highest quality in the Central and Eastern Europe. The proportion of shares in the portfolio must be at least 66 %. Investment time horizon is five years. The minimum initial investment amount is CZK 5 000, in the case of regular investment of CZK 500. Each additional investment must be at least CZK 500. [21]

The following chart reflects courses over ten years including the current exchange rate and efficiency of the IKS Akciový PLUS in % to 31.<sup>st</sup>12. 2011. The peak was reached in March 2002 and the performance of the Fund's 25.17%. At the lowest point performance declined in March 2009 and – 65.13 %. Performance to 31.<sup>st</sup> 12. 2011 is – 53.49 %. The graph shows that from April 2002 performance of the Fund entered into a percentage minus values and the trend of performance of this fund are continuously decreasing.



Chart No. 2: Graph (IKS Akciový PLUS), (in the years 2002 – 2011)  
Source: [21]

The deep slump in performance in 2008 and the first half of 2009 was caused by economic and financial crisis that hit the European countries like the Czech Republic. Share prices of the Czech Republic and other Central and Eastern Europe in this period fell repeatedly, until they found themselves on the lows. The deepest decline by up to 70 % was recorded in Polish stocks and even harder to Russian shares fell by more than 90 %, which was the result of political events in Russia. In the second half of 2009 and in 2010 the share price increased significantly had the highest increase in share of Poland, Russia and Hungary and also Turkey. This positively affected the performance of the Fund in subsequent years. [21]

The table describes the performance of the Fund in % (to 31.<sup>st</sup>12. 2011). The table shows the performance of the Fund for years. The fund started its activities in the market 18.<sup>th</sup> 9. 2000, it has since fallen to the lowest performance of the Fund – 67.65 %. For 10 years the fund has fallen with the power to – 53.49 %.

Period	1 year	3 years	5 years	10 years
Performance in %	- 21,95	17,17	-45,39	-53,49

Table No. 2: Return Fund (%), (IKS Akciový PLUS), (in the years 2002 – 2011)  
Source: [21], the actual processing

### ISČS Sporotrend OPF

It is a fund trading at a European level, are among the standard funds. ISČS Sporotrend is an equity fund founded in 1997. Fund following its investment in shares in Eastern and Central European markets, also in Turkish and Russian markets. The investment horizon of the fund is at least five years. Entrance fee is CZK 100. [26]

This graph shows the course over ten years and the performance of the Fund at 29 % to 29.<sup>th</sup>12. 2011. The highest point was reached in July 2007 and the performance of the Fund 227.80 %. At the lowest point performance fell in July 2002 and at - 17.59 % power. At 29 12th 2011 this fund amounted to 51.41 % efficiency. The graph shows that the trend in the performance of the Fund above the mid-2007 mainly upward, then a sharp downturn. Only in 2009, the fund's performance rebounding. In mid-2011 began to decline again, the fund's performance to a greater extent.



Chart No. 3: Course Fund (ISČS Sporotrend OPF), (2002 – 2011)  
Source: [30]

Year 2008 and the first half of 2009 were the worst period of the reference period. The deep economic and financial crisis caused a drastic decline in stock prices, whether Czech or shares in Central and Eastern Europe. The shares of Russia and Turkey worst on, As well as shares of Asia and Latin America. As a result, ISČS Sporotrend lost 67 % of its value. After cutting interest rates by central banks and the adoption of other anti-crisis measures were already in the second half of 2009 to improve the situation on financial

markets. Stock prices have soared Russia and Turkey. In 2010, European shares rise in prices also rose. As a result, the profitability of the Fund increased. [35]

The table shows the performance of the Fund in % (to 29.<sup>th</sup>12. 2011). The table shows the performance of the Fund for years. This fund began trading on the market in 1997. Since then, this fund increased its output by 81.53 %. During the period of ten years has reached a performance increase of 51.41 %.

Period	1 year	3 years	5 years	10 years
Performance in %	-39,41	67,02	-41,43	51,41

Table No. 3: Return Fund (ISČS Sporotrend OPF), (2002 - 2011)

Source: [27], the actual processing

## Bond Funds

Bond funds are particularly suitable for medium-term investments with an investment horizon of two to four years, or short-term investments with an investment horizon of around one year. Rate fluctuations in the value of investments in bond funds vary depending on its orientation. These funds can be targeted to specific regions or countries. Primarily invest in various types of bonds.

Selected Funds:

- IKS Dluhopisový PLUS,
- ISČS Sporobond.

### IKS Dluhopisový PLUS

It is a global fund, one of the special funds. It was founded in 2000. Its activities focuses to Central and Eastern Europe in particular to the Czech Republic, Poland and Hungary. Its portfolio consists of government bonds and bonds guaranteed by the State, corporate bonds, bank bonds, securities and deposits with banks. This fund is suitable for conservative investors looking for higher yields with the willingness to take the risk of higher volatility in returns. The investment horizon is at least two and a half years. Minimum initial deposit amount is CZK 5 000, in the case of regular investment of CZK 500. Each additional investment must be at least CZK 500. [23]

This graph shows the course over ten years including the current exchange rate and the performance of the fund in % to 31.<sup>st</sup>12. 2011. The lowest level of performance was achieved in June 2002 and at - 3.35 %. On the contrary, the highest point reached Fund in September 2011 with a performance of 25.17 %. The value of the performance of 31.<sup>st</sup>12. 2011 is 23 %. From this graph it is clear that the trends in performance of this fund are still rising despite occasional dips that occur.



Chart No. 4: Graph (IKS Dluhopisový PLUS), (2002 - 2011)  
Source: [23]

In early 2008, yields on Czech government bonds rose slightly. In the middle of that work began on the area affected by the financial and economic crisis as a result of the U.S. banking problems. Value of securities is indebted Hungary and Poland decline. In the second half of 2009 significantly strengthened the Czech government bonds and strongly support the performance of the Fund. In 2010 the Czech government bond prices rose further to its low debt and were considered high quality. In the fall also increased yields of Polish bonds. Also the German and U.S. bonds reached of the top. This favorable situation supported the fund's performance between 2010 and 2011. [23]

The following table shows the performance of the Fund denominated in % (to 31.<sup>st</sup>12. 2011). The table shows the performance of the Fund for years. The fund entered the market 6.<sup>th</sup> 3. 2000 and has since increased its output by 30.20 %. During the period of ten years achieved performance improvements of 23, 66 %.

Period	1 year	3 years	5 years	10 years
Performance in %	0,98	7,77	8,66	23,66

Table No. 4: Return Fund (%) (IKS Dluhopisový PLUS), (2002 - 2011)

Source: [23], the actual processing

### ISČS Sporobond

This is a standard global fund. It is a conservative bond fund founded in 1998. This is one of the largest Czech bond funds. It focuses its investments on high-quality domestic government bonds and corporate bonds or foreign bonds as well. Most of these bonds is hedged against currency risk. ISČS Sporobond is suitable for conservative investors. The investment horizon of the fund is at least three years. The initial minimum investment is CZK 100 and the fee for purchase of units is 1 %. [25]

The graph shows the course over ten years and the performance of the Fund in % to 31.<sup>st</sup>12. 2011. The peak was reached in August 2011 and the fund's performance with 36.48 %. At the lowest point of fund performance declined during the decade in March 2002 and at - 0.58 % performance. At 29.<sup>th</sup>12. 2011 this fund amounted to 25.92 % efficiency. The following chart shows that the trends in performance of this fund are gradually rising in spite of repeated cycles of growth and stagnation. The performance of the fund operated inflation and lowering interest rates.

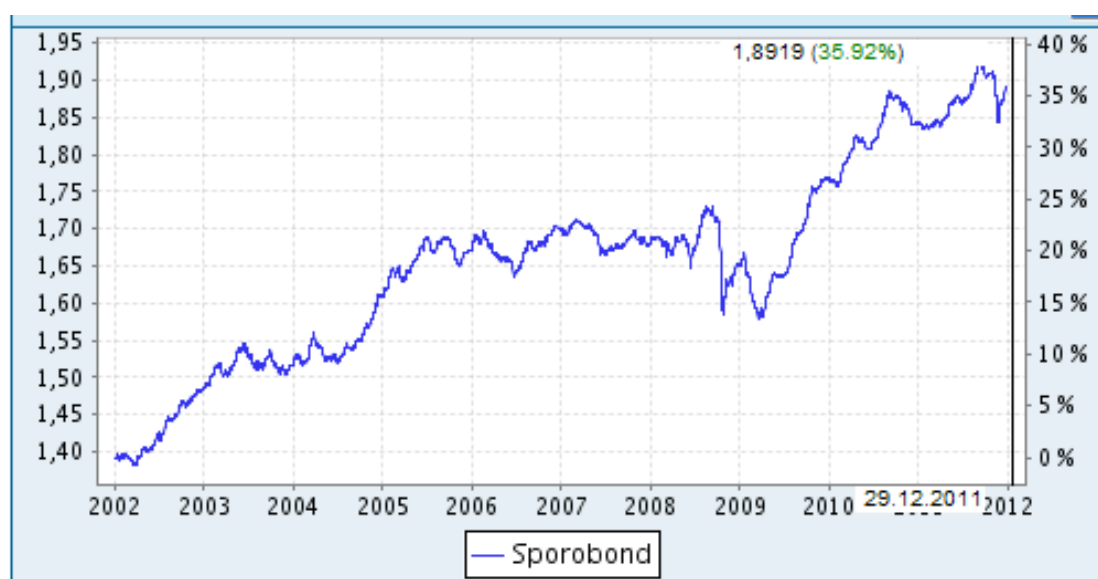


Chart No. 5: Course Fund (ISČS Sporobond), (2002 - 2011)

Source: [31]



U.S. banking crisis has significantly affected the developments in global financial markets. She had an adverse impact on the Czech economy. In the second half of 2008 passed the Czech crisis not only shares but also bonds. Thanks to the CNB, the situation in the market for the second half of 2009 improved and returned to normal. Czech government bonds at this time were considered high quality. The demand for them increased and exceeded the supply. In 2010 and 2011, sales increased thanks to exports. Bond prices continued to rise, especially Czech and Polish government bonds. Valued government bonds of Germany and the USA were also highly. [35]

The table is reflected in the Fund performance % (to 29.<sup>th</sup>12. 2011). The table shows the performance of the Fund for years. This fund began trading on the market 7.<sup>th</sup>6. 1994. Since then, increased its output by 179.94 %. During the period of ten years has reached a performance increase of 35.92 %.

Period	1 year	3 years	5 years	10 years
Performance in %	1,61	13,70	9,83	35,92

Table No. 5: Return Fund (ISČS Sporobond), (2002 - 2011)

Source: [28], the actual processing

### **Mixed funds**

Mixed funds worth between equity and bond funds invest in all asset classes, while basic, are suitable for medium to long term investment horizon of three to five years. Mixed funds are characterized by the ability of active shifting investment between different components of assets under current market prospects.

Selected Funds:

- IKS Balancovaný – dynamický,
- ISČS Fond řízených výnosů.

#### IKS Balancovaný – dynamický

This is a special global fund. It was founded in 1998 and operates in the areas of bond and equity markets in Central and Eastern Europe. Portfolio Fund must always contain at least 30 % of the shares and the share of bonds may not exceed 70 % of the portfolio.

The bonds consist of corporate bonds issued in the territory. Joint-stock includes high-quality component stocks, and stocks that have the potential to yield interesting. The investment horizon is five years. The amount of initial deposit is of at least 5000 CZK, 500 CZK regular investing. The amount of each subsequent deposit must then be 500 CZK. [22]

In the graph are expressed during the course of ten years, including current rates and performance of the Fund in % to 31.<sup>st</sup>12. 2011. The graph shows the variation curves. The curve reflects substantial increases in performance of the Fund, aside from some exceptions, the corner until July 2007 when it reached the highest point of efficiency, which made 145.05 %. A tendency the performance of the fund then began to decrease. In early March of 2009 again changed the downward trend in the fund, which is reflected by 59.53 % and the fund's performance began to rise. To fall back then was, after peaking in March 2011 to 125.27 % and the fund's performance. At 31.<sup>st</sup>12. 2011 the fund achieves 90.41 % efficiency. This graph shows that the trends in performance of this fund are fluctuating.



Chart No. 6: Graph (IKS Balancovaný - dynamický), (2002 - 2011)

Source: [22]

In the second half of 2008 due to economic and financial crisis has significantly weakened the value of the shares both Czech and other European countries. Bond prices also fell. These factors resulted in a deep slump in the fund's performance. In the second half of 2009, however, came a turning point. The rapid growth in stock prices, especially

Russian, Polish and Hungarian had a positive effect on growth performance of the Fund, which also significantly strengthens the Czech government bonds. The growth performance continued in 2010 and 2011, as stock prices continued to rise in Central and Eastern Europe as well as bond prices. Czech government bonds, as well as German and U.S. government bonds, reached top values. [22]

The table describes the performance of the Fund in % (to 31.<sup>st</sup>12. 2011). The table shows the performance of the Fund for years. This fund began trading on the 22.<sup>nd</sup>9. 1997. On the market and has since increased its output by 115.93 %. During the period of ten years has reached a performance increase of 90.41 %.

Period	1 year	3 years	5 years	10 years
Performance in %	-13,53	11,54	-11,54	90,41

Table No. 6: Return Fund (%) (IKS Balancovaný - dynamický), (2002 - 2011)

Source: [22], the actual processing

#### ISČS Fond řízených výnosů

Its type is classified among fund global standard. It is a mixed fund established in 1999, which predominate in the money market instruments (such as domestic and foreign bonds) over the shares of European companies, which may not exceed 25% of the fund's portfolio. The fund is suitable for less experienced and prudent investors. The investment horizon of the fund is two years. The minimum investment is 100 CZK. [20]

The following chart reflects courses over ten years and the performance of the Fund at in % to 29.<sup>tr</sup>12. 2011The highest point was reached in May 2011 and a 17.42 % performance of the fund. The lowest point of the performance was over ten years in February 2002 and - 0.15 % power. To 29.<sup>th</sup>12. 2011 this fund amounted to 15.46 % efficiency. This graph shows that the tendency of the fund's performance has been increasing recently. The curve tells us that during the ten years has been one great drop rate of return associated with a decrease in funds by about 6.5 %.

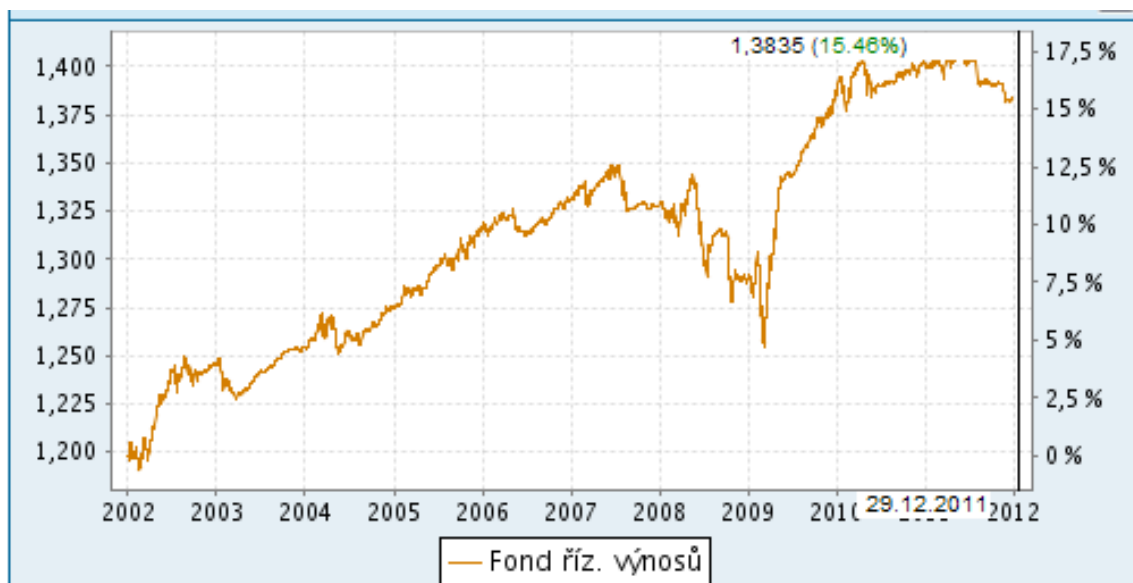


Chart No. 7: Course Fund (ISČS Fond řízených výnosů), (2002 - 2011)  
Source: [32]

The crisis in American banking crisis was also deep in the financial markets in Europe. In the second half of 2008 prices shares and bonds fell deeply of European countries, except neither the Czech Republic. The situation has improved markedly in the second half of 2009, when stock prices rose rapidly. Czech government bonds have been together with German and U.S. government bonds considered to be most profitable. Positive development continued in subsequent years. The fund achieved very good results and its performance significantly increased. [35]

The table describes the Fund's performance in % (as at 29.<sup>th</sup>12. 2011). The table shows the performance of the Fund for years. This fund began trading on the market in 1999 and has since increased its output by 151.65 %. During the period of ten years has reached a performance increase of 15.46 %.

Period	1 year	3 years	5 years	10 years
Performance in %	-1,29	7,39	3,94	15,46

Table No. 7: Return Fund (ISČS Fond řízených výnosů), (2002 - 2011)  
Source: [29]

## 2.3 Pension Funds

Since 1994, began to emerge in the Czech Republic, the first institution of pension funds. Since then the total of 44 pension funds. In 2011, there were only 10 pension funds at the market. These include the pension funds České spořitelny, České pojišťovny, KB, ING, Allianz, Generali, Aegon, AXA and two pension funds ČSOB. They are ČSOB Penzijní fond Progres and ČSOB Penzijní fond Stabilita. Since December 2011, however, these two funds were merged and there under the name ČSOB Penzijní fond Stabilita. [24]

To 28.<sup>th</sup> 2. 2012 it was possible to migrate freely from one fund to another. After this date it can not be open to changing by another fund. Since 2013, the participants will be able to decide whether to stay with your old fund called the Fund to transform their existing contracts, or will be able to make any transfer to the local fund. This transfer will be charged. By signing a new contract, however, the participant loses the benefits provided by the original contract, which are mainly guarantees that at least receive back what you ordered (his account can not get lost) and the choice of the saved money for 15 years through early-retirement pension. Participating funds but offer the possibility of higher returns, albeit with a higher risk of undergoing. If a party once, converting from fund to fund the transformed loop, loop back from the fund to transform the fund already can not violate. For both types of fund participants will be from 2013, new pay management fees. These fees include funds for the transformed 0.6 % of the volume of savings per year plus 15 % of profits for participating funds is charges to 0.8 % of the volume of savings (the amount of risk is determined by the Fund) and will do so 10 % of the value achieved year. [17, p. 2]

The only entities that can perform in the Czech Republic, pension schemes are pension funds are concerned only with this activity. Pension funds are specialized financial institutions that collect funds of their clients, invest them, are entitled to a client, paid his pension (pension) benefits, or a single dose.

The following chart shows how the number of participants was the development of supplementary pension insurance in the Czech Republic each year since 2001. In 2005, the number of subscribers exceeded 3 million in 2010 reached 4.6 million. The graph shows that during the last 11 years the number of participants nearly doubled.

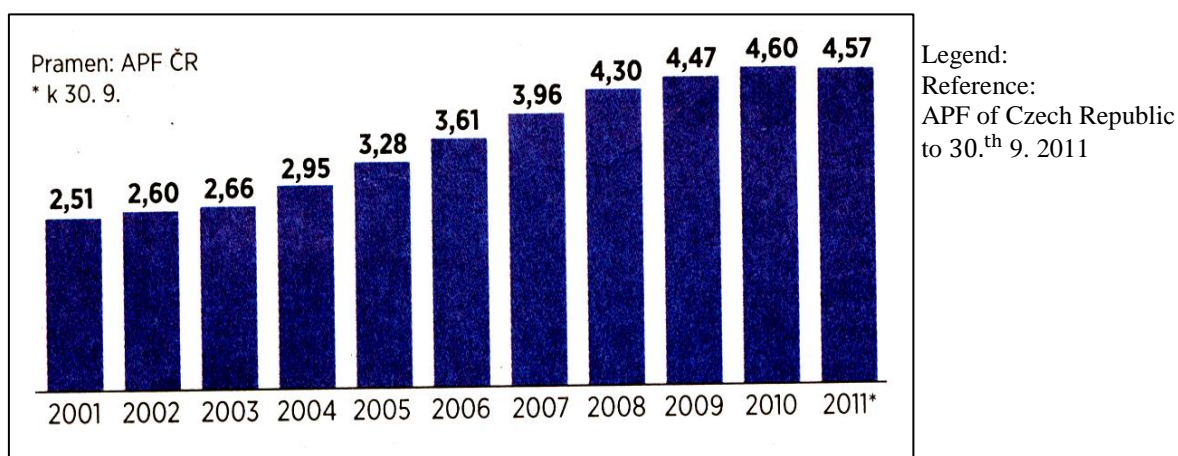


Chart No. 8 Development of the number of participants of pension in millions (2001 - 2011)  
Source: [17]

The table below is expressed as percentage composition of participants of pension funds in the Czech Republic in the years 2005 - 2011. This table shows that in recent years was the highest share recorded insurance participants aged 60 and over. In 2011, it amounted to 25.93% of the participants. Representation has the second largest category in Table 30 to 39 years with 21.39 %. At other places gradually include ages 50 to 59 years with 21.31 %, then followed the category 40 to 49 years with 19.39 % and 18 to 29 years with 11.97 %. In conclusion, the smallest number of participants is located in the youngest category, and most participants fall within the oldest category.

	18 - 29 years	30 – 39 years	40 – 49 years	50 – 59 years	60 years and more
to 31. <sup>st</sup> 12. 2011	11,97	21,39	19,39	21,31	25,93
to 31. <sup>st</sup> 12. 2010	12,36	21,33	19,16	22,04	25,10
to 31. <sup>st</sup> 12. 2009	12,61	21,11	19,10	22,94	24,23
to 31. <sup>st</sup> 12. 2008	12,70	20,60	19,20	24,20	23,40
to 31. <sup>st</sup> 12. 2007	12,63	19,98	19,74	25,31	22,32
to 31. <sup>st</sup> 12. 2006	12,60	19,09	20,46	26,91	21,38
to 31. <sup>st</sup> 12. 2005	11,63	18,35	21,50	28,38	20,14

Table No. 8: Age structure of participants in % (2005 - 2011)  
Source: [36]

Pension funds are legal entities constituted as joint stock companies which have their own characteristics. A pension fund may be established under the public offering. It is provided that the registered capital must be at least 50 million CZK. Another condition is that capital

stock is only cash deposits must be paid before the application is lodged for a permit to the creation and launch of a pension fund. Their founders are often banks. The establishment of the company decided by the Ministry of Finance, which is governed by Law No. 42/1994 Coll. Pension insurance with state contribution, and amendments to some laws relating to its introduction in the amended changes. Enable the Fund shall be granted for an indefinite period and is not transferable to another person. The above law stipulates how the fund to manage, store orders the pension fund of funds only in securities that are reliable. These include government and bank bonds, treasury bills, publicly traded shares and participation certificates. Pension funds may also invest in real estate or moveable property. The value of one property may not exceed 5 % of fund assets. One issuer can not hold securities with a value greater than 10 % of fund assets. Pension Act prohibits pension fund buying shares of other pension funds and issuing bonds. This Act also ensures maximum protection of pension insurance. [4, p. 241-247]

### **The investment activities of pension fund**

Participant funds must be invested safely. Funds can invest in is:

- government bonds and bonds guaranteed by the State,
  - banner mortgage bonds,
  - bonds issued by the ČNB,
  - corporate bonds issued and admitted to trading on a stock exchange,
  - shares of participation certificates admitted to trading on a stock exchange (their value can be up to 1/4 portfolio of pension fund) municipal bonds with a guarantee issued by a bank or bank,
  - bonds issued by Member States of the Organization for Economic Cooperation and Development or their central banks,
  - movable with a guarantee of safe storage,
  - with a constant yield property used for business or housing (the value of one property more than 5 % of fund assets),
  - on deposit accounts with banks (deposit at one bank up to 10 % of fund assets.
- [10, p. 19-20]

The graph shows the composition of the portfolio assets of all pension funds in the Czech Republic. The chart can be seen that in the Czech Republic in 2011 had the largest representation of bonds and 87 %. Other agency participation certificates, shares, real estate, treasury bills, money, accounts, term deposits and other assets amounted to 13 % which is much lower. It is clear that pension funds invest in the Czech Republic mainly in bonds, which represents very low risk investment.

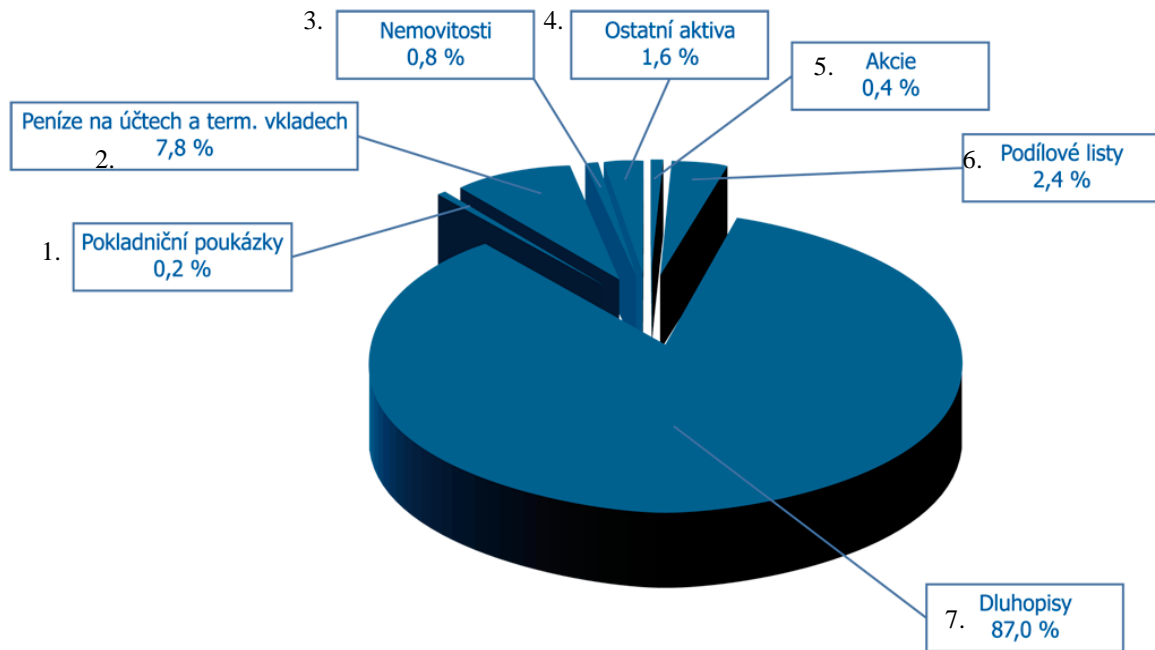


Chart No. 9: Composition of the portfolio PF in percentage terms (to 31.<sup>st</sup>12. 2011)  
Source: [36]

Legend: 1. Treasury bills, 2. Cash at bank and term deposits, 3. Property, 4. Other assets, 5. Share, 6. Units, 7. Bonds

Pension Fund Board of Directors is composed of at least five members. Pension fund must also have a supervisory board, which shall consist of at least three members, if their number is higher, must be divisible by three. Their duty is to protect the interests of participants. Employees Pension Fund may not become members of the Supervisory Board. Pension funds must also have its depositary, an amendment approved by the Ministry of Finance in case of violation of obligations may decide to amend the depositary. [71]

Pension fund must have its status as well as pension plan. Their engagement is enshrined in the pension fund. The statute is a document that is approved by the Securities and Exchange Commission. Changes must be approved by the Ministry of Finance. The Statute provides information to investors about the investment focus of the fund,



the fees, the fund managers and the like. Statute of the pension fund and the pension plan must be made available to all. [69]

The Statute includes:

- scope of activities,
- nature and objectives of investment policy,
- principles of management,
- use of profit,
- name and address of depositary,
- method of publication of reports on financial management,
- method of publication of amendments to the Statute,
- information sources. [69]

The pension plan provides for:

- types of pension benefits,
- conditions for obtaining benefits,
- method of calculating benefits,
- method of payment of benefits,
- amount of the contributions,
- changes in the amount of contributions,
- interruptions or delays in payment of contributions,
- payment of contributions,
- measures for non-payment or incorrect payment of contributions,
- conditions taking insurance from another pension fund,
- principles of distribution of the proceeds. [69]

There are three basic types of pension plans:

- Pension Plan is a defined contribution method, the participant pension saving regularly prescribed amount. The employer can contribute as an employee and as a result may provide for certain tax benefits. The amount of pension benefits is not guaranteed and will depend on market value of pension savings. Pension participant assumes all risks. This method is used in the Czech Republic.
- Pension plan with a defined dose is one in which the participant pension retirement benefits, a certain amount guaranteed. Employer pension plan to his ongoing

contributions. Pension benefits paid to him depends on the height of the contribution paid, average life expectancy of employees and evaluation of retirement savings. Investment risk assumed by the pension fund or its sponsor. For this type of planning is characterized by high costs and difficult to transfer pension entitlements between funds. This method is used in countries with developed economies.

- Hybrid pension plan is a combined plan of the previous two. Pension benefits are a minimum threshold, but which may later be increased. This method is not usually used in Anglo-Saxon countries.

In the Czech Republic are compiled for pension funds pension plans with defined contribution.

Responsibility of the pension fund is split 85 % of profits in favor of participants, more than 10 % of profits can be used for dividends and royalties, and at least 5 % of profits must be added to the reserve fund. [4, p 247]

Pension funds are independent financial institutions. Pension entitlements of these funds are easily transferable and are not influenced by the employer. Another advantage is that favorably affect the stock market. High administrative costs are not a disadvantage.

### **2.3.1 Pension Insurance**

Already seventeen years working in the Czech Republic with a state pension contribution. The issue of pension is dedicated to Law No. 42/1994 Coll. Pensions. It is a collection of funds from members and employers, handling and payment of pension benefits. [70]

The basic characteristics of the pension scheme are voluntary participation in the schemes that are under contract. The second characteristic is the state support the participants through the state contribution, which depends on the amount of premium, which since 2000 is also in the deduction of premiums paid from the tax base, which applies to both employees and employers. The tax base is possible to deduct an amount up to CZK 12 000 per year. This maximum amount of the deduction, however, reaches only those who pay annually 18 000 CZK, which is valid until the end of 2012. Since January 2013, however, will have to save up CZK 24 000 per year so that he can deduct from income CZK 12 000,

because under the new arrangements are not deductible deposits, covered by state aid. The tax advantage can therefore still profit of pension to monthly contributions in excess of CZK 500, from 2013 it will cover up to monthly contributions in excess of the amount of CZK 1 000. Also, an employer may contribute to their employees to pension plans and these contributions can be deducted from income tax. The maximum amount deducted by him but can only make 24 000 CZK. The third characteristic is the state supervision, which is implemented by the Ministry of Finance and Law No. 42/1994 Coll. Pensions. There are clear rules for the development and farming fund. Pension plans are funded, they can be implemented only pension funds. It is also based on the civic principle, ie the relationship between pension fund and the citizen. [4, p. 246], [11, p. 272], [16, p. 21]

The table is put above the state contribution to the pension provided by the participants until 2013, the amount may not exceed CZK 150 per month. The state no longer contributes to the investor for the monthly contribution of participants from 100 CZK or more.

1. Měsíční příspěvek účastníka (v Kč)	2. Měsíční státní příspěvek (v Kč)
100–199	3. 50 + 40 % z částky nad 100
200–299	90 + 30 % z částky nad 200
300–399	120 + 20 % z částky nad 300
400–499	140 + 10 % z částky nad 400
4. 500 a více	150

Table No. 9: The state's contribution to supplementary pension insurance in CZK (2012)  
Source: [4, p 245]

Legend: **1** Monthly contribution of the participant (in CZK) **2.** The monthly state contribution (in CZK)  
**3.** 50 + 40 % of the amount over 100 % **4.** 500 and more

The following table shows changes in the amount of state contributions to the pension scheme, the amount may be from 2013 up to CZK 230 per month. These changes are favorable for investors who invest in the fund CZK 700 per month and more. Investors investing CZK 600 per month from the state will receive the same high state contribution. But for investors who invest less than a month of CZK 600, this change will have a negative impact, the state will receive lower monthly contributions. The most disadvantaged will be those who currently invest 100 to 299 CZK. This group of persons would be by changing the state contribution to come altogether.

1.	<b>Výše státních příspěvků</b>		
2.	<b>vlastní úložka</b>	3. <b>od státu nyní</b>	4. <b>od státu od roku 2013</b>
	100	50	0
	200	90	0
	300	120	90
	400	140	110
	500	150	130
	600	150	150
	700	150	170
	800	150	190
	900	150	210
	1 000 a vyšší	150	230
5.	Poznámka: Částky v korunách, nová výše státních příspěvků se bude týkat i dosavadních smluv.		

Table No. 10: Amount of state contributions in CZK (2011)

Source: [37]

Legend: 1. Amount of state contribution, 2. own contribution, 3. from the state, 4. from the state from 2013, 5. Comment: Amounts in CZK, the new level of state contribution will also apply to existing contracts.

The emergence of pension determined by the following conditions:

- can be insured only person over 18 years, who has permanent residence in the Republic.
- The potential participant is obliged to conclude an agreement on pension schemes in selected pension fund, with the statute and the pension plan was closely acquainted in advance. Without a written contract with a natural person may become a party to the pension scheme.
- Date of pension is fixed. [4, p. 243]

Pension consists of two phases:

- Saving stage - participant saves money in the pension fund and this money along with contributions from the State continually invests. Terms and conditions of their investment in capital and money markets are set in advance. The aim is to achieve a reasonable return while facing risks. Share of profit is attributed to clients on their individual account.
- Selection of supplementary pension insurance benefits - if the participant meets the conditions laid down by a pension plan acquires a choice of pension benefits. [5, p. 428]

### **2.3.2 Termination of pension**

Termination of a pension scheme is possible in two ways, namely, dissolution, or testimony.

Termination may be made by either party and in writing, or pension fund. If you notice shall fund must be in writing. Termination of insurance in this way is only possible in cases where the insured does not pay contributions for at least six calendar months, or to fulfill another condition of the pension plan, which has undertaken in the contract. The Fund has given a party of its decision in writing at least one month before the termination of insurance. Another option terminate the contract by the Fund will occur if the participant provided false insurance information and thus affect the payment of benefits or state pension contributions, or concealed facts which had a decisive influence on the contract. Pension fund may give notice, if the participant does not meet the conditions of the insured by law. But if the insured has met the conditions for entitlement to retirement, his pension fund can not give notice of termination and shall pay his contributions under the pension plan. [10, p. 37]

The pension termination occurs in the following cases:

- on the date of last pension was paid,
  - payment of a lump sum settlement,
  - extinction based on the participant's written agreement and pension fund,
  - date of termination of the pension,
  - payment of the surrender of the dissolution of the Fund,
  - termination of permanent residence participant,
  - death of the participant (if the insured to the date of death has not been paid any benefit pension schemes are subject to inheritance saved money management).
- [10, p. 38]

### **2.3.3 Supplementary pension insurance**

Benefits provided by pension funds are divided into two groups:

- single dose,
- recurring cash benefits.

Limit of single doses are:

- One-time settlement - he has a claim instead of a participant under the board, which provides a pension plan. Or you may pay if the participant terminates stay in the Czech Republic. Payment shall be made up of money that client has saved the participant, state contributions, which fell to him, and shares the revenue funds.
- Surrender - is paid when the party ended pension testimony before the payment of pensions. Also due to the survivors. It is paid if the participant has met the statutory requirements, such as paid contributions for at least twelve months. Amount includes money paid by a participant and the client has saved a revenue share of this amount. However, the state contributions does not pay, or income from them. The recipient must surrender dodanit earlier claim deduction from the tax base.

The recurrent cash benefits include:

- Retirement board - this board has to provide all funds. Participant is entitled to it if it was 60 years old (it is the lower limit set by law, the upper limit is not limited) and paid contributions for at least 5 years. The fund must have at his registered 60 monthly contributions on time and properly.
- Early retirement - the participant is entitled to it if it arranged and paid contributions for at least 15 years. The fund must have at his registered 180 monthly contributions paid properly and on time. Entitlement to pension leach but will have from 2013 only a supplementary pension insurance participants who had a contract concluded by the end of 2012. The contracts entered into from January 2013 will no longer negotiate the possibility of early retirement pension. [15, p. 5]
- Disability pension - must be agreed in the contract, not on her special contributions. Participant is entitled to it, if paid contributions for at least five years. The Fund must be registered 60 monthly contributions paid properly and on time. Another condition is a disability pension social security office.
- Survivors' pensions - must be negotiated in the contract. The right to have her person a participant in the contract if stated and paid contributions in the contract for one year. The fund must have at his registered 12 monthly contributions paid properly and on time. Another condition is that it has not yet begun to pay retirement or early retirement pension. [4, p. 247 -249]

The rights of pension scheme:

- Written information - the amount of all funds registered with them. Must be provided at least once a year. They are usually sent in the form of statement of account.
  - Access to other information - a report on the retirement fund, pension fund statutes, a list of Members of the pension fund, pension fund's list of shareholders.
- [10, p. 18 - 19]

### 2.3.4 Weaknesses in the existing pension

The age of participant's horizon is relatively high and relatively low number of participants can be classified into younger ages. Pension funds are also struggling with low monthly contributions of the participants in the system, resulting in slow growth of the total equity funds. The reform, which introduces changes in the pension scheme, motivates the participants to higher monthly deposits. Finally, pension funds are struggling with low transparency, which reduces their credibility. Funds find themselves one of the biggest weaknesses of the provisions of Law No. 42/1994 Coll. Pension Funds, which allows participants to terminate the contractual relationship lump-sum payment. This problem should resolve the new reform, which has already been approved. [4, p. 249], [15, p. 5]

The following chart shows the percentage of men and women as participants in the pension insurance with state contribution in the Czech Republic to 31.<sup>st</sup>12. 2011. This graph shows that more women than men invest their funds into pension schemes, and this difference is 6 %.

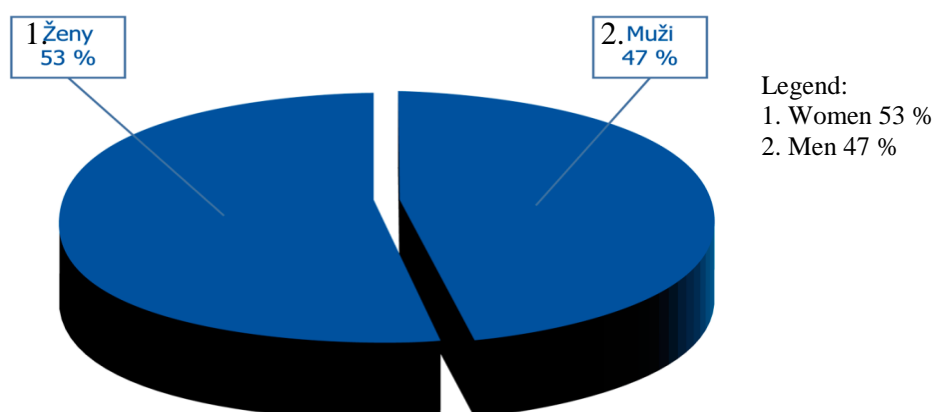


Chart No. 10: Proportion of men and women in pension insurance with state contribution in % (2011)  
Source: [36]

### **2.3.5 Association of Pension Funds (APF)**

Association of Pension Funds of the Czech Republic was established on 25.<sup>th</sup> 5. 1996. This association is a voluntary association of legal entities, particularly pension funds. APF has today members and three associate members. All pension funds operating on the Czech financial market is Regular members. [12, p. 66]

Voluntary membership in this association has two forms:

- Regular membership - members of the pension funds established under Act No. 42/1994 Coll. Pension insurance with state contribution, as amended. Membership can arise from a unilateral accession of the pension fund.
- Associate membership - members are legal entities that operate in areas related to pension schemes, or closely related. Membership begins after the application formembership and its approval by the Presidium of the Association. [38]

APF CR for its business set up an expert commission (sections) that are focused on the areas of legislation, information technology, operational fund management, economics, actuarial science, ethics, external relations and PR activities. [38]

The basic missions of the Association of Pension Funds are:

- co-ordinating, representing, defending and promoting the common interests of members,
- pioneering ideas pension,
- comments on legislative proposals and other measures relating to the pension and other interests of pension funds and initiating any amendments,
- acting as information and advisory center
- promoting and organizing educational and scientific activities,
- representation of common interests of its members abroad, establishing and developing contacts with similar institutions abroad and participation in the process of convergence conditions, pension CR standards of the European Union
- emphasis on respect for ethical relationships between members of the APF CR and pension participants,
- action to eliminate conflicts between members of the APF CR



- organizing professional, legal and material cooperation in addressing the process of merging, merging and dissolution of pension funds in order to eliminate any negative consequences for the image of pension and its participants. [12, p. 66]

### 2.3.6 Offer of pension funds operating on the Czech market

#### AENGON Penzijní fond, a.s.

Company AENGON is headquartered in the Netherlands. In 2007 began AENGON Penzijní fond traded on the market. In the Czech Republic is the youngest pension fund, even managed to take hold in the market and gained its clients. In 2010, the number of active clients by 20 % compared to 2009 and at 116 444 clients. Profit for the company was in profit in 2010 CZK 52.6 million. [39]

The following graph shows the time series of development funding valuation of pension AENGON Penzijní fond in % is given for the Czech market. From this graph can be seen that in the first year the highest value for money and 4.5 %, a year later it was 1 % less. The decline stopped in 2009, to 2.1 %. In 2010 compared to 2009, a slight increase when the value of funds reached 2.11 %. The last two years, holds a value just above 2 %. Outcome assessment for 2011 is not yet known, because the General Assembly, which decides about the outcome, even not meeting.

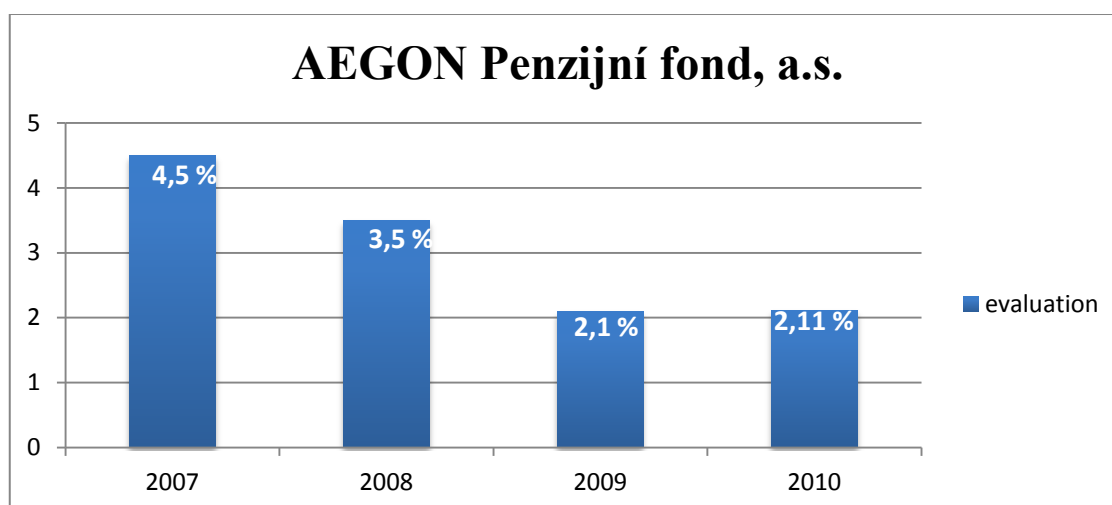


Chart No. 11: Value for money of pension in % (AEGON Penzijní fond, a.s.), (2001 - 2010)  
Source: [33], the actual processing

### Allianz penzijní fond, a.s.

This fund was established in 1997 and the merger of two funds Allianz - HYPO penzijní fond, a.s. and Živnobanka - penzijní fond, a.s. After the merger of that fund it is called Allianz - Živnobanka penzijní fond, a.s. In 2001, the pension fund was renamed to its current form, the purchase of shares from Živnostenské banky Allianz pojišťovnou. [40]

Appreciation of the time series of funds of participants Allianz pension fund illustrated in Figure No. 12 This graph shows the evolution of financial value in %. The time series is given within ten years. Graph illustrates that in the years 2001 to 2002 evaluation of pension values recorded around 4 %. High value was reached in 2001 and 4.36 %, while the lowest value has dropped to 3 % in 2003, 2004, 2005, 2007, 2008 and 2010. This graph shows that from 2003 to 2010, the value has stabilized and moving around 3 %. Outcome assessment for 2011 is not yet known, because the General Assembly, which decides about the outcome, even not meeting.

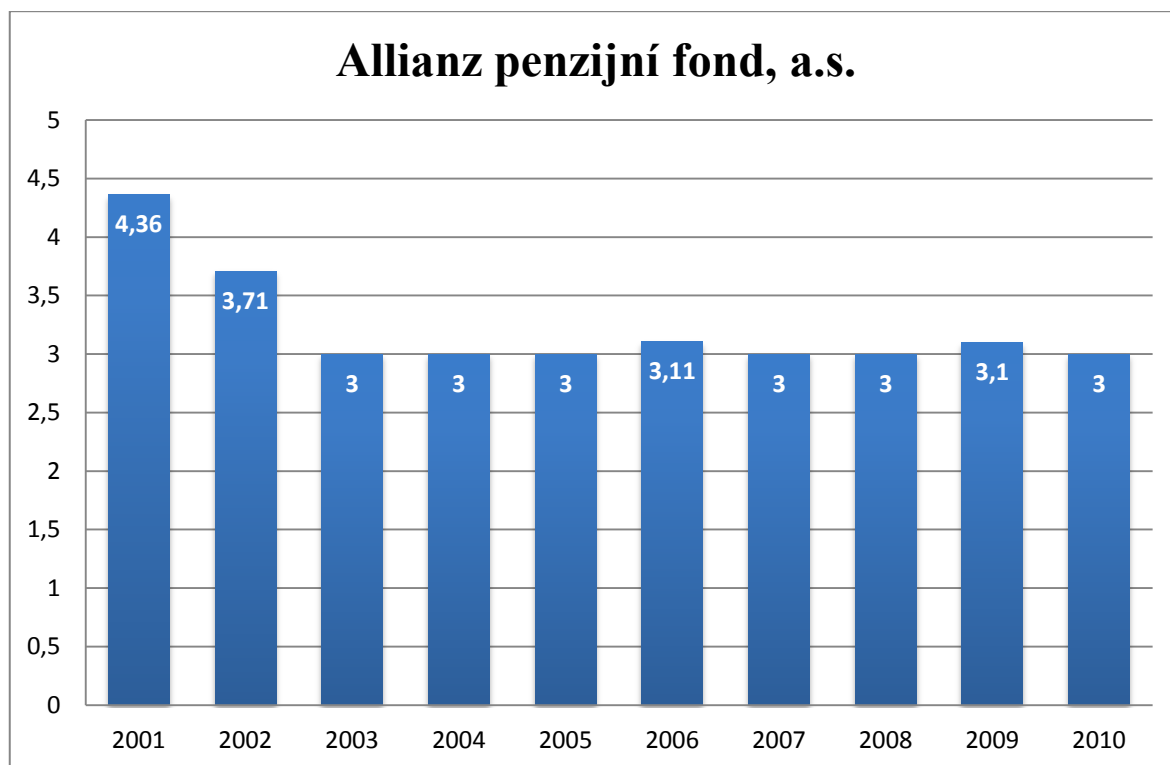


Chart No. 12: Value for money of pension in % (Allianz penzijní fond, a.s), (2001 - 2010)  
Source: [33], the actual processing

### **AXA penzijní fond, a.s.**

The company offers its services to clients since 1994, until March 2007, this company called Winterthur pension fund, as [41]

The graph below shows the time series of development funding valuation of pension in % and in the range of ten years. The graph has a decreasing tendency when comparing individual years. The exception is 2005, when the previous year to raise appreciation. High value was reached in 2001, 4.25 % and the lowest 0 % in 2008. Outcome assessment for 2011 is not yet known, because the General Assembly, which decides about the outcome, even not meeting.

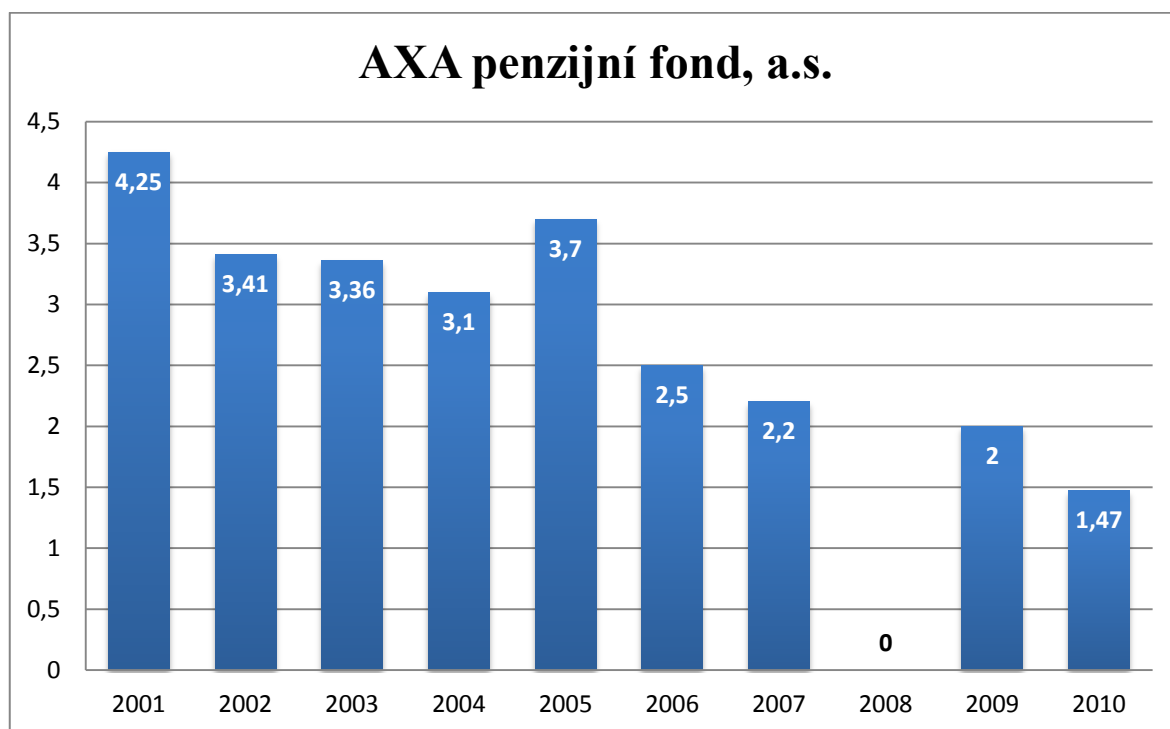


Chart No. 13: Value for money of pension in % (AXA penzijní fond, a.s.), (2001 - 2010)

Source: [33], the actual processing

### **ČSOB Penzijní fond**

Společnost ČSOB offered to 30.<sup>th</sup>12. 2011 two kinds of funds:

- ČSOB Penzijní fond Progres,
- ČSOB Penzijní fond Stabilita.

Since December 2011, these funds were merged into one under the name ČSOB Penzijní fond Stabilita. [24]

## ČSOB Penzijní fond Progres, a.s.

Began operating in 1995. He was the legal successor of the Penzijní fond Spokojenosti, Hornický penzijní fond Ostrava and Zemský penzijní fond, a.s. This fund was suitable for clients younger than 45 years for long-term savings, at least 15 years or more. He strove to above-average value for money of the participants in the long term. [42]

The following chart you can see a time line of development funding valuation of pension scheme with ČSOB Penzijní fond Progres in %. High value was reached in 2004 was 5.3 % and 0.2 % nižšího in 2008. From 2001 to 2005, the value ranged from about 4 to 5 %. In 2006 there was a significant fall to 2.3 % in 2007 there was a slight increase in value to 2.4 %. The year 2008 was critical, because the value dropped to 0.2 %. In 2009 was increased of 0.8 % over the previous year. In 2010, the value remains value for money nearly the same participants, was 1.03 %. On 31.<sup>th</sup> 11. 2011 the fund ceased to exist as a result of its merger with ČSOB Penzijní fond Stabilita, a.s. His clients and assets were transferred to ČSOB Penzijní fond Stabilita, a.s.

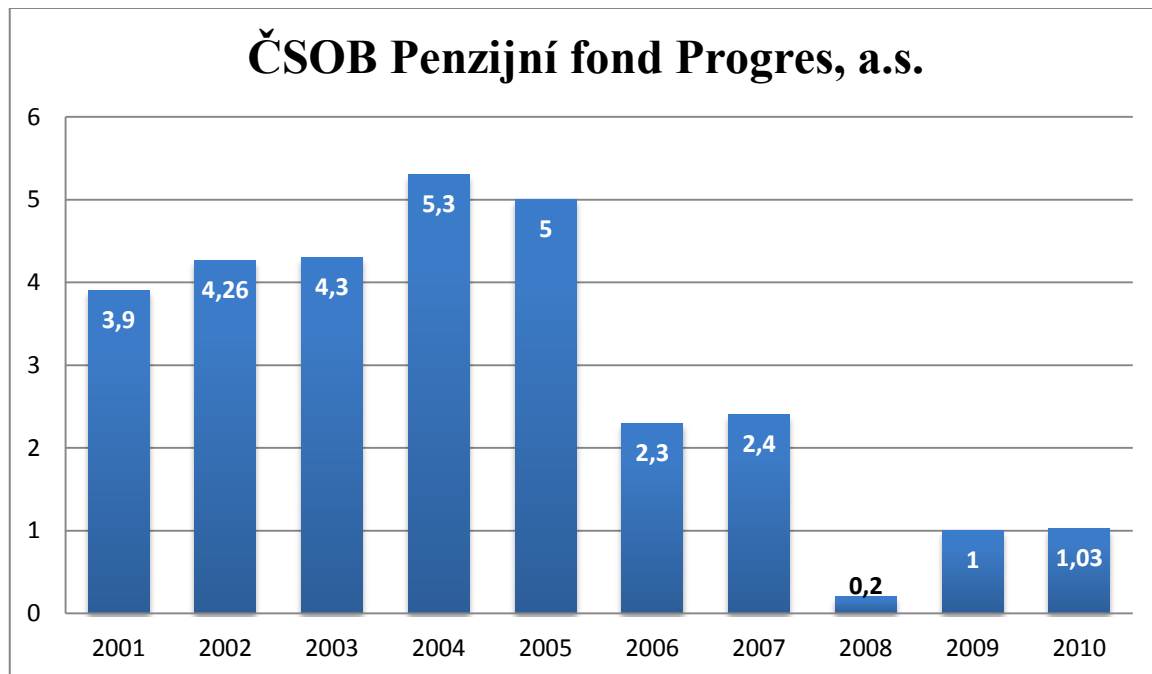


Chart No. 14: Value for money of pension in % (ČSOB Penzijní fond Progres, a.s.), (2001 - 2010)  
Source: [33], the actual processing

## ČSOB Penzijní fond Stabilita, a.s.

The pension market has been operating since 1994. His original name was Českomoravský penzijní fond, a.s. ČSOB Penzijní fond Stabilita is the legal successor of the Civil Pension Fund, as Czech pension fund and Health, Inc., which merged in 1999 and 2000. This fund is one of the major pension providers in the country. Before the merger in 2011 the fund had more than 380 000 clients, following the merger with the number of clients increased by nearly 730 000th It focuses on stable annual funding appreciation in the short term, by the end of November 2011 was presented as a fund suitable for clients over 45 who prefer a steady income and less time savings. [43]

Appreciation of the time series of funds of pension scheme with ČSOB Penzijní fond Stabilita within 11 years is shown in Graph No. 15. This graph shows the evolution of financial value in%. There are two cycles show a gradual decrease in recurrent evaluation in a row, in the years 2001 to 2003 and 2004 to 2007. In 2008 there was a sharp decline in value up to 0.05 % and since 2009 have these values slightly increase. During the last 3 years increased to 1.7 % appreciation. High value was reached in 2004 and 4.3 %, while the lowest 0.05 % in 2008.

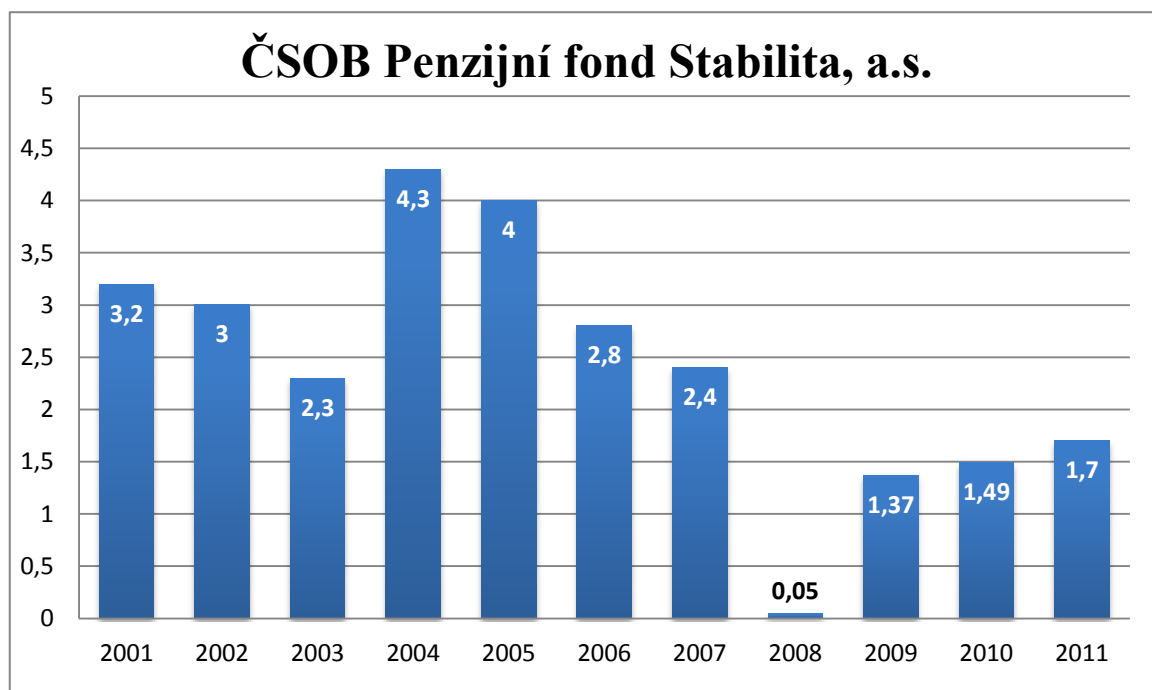


Chart No. 15: Value for money of pension in % (ČSOB Penzijní fond Stabilita, a.s.), (2001 - 2011)  
Source: [33, 44], the actual processing

## Generali penzijní fond, a.s.

Generali penzijní fond was established in 1995. [45] The graph below shows the time series development of the appreciation of the funds of pension insurance with Generali Pension Fund in %. The graph shows that in 2001, 2002, 2005, 2006 and 2007 was around 4 % appreciation. Between 2003 and 2004 was 3 %. From 2008 to 2010 compared to previous years there was a decrease in value and its value ranged from 2 % to 2.4 %. Thus maximize the fund reached 4.6 % in 2001 and the lowest 0.3 % in 2011.

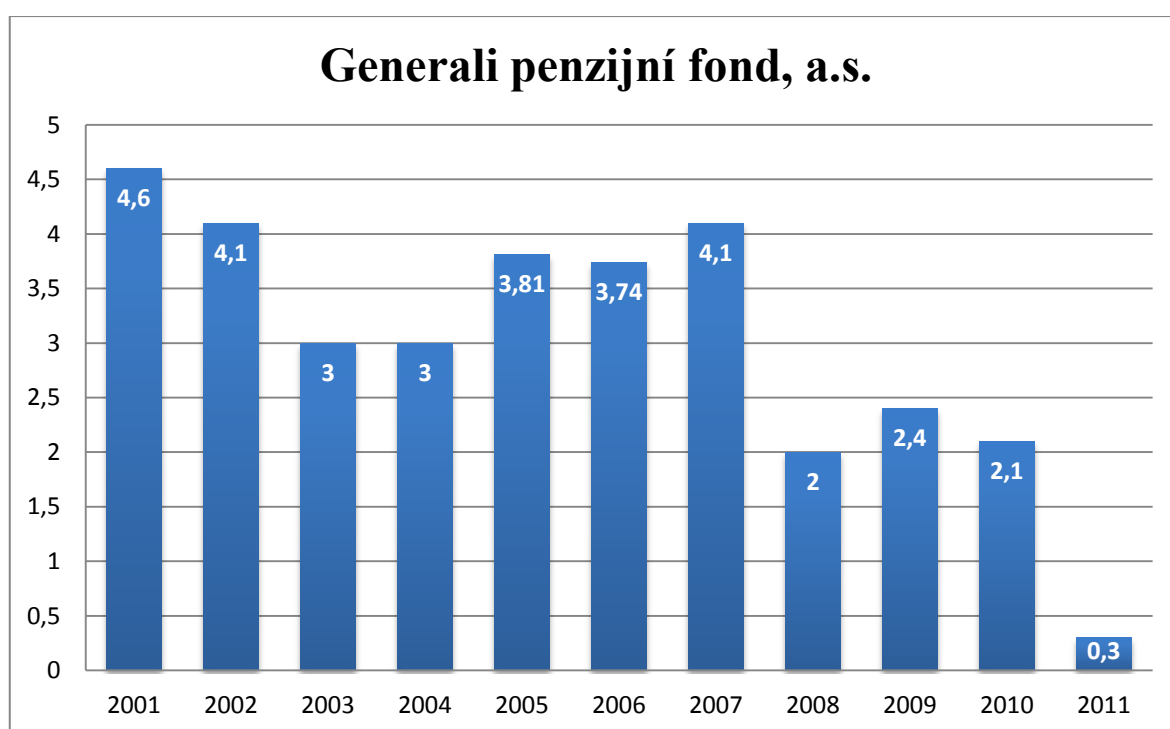


Chart No. 16: Value for money of pension in % (Generali penzijní fond, a.s.), (2001 - 2011)  
Source: [33, 46], the actual processing

## ING Penzijní fond, a.s.

ING Penzijní fond, a.s. Began work on the Czech market in 1995 under the name Industrial Pension Fund. ING Pension Fund operates with funds from all of the participants in the value of approximately CZK 21.6 billion and currently has approximately 448 000 clients. [47]

The chart that follows is captured time series of development funding valuation of pension at ING Pension Fund in %. They are from 2 waves seen him fall in the rate of appreciation. The first covered the period from 2001 to 2004, the second from 2005 to 2007. Since 2008,

when there was a steep decline in value for money to a mere 0.04 %, the curve again takes increasing values. In 2011, the evaluation reaches above 2.14 %. Maximize the 4.8 % achieved in 2001 and the lowest 0.04 % in 2008.

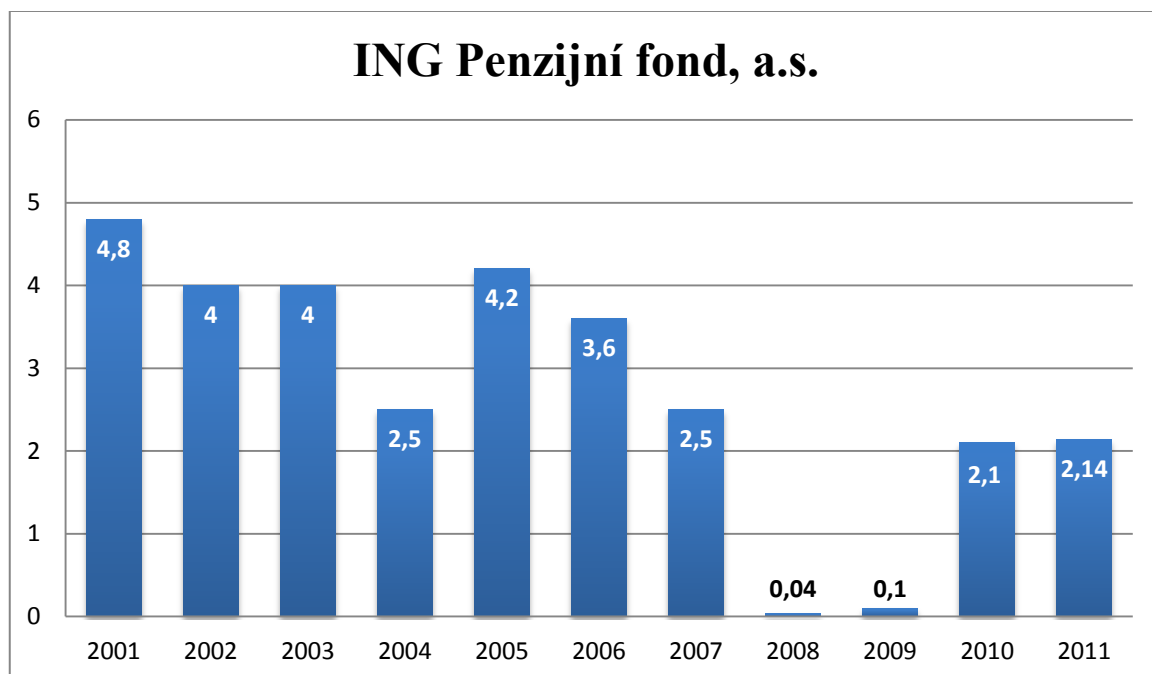


Chart No. 17: Value for money of pension in % (ING Penzijní fond, a.s. ), (2001 - 2011)  
Source: [33, 48], the actual processing

### **Penzijní fond České pojišťovny, a.s.**

Established in 1994, is a companies subsidiary of České pojišťovny. Currently one of the leading and major pension funds in the CR with the number nearly 1.2 million customers. [49]

Another graph shows the time series of the appreciation of the development funds of pension at Penzijní fond České pojišťovny in %. From 2001 to 2006 was to evaluate the whole stable and ranged between 3 % as 4 %. In 2007, decreased to 2.4 % a year later there was a fall up to 0.2 %. In the last two years, its value increased again, so in 2010 had a value of 2 %. High value was reached 3.8 % in 2001 and 2005, the lowest 0.2 % in 2008. Outcome assessment for 2011 is not yet known, because the General Assembly, which decides about the outcome, even not meeting.

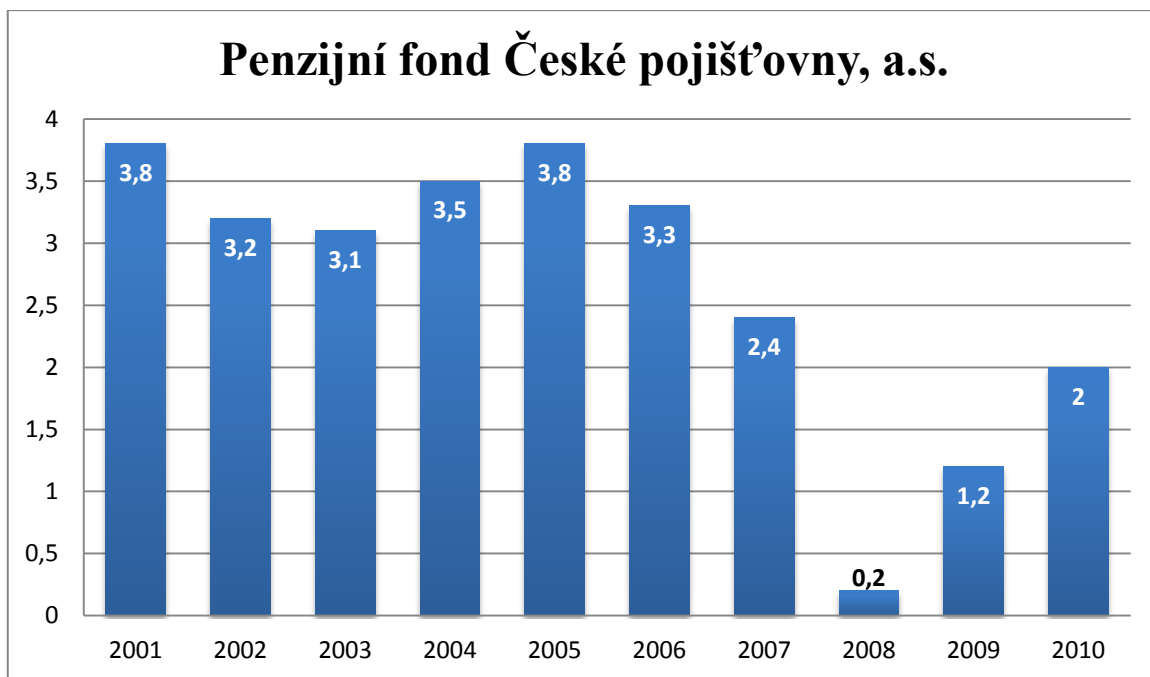


Chart No. 18: Value for money of pension in % ((Penzijní fond České pojišťovny, a.s), (2001 - 2010)  
Source: [33], the actual processing

### **Penzijní fond České spořitelny, a.s.**

The financial market in the Czech Republic joined in 1995. Since March 2001 is 100 % owner of Česká spořitelna Fund. [50]

The following chart is ready for inspection by the appreciation of time series of development funds of pension at Penzijní fond České spořitelny in %. From 2001 to 2007, its value quite stable and fluctuated around 3 % to 4 %. Since 2008, when there was a steep decline to 0.4 %, its value began to increase and in 2010 performed at 2.34 %. High value was reached 4.03 % in 2005 and the lowest 0.4 % in 2008. Outcome assessment for 2011 is not yet known, because the General Assembly, which decides about the outcome, even not meeting.



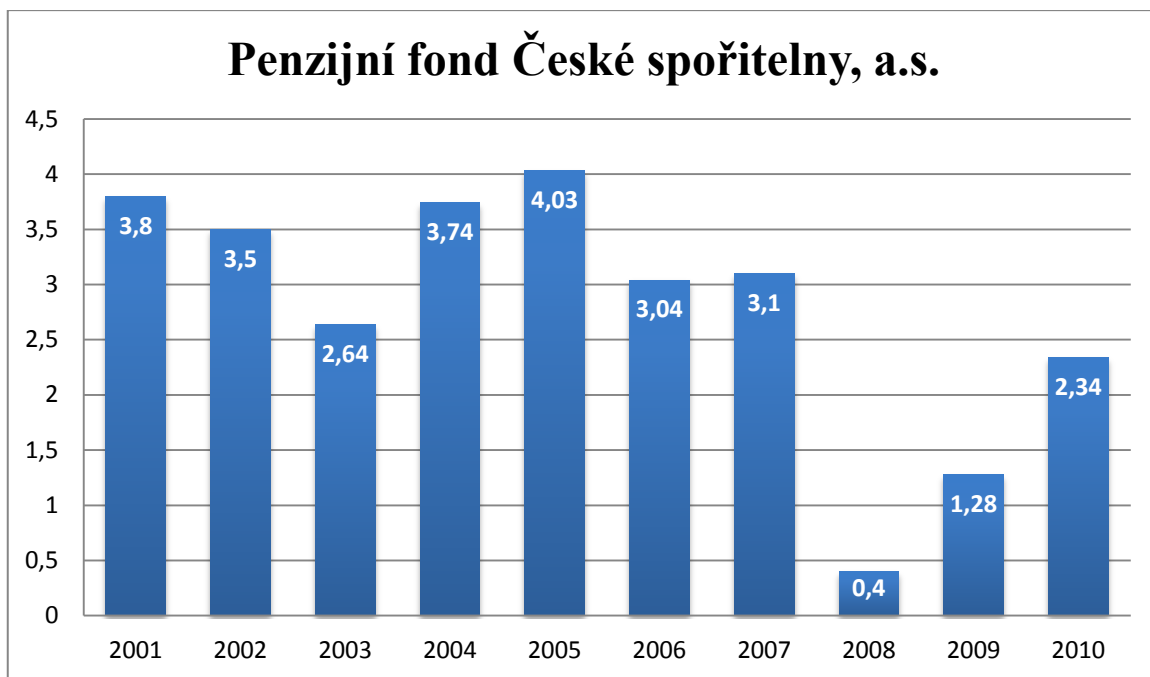


Chart No. 19: Value for money of pension in % (Penzijní fond České spořitelny, a.s.), (2001 - 2010)  
Source: [33], the actual processing

### **Penzijní fond Komerční banky, a.s.**

It was founded in 1994 on Komerční bankou, a.s. Among the largest and most pension funds, which trade on the Czech market. At present, takes care of finances more than 500 000 inhabitants of the Czech Republic. [51]

The following chart shows the time series development of the appreciation of the funds of pension Pension Fund at Commercial Bank in %. The graph shows that in 2001, 2002 and 2005, value for money ranged from 4 % to 4.63 %. In the years 2003, 2004 and 2006 does not drop below 3 %. In 2007, the value decreased to 2.3 %. The next year saw a decline to 0.58 % in 2009 even up to 0.24 %. The year 2010 was successful, appreciation increased to 2.23 %, but in 2011 there was again a slight appreciation in the fall and to 2.04 %. High value was reached 4.63 % in 2002 and the lowest 0.24 % in 2009.

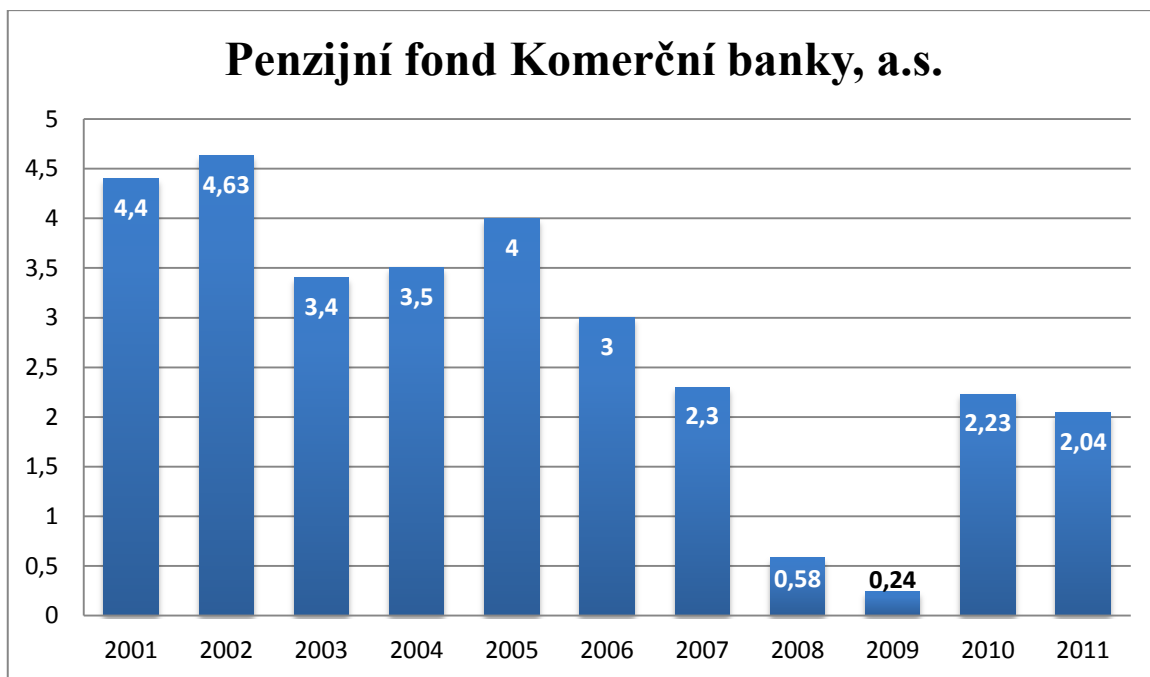


Chart No. 20: Value for money of pension in % (Penzijní fond Komerční banky, a.s.), (2001 - 2011)

Source: [33, 52], the actual processing

### 3 Comparison of Funds

This chapter focuses on a comparison of selected mutual funds and pension funds all offered in the country.

The mutual funds I have chosen to compare:

- equity funds (IKS Akciový PLUS, ISČS Sporotrend OPF),
- mutual funds (IKS Dluhopisový PLUS, ISČS Sporobond),
- mixed funds (IKS Balancovaný – dynamický, ISČS Fond řízených výnosů),

From each selected type of mutual funds, I chose two funds and am always one of the IKS and the second from ISČS.

For pension funds, I decided to compare all 10 funds operating on the Czech market. These include penzijní fondy České spořitelny, České pojišťovny, KB, ING, Allianz, Generali, Aegon, AXA and two pension funds of ČSOB. Compares all ten funds operating in the Czech Republic, because this kind of investment in the last decade has been sought. Currently, pension funds added to their investment more than half of the CR population of working age.

Comparisons will be made by fund type in the following areas:

- duration of action of individual funds in the Czech Republic,
- number of investors who put their money into individual funds,
- investment horizon of the fund,
- structure of the portfolio in funds,
- profit,
- minimum deposit,
- risk fund,
- performance of the funds.

Compares the data are shown for greater clarity in tables and graphs.

### 3.1 Comparison of selected mutual funds

This section focuses on a comparison of selected mutual funds.

Comparison of the mutual funds will be made in these areas:

- duration of action of individual funds in the Czech Republic,
- number of investors who put their money into individual funds,
- investment horizon of the fund,
- risk fund,
- minimum deposit
- performance of the funds.

#### Duration of action of individual funds in the Czech Republic

The following table shows data about the effect of selected funds on the Czech market. Longest operating fund is ISČS Sporotrend OPF, which traded for 14 years on the market. 13 years of operating funds ISČS Sporobond and IKS Balancovaný – dynamický and then followed by a fund managed ISČS Fond řízených výnosů for 12 years. The youngest funds are IKS Akciový PLUS and IKS Dluhopisový PLUS, which offer their services to investors for 11 years. The advantage is the possibility of a longer tradition of strengthening its position in the subconscious of investors, gaining more experience in the investment opportunity to gain reputation with the public.

Mutual Funds	Duration of action (in years)
IKS Akciový PLUS	11
ISČS Sporotrend OPF	14
IKS Dluhopisový PLUS	11
ISČS Sporobond	13
IKS Balancovaný – dynamický	13
ISČS Fond řízených výnosů	12

Table No. 11: Comparison of exposure times of mutual funds in the Czech market (2011)

Source: [20 to 23, 25, 26], the actual processing

## Comparison of the number of investors who put their money into individual funds

The number of fund investors can testify many, it may be a reflection of the fund popularity, good publicity, favorable terms for clients, and particularly the profitability of the fund. It is, however, many other factors such as investment horizon, risk and external factors (crisis, solvency of the population and so). According to population, the funds placed as follows on 1 ISČS Fond řízených výnosů, on the 2nd place IKS Dluhopisový PLUS, the 3rd placen ISČS Sporobond. Funds next followed the IKS Balancovaný – dynamický, ISČS Sporotrend OPF, IKS Akciový PLUS.

Mutual Funds	Number of investors	Position
IKS Akciový PLUS	2 658	6
ISČS Sporotrend OPF	6 234	5
IKS Dluhopisový PLUS	41 323	2
ISČS Sporobond	27 774	3
IKS Balancovaný – dynamický	6 563	4
ISČS Fond řízených výnosů	93 566	1

Table No. 12: Comparison of the number of clients on pension funds (2011)

Source: [55 - 60], the actual processing

## Investment horizon

The investment horizon is an important criterion on which clients take into account when choosing the fund. It is the minimum time that is convenient to invest in the fund. Subsequently, the table indicates that the shortest investment horizon for a period of 2 years has ISČS Fond řízených výnosů. Investment horizon IKS Dluhopisový PLUS is 2.5 years, for ISČS Sporobond is 3 years. The longest investment horizon of 5 years, funds have IKS Akciový PLUS, ISČS Sporotrend OPF and IKS Balancovaný - dynamický.

<b>Mutual Funds</b>	<b>Investment horizon (years)</b>
IKS Akciový PLUS	5
ISČS Sporotrend OPF	5
IKS Dluhopisový PLUS	2,5
ISČS Sporobond	3
IKS Balancovaný – dynamický	5
ISČS Fond řízených výnosů	2

Table No. 13: Comparison of the investment horizon of pension funds (2011)

Source: [20 to 23, 25, 26], the actual processing

## **Risk**

It is a very important factor influencing their decisions to the selection pool. There are two types of investors. Conservative investors do not like to run the risk and require maximum security. Therefore, invest in low risk funds. The second type of investor is willing to yield more for higher risk. The least risky funds are managed ISČS Fund revenues, followed ISČS Sporobond. Investors are undergoing the median level of risk IKS Bond Plus Fund. A slightly higher risk funds are IKS Balanced - dynamic. Funds are most at risk of IKS Equity Plus and iSCSI Sporotrend OPF

<b>Mutual Funds</b>	<b>Risk (min. 1 - max 5)</b>
IKS Akciový PLUS	5
ISČS Sporotrend OPF	5
IKS Dluhopisový PLUS	3
ISČS Sporobond	2,5
IKS Balancovaný – dynamický	4
ISČS Fond řízených výnosů	1

Table No. 14: Comparison of risk mutual funds (2011)

Source: [20 to 23, 25, 26], the actual processing

## **The minimum deposit**

The first minimum deposit may also influence the decisions of some investors. The relatively high initial investment of CZK 5 000 require funds IKS Akciový PLUS, IKS Dluhopisový PLUS and IKS Balancovaný – dynamický in the event that the investor saves his money once. If the decision is the investor for the regular monthly saving,

minimum initial contribution must be CZK 500. The minimum initial investment of CZK 100 is provided for investors in funds ISČS Sporotrend OPF, ISČS Sporobond, ISČS Fond řízených výnosů.

<b>Mutual Funds</b>	<b>Minimum deposit (in CZK)</b>
IKS Akciový PLUS	5 000 / 500
ISČS Sporotrend OPF	100
IKS Dluhopisový PLUS	5 000 / 500
ISČS Sporobond	100
IKS Balancovaný – dynamický	5 000 / 500
ISČS Fond řízených výnosů	100

Table No. 15: Comparison of minimum deposit of mutual funds (2011)

Source: [20 to 23, 25, 26], the actual processing

### **Performance funds**

The graphs below compares the performance of the different types of funds selected. The first chart compares equity funds, in the second graph compares the bond funds and mixed funds, third graph. The last graph shows comparison of selected mutual funds.

#### Equity Funds

Selected equity funds:

- IKS Akciový PLUS,
- ISČS Sporotrend OPF.

The following chart shows the performance of two stock funds to 28.<sup>th</sup>12. 2011. A comparison of these funds, it is clear that the fund ISČS Sporotrend OPF despite fluctuations in the curve has a higher performance.

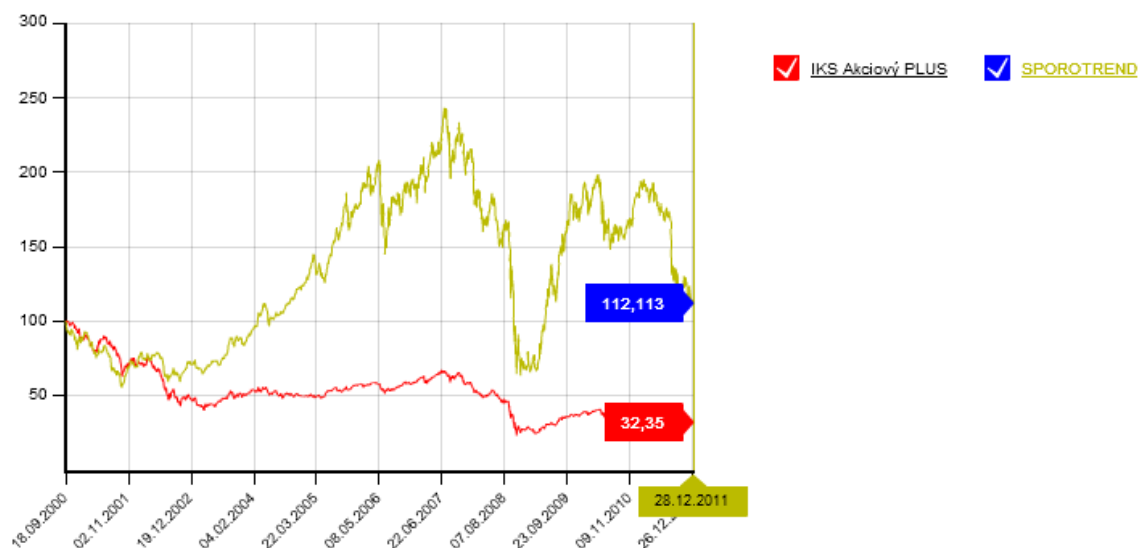


Chart No. 21: Comparison of funds (performance), (2000 – 2011)  
Source: [61]

### Bond Funds

Selected bond funds:

- IKS Dluhopisový PLUS,
- ISČS Sporobond.

The graph shows the performance curves of the two bond funds 'to 28.<sup>th</sup>12. 2011. A comparison of funds' thesis is evident That Both curves have a Similar Upward trend, but with the added fund performance ISČS Sporobond with Slightly Higher than the IKS Dluhopisový PLUS.

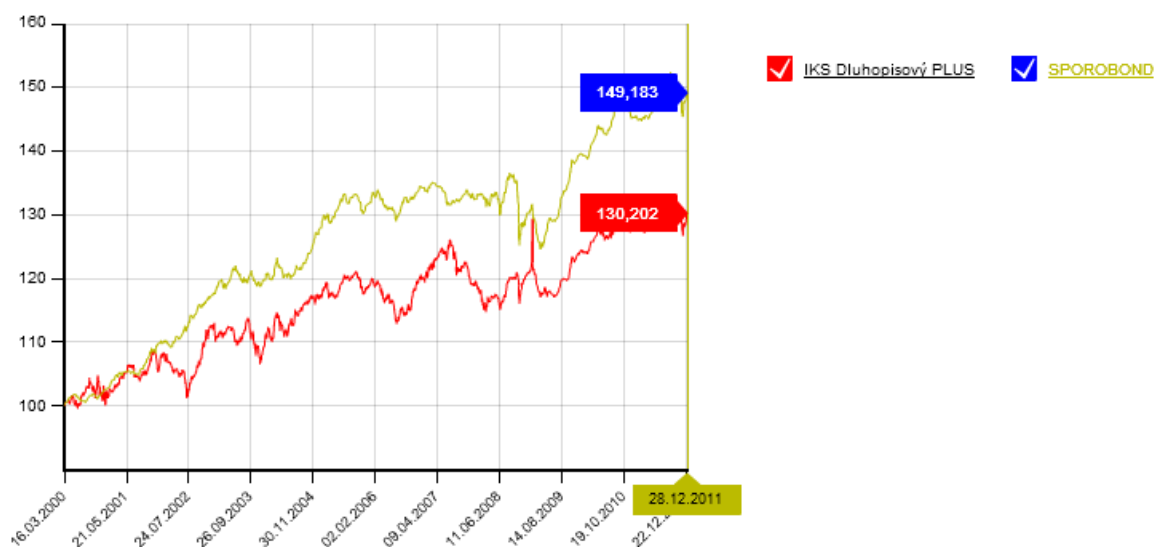


Chart No. 22: Comparison of funds (performance), (2000 - 2011)  
Source: [61]



## Mixed funds

### Selected Funds:

- IKS Balancovaný – dynamický,
- ISČS Fond řízených výnosů

The next chart compares the performance of two mixed funds to 28.<sup>th</sup>12. 2011. The graph shows that the IKS Balancovaný - dynamický fund has a fluctuating curve with higher performance. Performance curve ISČS Fondu řízených výnosů is controlled unlike previous fund stable with a slight increase.



Chart No. 23: Comparison of funds (performance), (from 1999 - 2011)

Source: [61]

Comparisons in the previous charts, it was found that the selected stock and bond funds have higher performance both funds Czech Savings Bank. Third graph shows that both komparovaných mixed fund is, more efficient capital investment fund of KB.

Upcoming graph compares the performance % over 10 years for all the selected mutual funds. The highest performance achieved IKS Balancovaný – dynamický and 90.41 %. Relatively well-farmed funds ISČS Sporotrend OPF performance with 51.41 % and iSCSI Sporobond performance with 35, 92 %. Fund IKS Dluhopisový PLUS has a 23.66 % performance, ISČS Fond řízených výnosů performance reached only 15.46 %. Fared worst

IKS Akciový PLUS, unlike previous funds declined only as to the performance to - 53.49 %.

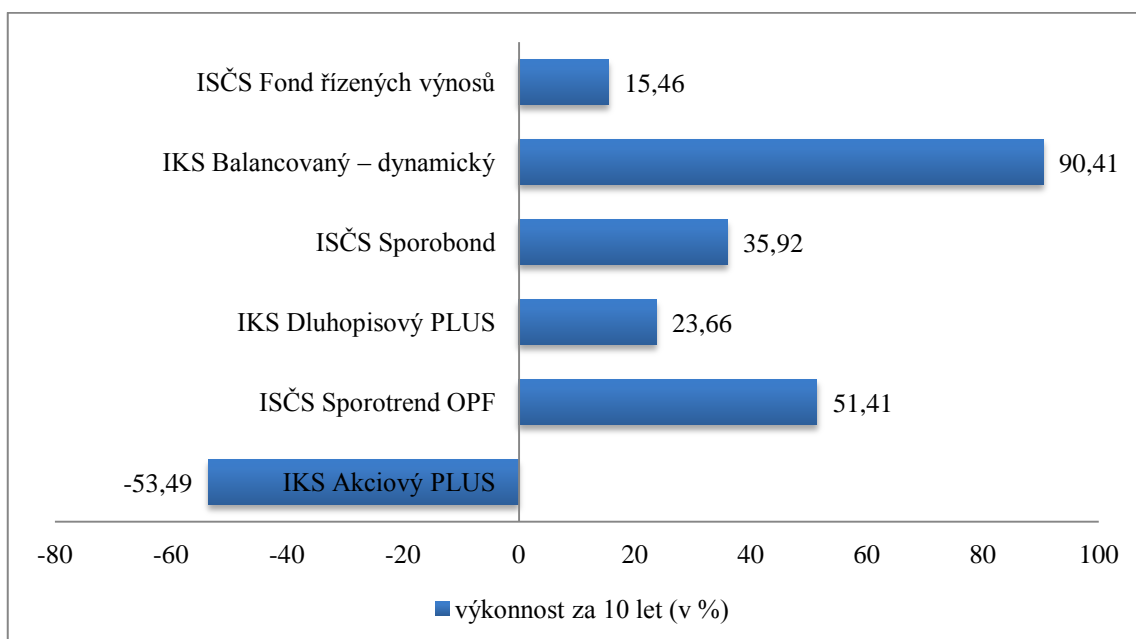


Chart No. 24: Comparison of the performance of mutual funds (2002 - 2011)  
Source: [21 to 23, 27 - 29], the actual processing

### Result comparison of selected mutual funds

IKS Akciový PLUS - performance of the fund is volatile with deep declines in the last 10 years hold in minus figures. Riskiness of the fund is high and the lowest number of investors from the funds under consideration. Capital investment is high and long-term investment horizon.

ISČS Sporotrend OPF - performance is very good, but with considerable fluctuations. At present, the past year downward trend. The funds under consideration has the longest tradition. Riskiness of the fund is high and the number of investors is low. Initial investment is low and the investment horizon is long-term fund.

IKS Dluhopisový PLUS - for the fund performance is not high but still rising. Investor undergoing moderate risk. The number of investors is high despite the high initial investment. The investment horizon is medium.

ISČS Sporobond - the fund's performance is good with minimal variations, is still rising. It is the second oldest compared have the Fund. Investors are undergoing low risk.

The number of investors does not cover the small funds, and compared them to third place. Minimum initial investment is small, medium-term investment horizon.

IKS Balancovaný – dynamický - that fund performance is very high but very volatile. It operates on the Czech market for 13 years. The risk is high and the low number of investors. Among funds with high upfront investment and long-term investment horizon.

ISČS Fond řízených výnosů - is considered the last of mutual funds. His performance is quite low, but has an upward trend, fluctuations are common. The risk is with him all the funds considered low. The initial investment is small and medium-term investment horizon.

### **3.2 Comparison of pension funds**

The comparison is performed for all 10 funds, which operate on the Czech market in 2011. It is a penzijní fondy České spořitelny, České pojišťovny, KB, ING, Allianz, Generali, Aegon, AXA and two pension funds ČSOB.

Compare and contrast the following areas:

- exposure time of each fund in the Czech Republic,
- number of investors who put their money into individual funds,
- Economic outcome of individual pension funds,
- minimum deposit,
- Funds in the portfolio structure,
- performance of the funds.

#### **Duration of action of individual funds in the Czech Republic**

The next table shows the data about the operation of pension funds on the Czech market. Longest active funds are AXA penzijní fond, ČSOB Penzijní fond Stabilita and Penzijní fond Komerční banky, which has 17 years trading in the market. Other funds operating in the market 16 years to the Allianz penzijní fond that offers its clients 14 years and AEGON

Penzijní fond which is on the Czech market only four years. Long tradition can strengthen our market position, gaining more experience in the investment opportunity to gain reputation with the public.

<b>Pension Fund</b>	<b>Duration of action (in years)</b>
AEGON Penzijní fond, a.s.	4
Allianz penzijní fond, a.s.	14
AXA penzijní fond, a.s.	17
ČSOB Penzijní fond Progres, a.s.	16
ČSOB Penzijní fond Stabilita, a.s.	17
Generali penzijní fond, a.s.	16
ING Penzijní fond, a.s.	16
Penzijní fond České pojišťovny, a.s.	16
Penzijní fond České spořitelny, a.s.	16
Penzijní fond Komerční banky, a.s.	17

Table No. 16: Comparison of time of exposure of pension funds in the Czech market (2011)

Source: [39 - 43, 45, 47, 49 - 51], the actual processing

### **Comparison of the number of investors who put their money into individual funds**

The following table lists the number of client funds, which amounted to the individual funds in 2011. This table indicates that most clients have Penzijní fond České pojišťovny, that is 1 158 000 people. The second largest pension fund in the number of clients is Penzijní fond České spořitelny with 926 000 persons. The third order cast AXA penzijní fond with 479 000 clients. Another sequence found in the table. An interesting fact is that the funds in the table stands for the last three places, was recently reported high growth in the number of clients. These are funds Allianz penzijní fond, AEGON Penzijní fond and Generali penzijní fond.

<b>Pension Fund</b>	<b>Number of clients</b>	<b>Position</b>
AEGON Penzijní fond, a.s.	116 000	<b>9</b>
Allianz penzijní fond, a.s.	193 000	<b>8</b>
AXA penzijní fond, a.s.	479 000	<b>3</b>
ČSOB Penzijní fond Progres, a.s.	306 000	<b>7</b>
ČSOB Penzijní fond Stabilita, a.s.	424 000	<b>6</b>
Generali penzijní fond, a.s.	61 000	<b>10</b>
ING Penzijní fond, a.s.	413 000	<b>5</b>
Penzijní fond České pojišťovny, a.s.	1 158 000	<b>1</b>
Penzijní fond České spořitelny, a.s.	926 000	<b>2</b>
Penzijní fond Komerční banky, a.s.	498 000	<b>4</b>

Table No. 17: Comparison of the number of clients by pension funds, rounded to the nearest thousand. (2011)

Source: [53], the actual processing

### **Comparison of profit**

Another table was created based on financial results for the third quarter of 2011. This table shows how high is the profit of pension funds. The highest profit is 655 million, which has Penzijní fond České pojišťovny, the second highest profit of 582 million active Penzijního fondu Komerční banky. The third placed Penzijní fond České spořitelny with the economic result of 486 million. Profit affects many factors such as number of participants in pension plans and the amount of your investment, profitability etc.

<b>Pension Fund</b>	<b>Earnings (in millions of CZK)</b>	<b>Position</b>
AEGON Penzijní fond, a.s.	25,50	<b>9</b>
Allianz penzijní fond, a.s.	259,00	<b>7</b>
AXA penzijní fond, a.s.	451,00	<b>4</b>
ČSOB Penzijní fond Progres, a.s.	54,40	<b>8</b>
ČSOB Penzijní fond Stabilita, a.s.	298,00	<b>6</b>
Generali penzijní fond, a.s.	20,00	<b>10</b>
ING Penzijní fond, a.s.	359,59	<b>5</b>
Penzijní fond České pojišťovny, a.s.	655,00	<b>1</b>
Penzijní fond České spořitelny, a.s.	486,00	<b>3</b>
Penzijní fond Komerční banky, a.s.	582,00	<b>2</b>

Table No. 18: Comparison of profit in million CZK (2011)

Source: [53], the actual processing

### **The minimum deposit**

From the following table to list the minimum monthly deposit is the same for all pension funds, in contrast to mutual funds. Planholders must put into the pension fund every month at least CZK 100, the upper limit is not restricted.

<b>Pension Fund</b>	<b>Minimum deposit (in CZK)</b>
AEGON Penzijní fond, a.s.	100
Allianz penzijní fond, a.s.	100
AXA penzijní fond, a.s.	100
ČSOB Penzijní fond Progres, a.s.	100
ČSOB Penzijní fond Stabilita, a.s.	100
Generali penzijní fond, a.s.	100
ING Penzijní fond, a.s.	100
Penzijní fond České pojišťovny, a.s.	100
Penzijní fond České spořitelny, a.s.	100
Penzijní fond Komerční banky, a.s.	100

Table No. 19: Comparison of minimum investment by pension funds' (2011)

Source: [54], the actual processing

## Structure of portfolio funds

The following table is prepared for the third quarter of 2011. This table is used to compare the location of the funds of pension funds. Funds of funds can be put into bonds, equities, equity funds, real estate or are held in the accounts, etc. The volume of the individual components of the portfolio is in the table expressed in %. Of all the pension funds into bonds following a percentage of its resources most ČSOB Penzijní fond Stabilita, equities and real estate AXA penzijní fond in units Česká spořitelna, Česká spořitelna accounts also. The structure of the portfolio is important because it significantly affects the value for money of pension.

Pension Fund	Placement of pension funds in %					
	Total debt securities	Share	Units	Property	Money in accounts	Other
<b>AEGON</b>	87,61	0,00	0,00	0,00	3,00	<b>9,40</b>
<b>Allianz</b>	95,10	0,00	1,80	0,00	3,00	0,10
<b>AXA</b>	79,11	<b>1,64</b>	5,14	<b>4,91</b>	6,10	3,10
<b>ČSOB Progres</b>	94,16	1,48	0,00	0,04	1,07	3,25
<b>ČSOB Stabilita</b>	<b>95,40</b>	0,92	0,00	0,00	1,22	2,46
<b>Generali</b>	85,14	0,15	2,63	0,24	8,61	3,23
<b>ING</b>	93,73	0,00	0,00	0,00	4,44	1,83
<b>Česká pojišťovna</b>	88,85	0,21	3,47	0,00	5,74	1,72
<b>Česká spořitelna</b>	75,45	0,11	<b>7,83</b>	0,00	<b>16,18</b>	0,43
<b>Komerční banka</b>	90,30	0,00	0,00	0,00	7,40	2,30

Table No. 20: Comparison of the portfolio structure of pension funds (2011)

Source: [53], the actual processing

## Performance funds

The performance of pension funds is expressed over a period of 10 years, two tables that display the numerical values given in % performance especially in individual years and calculated the average performance in 10 years. The graph showing the total assessment, which occurred for each year within 10 years, is subsequently. Assessment results for 2011 are not in these tables or the graph, since for most funds this result is not yet known. General Meetings, which decided the outcome of this, usually even not meeting. For this reason it is not yet possible to compare the value for 2011 between the funds.

The table shows the percentage of return on funds in certain years, for a period of 10 years. The table can be seen that the most stable, Allianz penzijní fond, which is stabilized in recent year's thanks largely to its large investments in bonds, not less than 3 % appreciation in contrast to others. Most of these funds (exceptions are Allianz penzijní fond, AEGON Penzijní fond, Generali penzijní fond) in 2008 dropped his appreciation to the level of 0.58 - 0.00 %. This decrease was mainly due to among other things, the impact of the crisis. Since 2008, the pension funds to increase investment in bonds due to their stability. Although the impact of the crisis manifested itself even in these investments does not have such large consequences. AEGON penzijní fond in 2008 faced a crisis with the highest appreciation. As a newly starting pension fund attributed the high appreciation of the participants in pension plans even though they came to assess the losses and other funds amounted to 0 %. The main reason for this step was to obtain new members and employers.

	AEGON PF	Generali PF	Allianz PF	PF České spořitelny	PF České pojišťovny	ČSOB PF Progres	ČSOB PF Stabilita	ING PF	AXA PF	PF Komerční banky
2010	2,11	2,10	3,00	2,34	2,00	1,04	1,50	2,14	1,47	2,23
2009	2,10	2,40	3,10	1,28	1,20	1,00	1,40	0,10	2,00	0,24
2008	3,50	2,00	3,00	0,40	0,20	0,02	0,05	0,04	0,00	0,58
2007	4,50	4,10	3,00	3,10	2,40	2,40	2,40	2,50	2,20	2,30
2006	0,00	3,74	3,11	3,04	3,30	2,30	2,80	3,60	2,50	3,00
2005	0,00	3,81	3,00	4,03	3,80	5,00	4,00	4,20	3,70	4,00
2004	0,00	3,00	3,00	3,74	3,50	5,30	4,30	2,50	3,10	3,50
2003	0,00	3,00	3,00	2,64	3,10	4,30	2,30	4,00	3,36	3,40
2002	0,00	4,10	3,71	3,50	3,20	4,26	3,00	4,00	3,41	4,63
2001	0,00	4,60	4,36	3,80	3,80	3,90	3,20	4,80	4,25	4,40

Table No. 21: Comparison of assessment of the pension fund for 10 years in % (2001 - 2010)

Source: [33], the actual processing

The following table shows the calculated average value fund, which is expressed in %, for 10 years. This table clearly shows that the three best performing funds are



Generali penzijní fond with the performance of 3.29 %, Allianz penzijní fond with 3.23 %, ČSOB Penzijní fond Progres with 2.95 %.

	AEGON PF	Generali PF	Allianz PF	PF České spořitelny	PF České pojišťovny	ČSOB PF Progres	ČSOB PF Stabilita	ING PF	AXA PF	PF Komerční banky
Average for 10 years	1,22	3,29	3,23	2,79	2,65	2,95	2,50	2,79	2,60	2,83

Table No. 22: Comparison of the average value of pension funds in 10 years in % (2001 - 2010)  
Source: [33], the actual processing

The graph shows the color value of each year, which reflects the sum value in 10 years. The sum of return on funds is the most powerful: Generali penzijní fond with the performance of 32.85 %, Allianz penzijní fond with 32.28 %, ČSOB Penzijní fond Progres with 27.88 %.

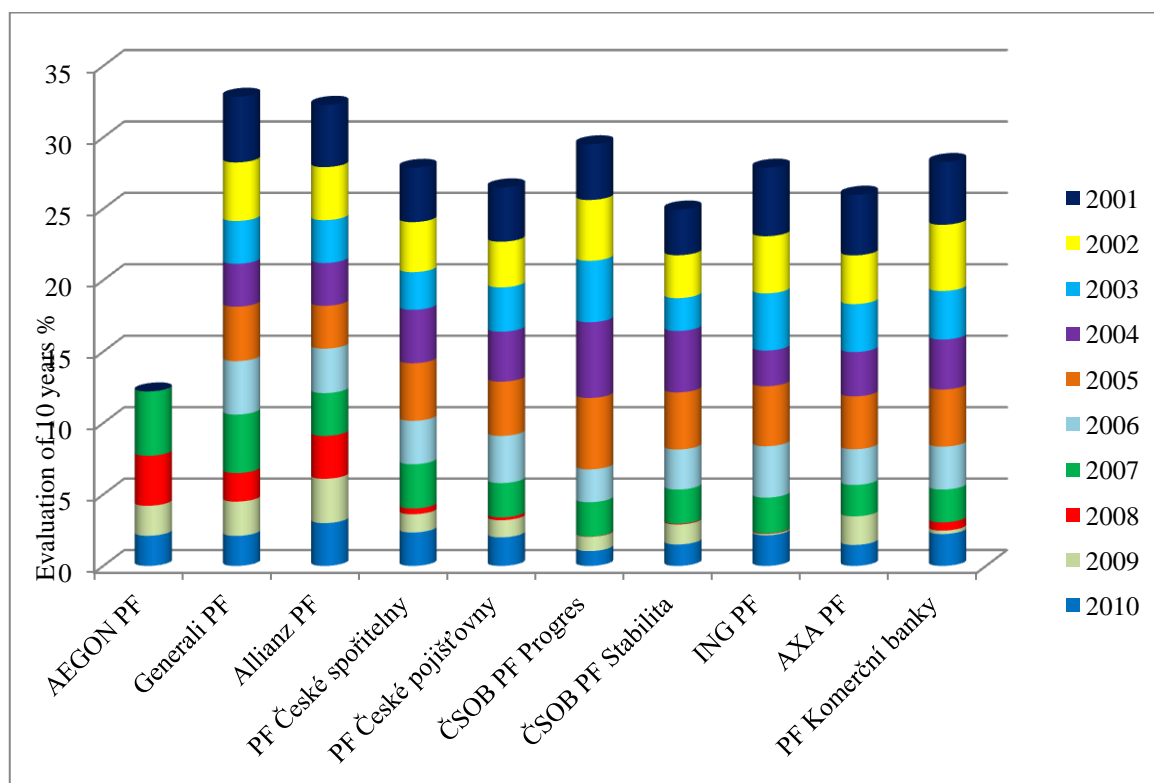


Chart No. 25: Comparison of assessment of the pension fund for 10 years in % (2001 - 2010)  
Source: [33], the actual processing

## **Result comparison of pension funds**

AEGON Penzijní fond, a.s. – It is the youngest of pension funds operating in the Czech Republic. The graph and table indicating the performance of the last ten years seems to be a fund with the lowest evaluation. Taking into account but that has only four years and if the calculated performance for these four years, the outcome is clear that AEGON Pension Fund is a fund with the third highest average valuation, which amounts to 3.05 %. Bonds in its portfolio consist of 87.6 %. In just four years he managed to get 116 000 participants in pension plans.

Allianz penzijní fond, a.s. - Is the most stable of all komparovaných funds. For the reporting period this fund not has less than 3 % appreciation. Its average performance for mid-day for ten years was 3.23 % in the 2008 crisis and after the assessment still holds 3 % or more. Before the crisis, its value ranged from 3 % to 4.36 %. The bonds in the portfolio of the fund amounted to 95.10 %. It operates insurance and 14 years for him to pay 193 000 participants.

AXA penzijní fond, a.s. - A fund whose average performance over the past 10 years is low, is actually the second lowest of all funds with a value reached 2.6 %. Since the beginning of the period to 2007 this fund had a value almost always downward trend from 4.25 % to 2.20 %. The crisis in its evaluation as a single dropped to 0 %. In 2009, while jumped to 2 %, but in the year 2010 again decreased to 1.47%. Bonds in its portfolio, only occupy 79.11 %, the fund is the second lowest share of bonds in the portfolio. It invests in all but the most pension funds in real estate and 4.91 %. It is one of the oldest fund, has been in operation for 17 years, has 479 000 clients, which ranked as the third fund with the highest number of participants in pension plans.

ČSOB Penzijní fond Progres, a.s. - Evaluate the performance of a ten-year period, the fund belonged to the powerful funds, from the beginning of his performance soared, the value peaked in 2004 with a value of 5.3 % in 2005 it was 5 %, following years experienced a significant decline in 2.3 % and 2.4 %. In the crisis year 2008, but its value fell to 0.02 % and the following years he did not too well. In 2009, the evaluation performed for only 1 % in 2010 to just 1.04 %. The bonds in the portfolio of the Fund were 94.16 %. The market has 16 years of age and the number of clients reached 306 000.

ČSOB Penzijní fond Stabilita, a.s. - If we judge the performance of the last 10 years, shows us that the fund for all funds has the lowest average performance of 2.50 %. Since the beginning of the period until the crisis period performance of the fund has fluctuated between 2.3 % to 4.3 %. In 2008, the crisis marked by the fund amounted to only 0.05 % appreciation in 2009 performed his appreciation to 1.4 % in 2010 to 1.5 %. Its portfolio consists of bonds 95.4 %. One of the oldest funds, operating for 17 years and manages the accounts of 424 000 participants.

Generali penzijní fond, a.s. - This fund is under consideration of all funds over the past 10 years the most powerful and its average value amounted to 32.85 %. The crisis in 2008 reached 2 % and appreciation for other years exceeded 2 %. By 2008, the return on this fund ranged from 3 % to 4.6 %. Bonds in its portfolio accounted for 85.14 %. Although Generali Pension Fund operates on the market for 16 years, manages accounts for only 61 000 participants in pension plans, the lowest number of total pension fund under consideration.

ING Penzijní fond, a.s. - Belongs to the median performance of the funds, its average value over a period of ten years was 2.79 %. Since the beginning of until 2007 its value has fluctuated between 2.5 % to 4.8 %. Crisis year for him meant a decline in value to 0.04 % in 2009 following the evaluation slightly increased to 0.1 % in 2010 rose to 2.14 %. Bonds in its portfolio consists 93.73 %. It amongs to funds with long-term competence 16 years, has won 413 000 participants in pension plans.

Penzijní fond České pojišťovny, a.s. - When evaluating the performance over the last decade is the finding that this fund is the third worst of all assessed funds, has an average value 2.65 %. While in 2006 its value always exceeded 3 % in 2007 fell to 2.4 % in 2008 fell to 0.20 % in 2009 amounted to 1.2 % in 2010 performed at 2 %. The portfolio consisted of 88.85 % bonds. Pension concludes with clients for 16 years. Regarding the number of clients is the most successful of all funds, manages accounts for 1,158 million participants.

Penzijní fond České spořitelny, a.s. - Are among the funds with an average performance with the evaluation of 2.79 % over the ten-year period. By 2007, its performance varied with slight variations between 2.64 % to 4.03 %. In times of crisis, in 2008 there was a fall up to 0.4 % the following year performed evaluation of the fund to 1.28 % in 2010

increased up to 2.34 %. The bonds in the portfolio consisted of 75.45 %, 7.83 % units and money in the accounts of 16.16 %. Pension Fund of the Czech Savings Bank has been working 16 years in the number of pension is the second largest fund, as managed accounts for 926,000 clients.

Penzijní fond Komerční banky, a.s. - Looking at the average performance of pension funds for the ten-year period, this fund belongs to those with an average value of 2.83 %. By 2006, its value ranged between 3 % as 4.63 % since 2007 and it began to decline to 2.3 % in 2008 to 0.58 % in 2009 to 0.24 % even. Only in 2010 was favorable in this respect and appreciation rose to 2.23 %. The portfolio was composed of 90.3 % bonds, the fund has 17 years and has 498 000 participants in pension plans.

## **4 Comparison of model cases in funds investing in the Czech Republic**

The comparison was chosen two products offered by the Czech Savings Bank. For mutual funds, the choice fell on ISČS Sporobond because the fund is high risk, performance is increasing without major fluctuations. Second of the Fund is Pension Fund of the Czech Savings Bank. Precisely this pension fund was chosen, the comparison of two products from the same company.

The difference when investing in mutual and pension funds is apparent, whether it be the final increase in deposits, the choice of their invested funds and time investment. An investor who puts his deposit into mutual funds is hampered considerably shorter investment horizon as ISČS Sporobond save at least 2.5 years to become an advantageous investment. This period is generally short compared to pension schemes. Pension insurance can be arranged from 18 years, so that was paid to retire soon, but in 60 years of age party. Members and employers are bound to save their funds on a regular basis since the signing of contracts for many years until retirement, at least until the age of 60. The participant of the savings deposit can choose, but only if it is stated in the contract. By the end of February 2012 to negotiate pension under the original conditions in which the evaluation of the fund could drop to minus numbers. From that date the newly concluded contract governed by the changed rules, and pension funds, according to them can also be put in a minus. For mutual funds, it is common that the client can be idle. [25, 62]

In order to be advantageous compared to individual products for investors, have been identified basic issues that must meet both funds:

- CZK 600 monthly contribution by the investor,
- filling time of 10 years.

Two test cases of pension funds investing in different companies are compared the next part of this comparison. The comparison of model cases were selected funds with the highest performance. These include Allianz penzijní fond and Generali penzijní fond.

#### 4.1 Comparison of two model case of investing in pension and mutual fund offered by the same company

In this section, the comparison of two model cases, which offers the same company, which the Czech Savings Bank. Test cases are: ISČS Sporobond mutual fund and pension fund Czech Savings Bank.

##### ISČS Sporobond

When inserting CZK 600 monthly investor naspoří 10 years 72 000 CZK. In 3 % of the expected average value of the deposit should be in 10 years, save up the total amount of CZK 84 054.

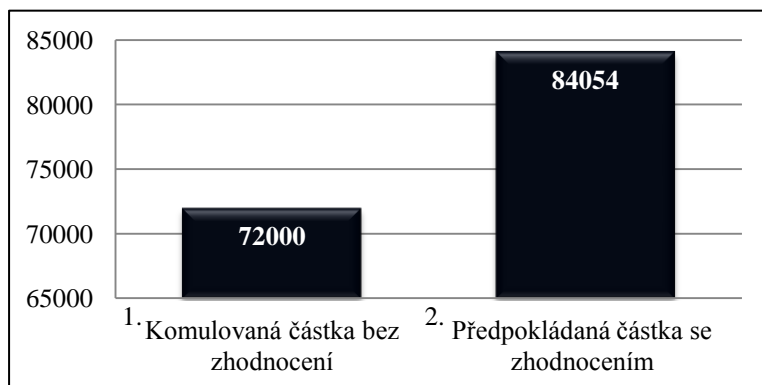
Important data used to calculate the yield on savings fund ISČS Sporobond are listed in the table.

Investment period (years)	10
The monthly contribution (CZK)	600
Evaluation (in % per annum)	3

Table No. 23: Basic data (2012)

Source: [72], the actual processing

The following chart is a forecast for the period of account after 10 years of investing. The graph shows the difference between the cumulative amount that the client into the fund for 10 years and put the expected value (3 %) with the cumulative amount of the investor.



Legend: 1. cumulative amount of no evaluation, 2. the estimated amount of evaluation

Chart No. 26: Forecast of account in CZK for 10 years (2012)

Source: [72], the actual processing

Evaluation to determine that the expected yield for the investor after 10 years with an average of 3 % amounts to 12 054 CZK.

### Penzijní fond České spořitelny

If the monthly amount from the participant's contribution amounted to CZK 600 for 10 years, so would the participant client has saved 72 000 CZK. Assuming a 2.5 % appreciation and state contributions, which amounted to CZK 150 per month, the amount saved rose to 102 091 CZK.

The following table shows the forecast investment in the Penzijní fond České spořitelny for 10 years.

1. Vstupní informace - výše měsíčního příspěvku			
2. Výše měsíčního příspěvku (Kč)		Převedené prostředky (Kč)	
3. Účastník a 3. osoba	600	Účastník a 3. osoba	0
Zaměstnavatel	0	Zaměstnavatel	0
4. Státní příspěvek	150	Státní příspěvek	0
5. Předpoklad zhodnocení (%)	2,5		
6. Doba placení (roky)	10		
7. Výstupní informace - Výpočty jsou pouze orientační			
8. Celkový stav účtu (Kč)		13. Dávky po zdanění	
9. Příspěvky účastníka a 3. osoby	72 000	14. Základ pro penzi*	102 091
Příspěvky zaměstnavatele	0	15. Jednorázové vyrovnání	100 277
10. Státní příspěvky	18 000	16. Odbytné	80 222
11. Výnosy	12 091		
12. Celkový stav účtu	102 091		

Table No. 24: Forecast for 10 years (2012)

Source: [73]

Legend: 1. Input - the amount of monthly contributions, 2. The monthly contribution (CZK), 3. participant and a third person, 4. State contribution, 5. Assumption appreciation (%), 6. Time payment (years), 7. Output information - Calculations are indicative only, 8. The total account balance (CZK), 9. Participant contributions and third party, 10. State contributions, 11. Revenues, 12. The total account balance, 13. Benefits after tax, 14. Basis for retirement, 15. One-time settlement, 16. Pay-off

Another chart clearly shows the status of the account where the amount saved, whether the contributions made by the participant or the state or the proceeds. When adding these items reach a final state representing the amount in the account, which amounts to 102 091 CZK.

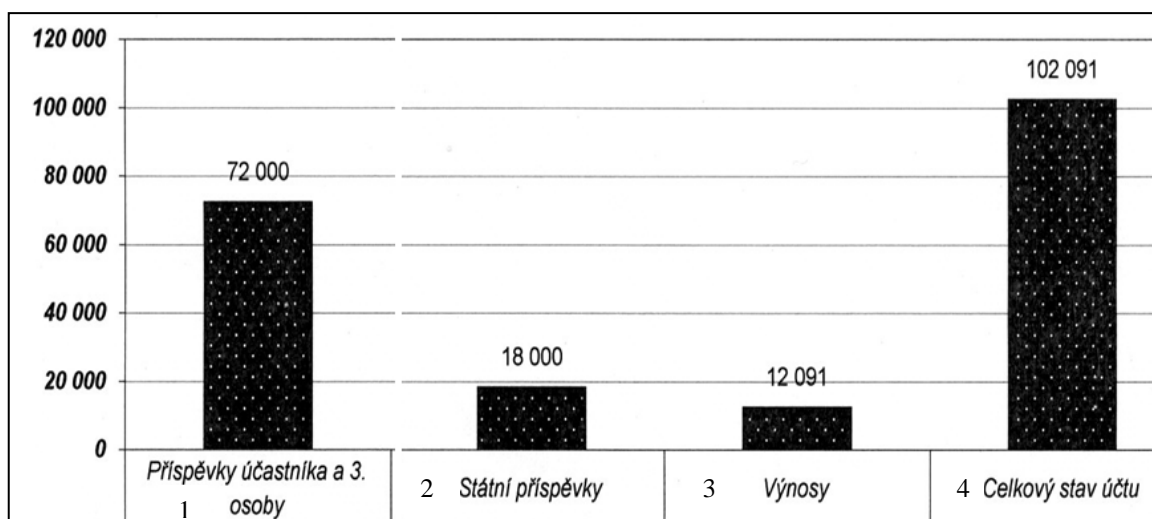


Chart No. 27: Estimated total account balance in CZK for 10 years (2012)

Source: [73]

Legend: 1. Participant contributions and third party, 2. State contributions, 3. Revenues, 4. The total account balance,

The evaluation is found that the expected yield for the participant after 10 years with an average 2.5 % appreciation is calculated from the party and state posts which is 12 091 CZK. The difference between the overall state of the account and saved-up contributions is 30 091 CZK.

### The result of comparison

After 10 years, regular investments, the investor should ISČS Sporobond the amount of CZK 84 054 and its yield amounted to 12 054 CZK.

For 10 years the Regular Savings Penzijní fond České spořitelny was a participant would yield 12 091 CZK. He would state contributions in the amount of CZK 18 000, so the savings would be 10 years earned him the total amount of CZK 30 091.

When compared with revenues of both companies, we find that their values are almost the same. The participant gets a pension the amount of CZK 18 000 and higher contributions are currently provided by the state for pension insurance. The result of comparison is that the clients for Česká spořitelna are clearly more profitable to save their money into the pension fund than in ISČS Sporobond. Effectiveness is questionable, however, as the money from ISČS Sporobond can get money much sooner and easier.



## 4.2 Comparison of two model case of investing in pension funds

This section compares the two test cases of pension funds: Allianz penzijní fond and Generali penzijní fond. These funds were selected by the finding that these two funds are for a period of ten years the most powerful ones.

### Allianz penzijní fond

During regular monthly contribution of CZK 600 for 10 years, so would the participant client has saved 72 000 CZK. If the anticipated appreciation of 3.04 % and state contributions would amount to CZK 150 per month, amount saved would rise to 104 798 CZK. Graph also indicates that the participant pension at Allianz penzijní fond should be entitled to a pension for life payable monthly in the event that this is a man of 628 CZK, 566 CZK for women.

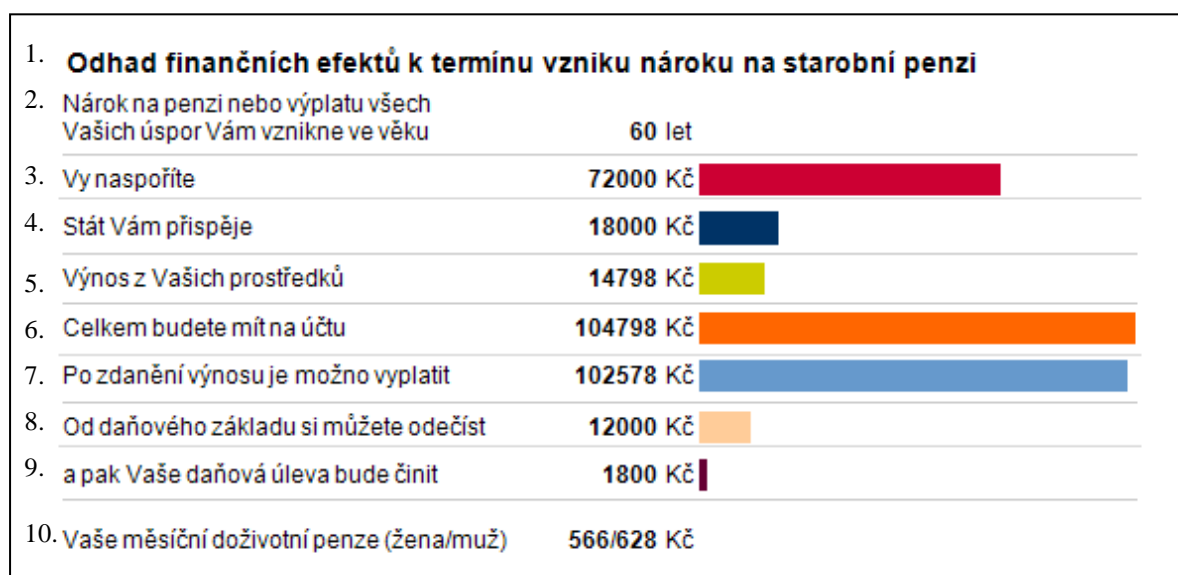


Chart No. 28: Estimated financial effects of the date of entitlement to state pension at Allianz penzijní fond (2012)

Source: [63]

Legend: 1. Estimated financial effects of the date of the retirement pension, 2. Entitlement to payment of your pension or savings will arise at the age of 60 years, 3. You have to save money 72 000 CZK, 4. The state will contribute 18 000 CZK, 5. Return on your contributions 14 798 CZK, 6. Total you have in the account 104 798 CZK, 7. Total you have in the account 102 578 CZK, 8. Since the tax base, we can subtract 12 000 CZK, 9. and then tax relief will be 1 800 CZK, 10. Your monthly lifetime pension will be (man/woman) 566/628 CZK

### Generali penzijní fond

If a regular monthly contribution is CZK 600 for a period of 10 years, the client has saved the party to 72 000 CZK. If the anticipated appreciation of 2.87 % and state contributions

will amount to CZK 150 per month, amount saved should reach CZK 103 902. The graph below can be seen that the lifetime pension planholders at Generali penzijní fond should be a month in men 623 CZK and women 561 CZK.

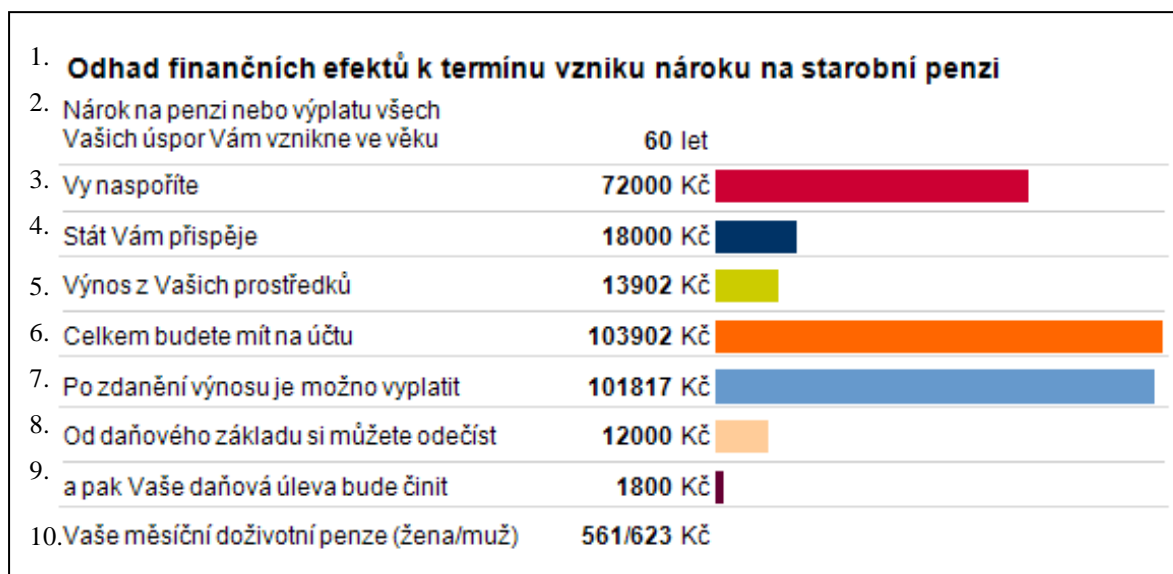


Chart No. 29: Estimated financial effects of the date of entitlement to state pension at Generali penzijní fond (2012)

Source: [63]

Legend: 1. Estimated financial effects of the date of the retirement pension, 2. Entitlement to payment of your pension or savings will arise at the age of 60 years, 3. You have to save money 72 000 CZK, 4. The state will contribute 18 000 CZK, 5. Return on your contributions 13 902 CZK, 6. Total you have in the account 103 902 CZK, 7. Total you have in the account 101 817 CZK, 8. Since the tax base, we can subtract 12 000 CZK, 9. and then tax relief will be 1 800 CZK, 10. Your monthly lifetime pension will be (man/woman) 561/623 CZK

### The result of comparison

In conclusion, it is more convenient for the participant fund Allianz. Differences in the results of the two funds are very small. Allianz pension fund participant will have after 10 years of saving account the total amount of CZK 896 higher. Likewise, the amounts will be higher for a pension for life but only slightly. Men and women should also be well received by CZK 5 per month more.

## **5 Design of optimal investment**

The purpose of this chapter is to express the optimum method of investing money in mutual funds and pension funds.

Open-end mutual funds are a type of funds that investors often choose to invest their funds. One reason is simplicity, which is reflected in the fact that investors entrust their money and worries in the hands of specialists - managers and does not need to have experience in investing. Does not have to worry about selecting appropriate and profitable securities, devote much time to obtain of the necessary information. Responsible for investment decisions is abandoning professionals. This type of investment provides investors and other benefits. An investor can invest in this way a relatively small amount of funds at the moment is free. Transaction and information costs are substantially lower, because funds have the benefit of merchandising. They have easier access and greater opportunity to participate in a wide range of instruments and market risk is more evenly distributed. Ensure security of investment is to greater the imposition of a state-regulated institutions. For open-end mutual funds is limited by the number of shareholders and is therefore easy to buy units of these funds. In addition, the fund must meet the requirements of shareholders on redemption of Units not later than one month from the date of the shareholder's request. The investor then quickly gets saved to your finances if need be. This is an indisputable advantage over saving funds into pension funds, which to be reckoned with investing on a long number of years. The decision to invest in mutual funds, the investor can choose from a wide range of funds that differ from each other. In the Czech Republic is divided according to investment funds focused on equity funds, bond funds, mixed funds, money market funds, funds of funds and guaranteed funds.

Of the investment in pension funds have recently expressed interest in a large number of citizens of the Czech Republic. Although investing in these funds is very lengthy matter, even decades, for those interested in are appealing especially for the provision of state benefits, but also to the contributions from the employer or other third parties. With these contributions of pension gains in the final yield higher than any other method of investing. Another considerable advantage is the possibility of reducing the tax base.

Optimal method of investing is based on the previous chapters. Important factors influencing the selection of the optimal method of investing are value or performance of the fund, minimum investment horizon, risk fund, fund of tradition associated with credibility, the minimum initial deposit, etc.

## **5.1 Design of optimal investment in mutual funds**

The mutual funds were equity compares the two, two mixed and two bond funds, always one of the IKS and the other from ISČS. For comparison, I chose IKS Akciový PLUS, ISČS Sporotrend OPF, IKS Dluhopisový PLUS, ISČS Sporobond, IKS Balancovaný – dynamický and ISČS Fond řízených výnosů.

IKS Akciový PLUS is Fund with fluctuating performance with deep declines in the last 10 years hold in minus figures. Riskiness of the fund is high and the lowest number of investors from the funds under consideration. Capital investment is high and long-term investment horizon. ISČS Sporotrend OPF is a fund that has very good performance, but with considerable fluctuations. At present, the past year downward trend. The average performance of the fund over the past 10 years is 51.41 %. The funds under consideration have the longest tradition. Riskiness of the fund is high and the number of investors is low. Initial investment is low and the investment horizon is long-term fund. Mutual comparison of the two selected equity funds have shown that investors are far better investment in the fund ISČS Sporotrend OPF, because its performance is much higher. Another advantage for investors is also a low initial deposit.

IKS Dluhopisový PLUS is a fund in which performance is not high but still rising. Its average performance over the past 10 years reached 23.66 %. Investor undergoing is moderate risk. The number of investors is high despite the high initial investment. The investment horizon is medium. ISČS Sporobond OPF has good performance with minimal fluctuations are still rising. For the past 10 years this fund averaged 35.92 %. ISČS Sporobond OPF compared have the second oldest fund. Investors are undergoing low risk. The number of investors does not cover the small funds, and compared them to third place. Minimum initial investment is small, medium-term investment horizon. Comparing the two bond funds, I found that both funds have a similar increasing trend with a slight variation of the curve in the graph showing the performance. The OPF ISČS Sporobond

curve, however, varies moderately and at her rise is quicker. The fund thus achieves higher performance and is therefore to invest more favorable for investors.

IKS Balancovaný – dynamický is a fund that has very high performance but very volatile. Its average performance over the past 10 years reached the highest assessed value of all funds and 90, 41 %. It operates on the Czech market for 13 years. The risk is high and the low number of investors. Pertain to among funds with high upfront investment and long-term investment horizon. ISČS Fond řízených výnosů is considered the last of mutual funds. His performance is quite low, but stable, has a rising trend, fluctuations are not common, they are only slight declines. The average performance over the past 10 years amounted to only 15.46 %. The risk is with him all the funds considered low. The initial investment is small and medium-term investment horizon. After comparing the two mixed funds I would clearly opted for a better investment in the IKS Balancovaný – dynamický for its high performance in spite of fluctuations which occur in the performance of the fund. ISČS Fond řízených výnosů is stable but its performance is still slightly despite an upward trend rather low.

Comparisons revealed that the selected stock and bond funds have higher performance both funds Česká spořitelna, ISČS Sporotrend OPF and ISČS Sporobond. Both komparovaných mixed funds is more powerful capital fund of Investiční kapitálové společnosti KB, which is fund IKS Balancovaný – dynamický. When comparing the performance of all six selected mutual funds showed the best performance over the past 10 years reached IKS Balancovaný – dynamický and 90.41 % well farmed fondy ISČS Sporotrend OPF performance with 51.41 % and ISČS Sporobond performance with 35.92 %. To be chosen the best fund to invest small investors, it was necessary to consider other criteria. Using the comparison, I chose two funds as the best investment for each different type of investors.

The assessed recommend mutual funds for investors who are not afraid of risk and go for the high expected returns, as the most dynamic IKS Balancovaný dynamický it has a performance far exceeding the other compares the funds. The fund is designed for those who intend to fully entrust their investments into the hands of portfolio managers, and allow for partial volatility in share value, although the fund trades with high-quality stocks and shares, which have the potential to yield interesting. It is for this fund should also allow for long-term investment horizon of at least 5 years, due to short-term

fluctuations in income. The amount of initial deposits them in a single investment of at least 5000 CZK, 500 CZK regular investing. The amount of each subsequent deposit must then be 500 CZK. This fund has a long tradition on the Czech market for 14 years.

For more cautious investors seeking security is the optimal choice fund ISČS Sporobond, which belongs to the conservative bond funds. Performance is good with minimal variations, is still rising. This fund is stable with low risk. Its investments focus on the quality of domestic government bonds and corporate bonds, in the case of a potential increase in profits and purchases of foreign bonds. Most of the bonds in which Sporobond saves your investment is hedged against currency risk. Its tradition is long enough, and many investors creates confidence. With its medium-term investment horizon of 3 years and is suitable for clients who want to invest long term and need to have their funds available in the foreseeable future. The initial minimum investment is CZK 100 and the fee for purchase of units is 1 %.

## **5.2 The proposed optimal method of investing in pension funds**

In this paper, I compared all pension funds, which currently operates on the Czech market. Pension funds are very similar, because their activity is controlled by the same laws and regulations. The most important criterion for comparing is the performance of pension funds, taking stock of pension funds over the last ten years in total, by year and particularly in recent years.

Generali penzijní fond, a.s. - This fund is under consideration of all funds over the last ten years the most powerful and its average value amounted to 3.29 %. The crisis in 2008 reached 2 % and appreciation for other years exceeded 2 %. By 2008, the return on this fund ranged from 3 % to 4.6 %. Although Generali penzijní fond operates on the market for 16 years, manages accounts for only 61 000 participants in pension insurance, which is the lowest number of total pension fund under consideration.

Allianz penzijní fond, a.s. - Is the second most powerful pension fund. It is the most stable of all compared funds. For the reporting period is no less than 3 % appreciation. Its average performance for mid-day for ten years was 3.23 % in the 2008 crisis and after the

assessment still holds 3 % or more. Before the crisis, its value ranged from 3 % to 4.36 %. It operates insurance and 14 years for him to pay 193,000 participants.

AEGON Penzijní fond, a.s. - Is the youngest of pension funds operating in the Czech Republic. On the Czech market began AENGON Penzijní fond business in 2007. Taking into account that only has five years to calculate the performance for these years, the outcome is clear that AEGON Penzijní fond is a fund with the third highest average valuation, which amounts to 3.05 %. During this relatively short time was able to get 116 000 participants in pension plans.

ČSOB Penzijní fond Progres, a.s. - Evaluate the performance of a ten-year period, the fund belonged to the powerful funds, from the beginning of his performance soared, the value peaked in 2004 with a value of 5.3 % in 2005 it was 5 %, following years experienced a significant decline in 2.3 % and 2.4 %. In the crisis year 2008, but its value fell to 0.02 % and the following years he did not too well. In 2009, the evaluation performed for only 1 % in 2010 to just 1.04 %. The market has 16 years of age and the number of clients reached 306 000.

Penzijní fond Komerční banky, a.s. - The average performance for the ten-year period, this fund belongs to those with an average value of 2.83 %. By 2006, its value ranged between 3 % as 4.63 % since 2007 and it began to decline to 2.3 % in 2008 to 0.58 % in 2009 to 0.24 % even. Only in 2010 was favorable in this respect and appreciation rose to 2.23 %. The Fund has 17 years and has 498,000 registered members and employers.

Penzijní fond České spořitelny, a.s. - Are among the funds with an average performance with the evaluation of 2.79 % over the ten-year period. By 2007, its performance varied with slight variations between 2.64 % to 4.03 %. In times of crisis, in 2008 there was a fall up to 0.4 % the following year performed evaluation of the fund to 1.28 % in 2010 increased up to 2.34 %. He is 16 years and in the number of pension is the second largest fund, manages accounts for 926,000 clients.

ING Penzijní fond, a.s. - Belongs to the median performance of the funds, its average value over a period of ten years was 2.79 %. Since the beginning of 2007 its value has fluctuated between 2.5 % as 4.8 %. Crisis year for him meant a decline in value to 0.04 % in 2009

following the evaluation slightly increased to 0.1 % in 2010 rose to 2.14 %. Among funds is with long-term competence 16 years, has won 413 000 participants in pension plans.

Penzijní fond České pojišťovny, a.s. - Assessment of performance over the last decade is the finding that this fund is the third worst of all assessed funds, has an average value 2.65 %. While in 2006 its value always exceeded 3 % in 2007 fell to 2.4 % in 2008 fell to 0.20 % in 2009 amounted to 1.2 % in 2010 performed at 2 %. Regarding the number of clients gained during 16 years of its scope, is the most successful of all funds, managed accounts for 1.158 million subscribers.

AXA penzijní fond, a.s. - A fund whose average performance over the last ten years is the second lowest of all funds with a value reached 2.6 %. Since the beginning of the period to 2007 this fund had a value almost always downward trend from 4.25 % to 2.20 %. The crisis in its evaluation as a single dropped to 0 %. In 2009, while jumped to 2 %, but in the year 2010 again decreased to 1.47 %. It is one of the oldest fund, has been in operation for 17 years, has 479 000 clients, which ranked as the third fund with the highest number of participants in pension plans.

ČSOB Penzijní fond Stabilita, a.s. - If we judge performance over the last ten years, shows us that the fund for all funds has the lowest average performance of 2.50 %. Since the beginning of the period until the crisis period performance of the fund has fluctuated between 2.3 % to 4.3 %. In 2008, the crisis marked by the fund amounted to only 0.05 % appreciation in 2009 performed his appreciation to 1.4 % in 2010 to 1.5 %. One of the oldest funds, operating for 17 years and manages the accounts of 424 000 participants.

The pension funds as a recommendation, I chose two appropriate funds and Allianz penzijní fond, a.s. and Generali penzijní fond, a.s. These two funds came from a comparison nevykonnější of all pension funds operating in the CR and from the perspective of assessment for the past 10 years, from the perspective of the last years. In recent years, the youngest of AEGON Penzijní fond, a.s. very well led by All these 3 funds also face a crisis in 2008 and beyond. Their performance does not drop below 2 %, which can not be said for other funds that have experienced a deep decline up to the values of 0 %.



As ever it seems to me the most stable Allianz penzijní fond over the period of performance has never fallen below 3 %. Overall evaluation for the past 10 years may be slightly lower than the fund Generali penzijní fond, but its value is highly stable. This is evidenced by the fact that since 2003 despite the crisis in 2008 to the present value of the fund reached values always around 3 % between 2001 and 2002 its value amounted to around 4 %. Allianz penzijní fond is a fund belonging to the funds with the highest proportion of their portfolios in bonds, bonds with him 95 % of the portfolio. This fact also confirms the high stability of the fund. Although this fund is not the oldest, the financial market has been operating for 15 years.

Generali penzijní fond, a.s. the fund, which reached the highest value in the last 10 years and 2.29 %, but its value is only 0.06 % higher than the Fund, Allianz pension fund. Representation of the bonds in the portfolio is at Generali Pension Fund 85 %, which also coincides with the lower stability resulting from the comparison of individual performance in the ten years period. Between 2001 and 2007, the return on this fund ranged from 3 % to 4.6 % in the crisis year 2008 and subsequent years in the valuation stabilized around 2 %. Nevertheless, the Fund for financial market for 17 years, has a high number of participants.

### **5.3 Design of optimal investment model of the selected cases**

In the next section by comparison, I compared the two test cases for different types of investment fund ISČS test cases and two pension funds investing in different companies. For comparison of model cases were set for the same funds two basic points: CZK 600 monthly contribution by the investor and the period of performance for 10 years.

Comparison of model cases Sporobond and Penzijního fondu České spořitelny, I came to the conclusion that income from mutual fund ISČS Sporobond would amount to savings for regular depositing of CZK 600 per month after 10 years the amount of CZK 12 054. For 10 years the Regular Savings Pension Fund of the Czech Savings Bank was a participant would yield 12 091 CZK. He would not even state contributions in the amount of CZK 18 000, so the savings would be 10 years earned him the total amount of CZK 30 091. Comparing the yields of both companies, we find that their values are almost the same. The participant gets a pension the amount of CZK 18 000 and higher

contributions are currently provided by the state for pension insurance. The result of comparison is that the clients for Czech Savings Bank are clearly more profitable to save their money into the pension fund than in ISČS Sporobond. Effectiveness is questionable, however, as the money from ISČS Sporobond client can gain much sooner and easier.

The comparison of two model cases to pension funds, I chose funds with the highest performance. They include Allianz penzijní fond and Generali penzijní fond. At Allianz penzijní fond they would have ten years of saving the amount received CZK 32 798, which is only 896 CZK more than Generali Pension Fund, for which the participant received for the same period and depositing the same amount of CZK 31 902. Slight differences would also be paid on pension benefits. The Allianz Pension Fund participant would receive a monthly pension of a man of 628 CZK, 566 CZK women. Generali penzijní fond would amount men were paid 623 CZK and 561 CZK woman. The difference in monthly benefits paid by pension funds for both men and women amounted to CZK 5. In conclusion, I therefore determined as the optimal solution to invest in the Allianz penzijní fond of all pension funds out of the comparison as the best and most stable. It should be noted however that the differences between Allianz penzijní fond are small.

## **6 Sharp and diagnostic test in the e-learning system**

E-learning is an abbreviation for the concept of electronic learning, which means e-learning. In the literature, this term began at the end of 80 years. In the Czech Republic, e-learning most commonly used definition from Mr. Vagner, which refers to e-learning as an educational process that uses information and communication technologies to create courses of study on the distribution of content, also for communication between students and teachers, is used also control study. There are still a number of other definitions and all expressing the essence of e-learning, which is in effective use of information technologies in educational processes. [65, 68]

E-learning is a process conducive to education, which uses information and communication technologies, particularly computers. Nowadays they are increasingly used in addition to personal and handheld computers and organizers and mobile phones that have internet access. Thus, it is the mobile learning, which is called m-learning. E-learning offers many products that are grouped in the overall system, or may be offered individually. These systems may differ from each other in the complexity of the application. Some are very simple to apply and use, others are considerably more complex. E-learning is used primarily to create courses, communication between students and teachers and other educational purposes such as an electronic library, electronic texts, use of research in the perspective of students and teachers such as the use of modern technologies in teaching. E-learning is a process that describes and addresses the creation of learning materials, distribution, management training and feedback to the e-learning courses. These programs simulate the processes that are a combination of text explanations, animations, videos, diagrams, graphics, and electronic audit tests. Everyone can choose the form most suitable to him. E-learning courses can be divided into two basic categories. Open courses are available for anyone interested in studying in the field. They are as language courses. Closed courses are designed for specific group of students. They can introduce new employees to the new policy, or can be focused on education and hospital staff alike. [64, 66]

The advantage of e-learning systems, for example, it is easy to access learning materials for undergraduate and graduate courses, or even workers who extend the horizon of their professional specialization. The great advantage of e-learning system is also time savings it

brings to users. Thanks to the ease of the time, this type of education is currently widespread and often coveted. It can be used as working people and also people interested in lifelong learning. In addition to individual e-learning systems and widely used by modern companies. E-learning instruction must also deal with various issues relating to ethics, especially issues of copyright, licensing, learning resources, student privacy and the like. One of the negative sources is electronic cheating, with which users must cope with. [67]

For the benefit of e-learning can be considered:

- Reduce costs - rent for classrooms, for procurement of learning materials, teacher salaries, transportation, etc.
- Time independence - the opportunity to be selected as needed for education and leisure, learning rate, type and form of a course, the possibility of repetition of subject matter and verify the knowledge acquired.
- High level of knowledge acquired.
- Same rules for all the knowledge acquired, immediate feedback. [64]

Disadvantages of e-learning are:

- High cost of the necessary computer equipment, control system, payment rate, although other operating costs are minimal.
- For effective use of e-learning is an essential need for continuous training and sufficient motivation to self-education of users [64]

For European Polytechnic Institute, I developed a sharp and a diagnostic test that can be used in e-learning system. In particular, should serve to develop study skills of students in the area of collective investment schemes. Students should make use of these tests to verify their learning skills with particular mutual funds, investment funds and pension funds. The test can also help students to consolidate knowledge already acquired degree. This study program saves students time and therefore this method of study suitable for students studying on distance learning. Sharp and prepared diagnostic test is stored in the Appendix No. 1.

## CONCLUSION

Therefore the majority of citizens of the Czech Republic needs to temporarily store its available funds many are stored in different banks, insurance companies, accounts, etc. A smaller proportion of citizens engage in collective investment schemes. In recent years, interest in investing in funds is gradually increasing. Entrust their money into the hands of portfolio managers-is certainly easier than private investment, provides a more secure investment in terms of unethical practices, higher profitability and better access to individual instruments, including a more diverse range of investment options. The investor is not subject to almost any requirements. Do not follow the situation on the securities markets and exchanges, not even decide what securities to save your money. The greatest interest has recently been shown to invest in pension funds. Although investing in pension funds is long-standing issues for the citizens is particularly attractive for state contributions and also for the possibility of the contributions from the employer, which in the final profit of pension income higher than any other method of investing. The main objective is the regular pension savings for state support and by the time the retirement party the amount saved, which would guarantee a dignified living a life in retirement. Currently, citizens can not find suitable for this purpose form of investing their money than the pension by pension funds.

This thesis gives a detailed introduction to various types of funds, investing in various types of funds, identification of pitfalls and advantages of collective investment schemes.

Investment funds to retail investors do not use too much, because it is in the Czech Republic, only the fund closed type. This work deals with them only marginally.

The mutual funds are now more widely used open-ended mutual funds. Therefore, they work in more detail. The investor has to choose from a wide range of funds from each other quite significantly different. In the CR, the investor can choose from funds allocated by investment focus on money market funds, bond funds, equity funds, mixed funds, funds of funds, property funds and guaranteed funds. In order to decide, it is necessary to determine the criteria under which the funds differ. One of the most important factors that show the diversity of these funds, the value or performance of the Fund, the Fund's

portfolio composition, risk a minimum investment horizon of fondu, fondu traditions associated with credibility, the minimum initial deposit.

The goal of this bachelor lever was selected comparisons of mutual funds and pension funds, as well as model comparisons of selected cases, investing in funds. The aim was to develop the optimum method of investing money in mutual funds and pension funds.

The mutual funds were equity compares the two, two mixed and two bond funds, always one of the IKS and the other from ISČS. Fund was selected IKS Akciový PLUS, ISČS Sporotrend OPF, IKS Dluhopisový PLUS, ISČS Sporobond, IKS Balancovaný – dynamický and ISČS Fond řízených výnosů. Comparisons revealed that the selected stock and bond funds have higher performance both funds České spořitelny, ISČS Sporotrend OPF and ISČS Sporobond. Both komparovaných mixed funds is more powerful capital funds of Investiční kapitálové společnosti KB which is IKS Balancovaný – dynamický. When comparing the performance of all six selected mutual funds showed the best performance over the past 10 years reached IKS Balancovaný – dynamický and 90.41 %, well farmed fondy ISČS Sporotrend OPF performance with 51.41 % and ISČS Sporobond performance with 35.92 %.

The assessment of other criteria evaluated, it appears that the fund IKS Balancovaný – dynamický performance does have a very high but very volatile. On the Czech market for 13 years, but the number of investors is low. The risk is high. It pertains among funds with high upfront investment and long-term investment horizon.

ISČS Sporotrend OPF fund is a very good performance, but with considerable fluctuations over the last year, a downward trend. It has the longest tradition from funds under consideration, but the number of investors is low. It pertains among funds with high risk. Initial investment is low and the investment horizon is long-term fund.

ISČS Sporobond belongs to funds with good performance with minimum fluctuations, which is still rising. It is the second oldest of compared funds, the number of investors does not cover the small funds, and compared them to third place. Investors are undergoing low risk. Minimum initial investment is small, medium-term investment horizon.

The mutual fund is considered to be recommended for adventurous investors who are not afraid of risk and go for the high expected returns, IKS Balancovaný - dynamický, because its performance far exceeds the other compares the funds. The fund is designed for those who intend to fully entrust their investment portfolio in the hands-managers allow partial volatility in share value and intend to invest their money long term.

For more cautious investors looking for security the fond ISČS Sporobond is optimal choice, one of the conservative bond funds. Performance is good with minimal fluctuations and is still rising. This fund is stable with low risk. Most of the bonds in which Sporobond saves your investment are hedged against currency risk. With its medium-term investment horizon meets the clients who want to invest long term and need to have their funds available in the foreseeable future.

Because in recent years increased public interest in saving money into pension funds in the form of supplementary pension schemes are compared all pension funds, which currently operates on the Czech market. Pension funds are very similar, because their activities are governed by the same law and must therefore follow the same rules and regulations. They have the same guidelines for contracting for the amount of participant contributions, the provision of state subsidies and contributions from third parties to the payment of pension benefits. Among them are different administrators, network affiliates, rate of return, which is affected by placing funds in the portfolio, as well as external influences.

The performance is the most important criterion for comparing of pension funds. The assessed value made by the pension funds over the last ten years, overall and in individual years, particularly in recent years and the crisis in 2008. Allianz penzijní fond, Generali penzijní fond and AEGON Penzijní fond reached the highest value. Funds and the majority rated these three in a time of economic crisis in 2008 with his performance dropped to the level of 0.58 % - 0 %.

Most stable of all komparovaných Funds Allianz penzijní fond during the reporting period not less than 3 % appreciation. Its average performance for mid-day for ten years was 3.23 % in the 2008 crisis and after the assessment still holds 3 % or more, before the crisis, its evaluation ranged from 3 % to 4.36 %. The bonds in the portfolio of the fund amounted to 95.10 %. It operates insurance and 14 years for him to pay 193 000 participants.

Generali penzijní fond is under consideration of all funds over the past 10 years the most powerful and its average value amounted to 32.85 %. The crisis in 2008 reached 2 % and appreciation for other years exceeded 2 %. By 2008, the return on this fund ranged from 3 % to 4.6 %. Bonds in its portfolio accounted for 85.14 %. Generali penzijní fond operates on the market for 16 years and manages accounts for 61 000 of pension, the lowest number of total pension fund under consideration.

AEGON Penzijní fond is the youngest of pension funds operating in the Czech Republic. The average performance over the last 10 years appears to be low. Taking into account but that has only 5 years and if the calculated performance for these years, the outcome is clear that AEGON Penzijní fond is a fund with the third highest average valuation, which amounts to 3.05 %. The bonds in his portfolio are 87.60 % and its relatively short existence, he could get 116 000 participants in pension plans.

Regarding the number of pension, in the first place was Penzijní fond České pojišťovny by the number of insurance companies with 1 158 000 participants, followed then Penzijní fond České pojišťovny with 926 000 the number of participants. Their performance would be evaluated, however, gave rather weaker on average to average, the market has been operating for 16 years.

In the next section by comparing two models are compared for the different cases of investment fund type ISČS test cases and two pension funds investing in different companies.

In order to compare the two products are compared from the same company, the choice fell on two products offered by Česká spořitelna. The mutual funds were selected ISČS Sporobond, since it is highly stable, the risk of this fund is not high, performance is increasing without major fluctuations. Second by the Fund is Penzijní fond České spořitelny. The difference when investing in mutual and pension funds is considerable. An investor who puts his deposit into mutual funds is hampered considerably shorter investment horizon as ISČS Sporobond save at least 2.5 years to become an advantageous investment. This period is generally short compared to pension schemes for which it is possible to arrange insurance since 18 years. Members and employers is bound to save their funds on a regular basis since the signing of contracts for many years until retirement, at least until the age of 60 when he was only possible to pay the money



saved. The participant can select the part of the deposit during the savings, but only if it is so specified in the contract. Under the old law on account of a participant funding could drop to minus numbers. Since 2013 under the new rules changed the participant is also exposed to pension risk of dissipation. For mutual funds, it is common that the client can be idle.

For comparison of model cases were set for the same funds two basic points: CZK 600 monthly contribution by the investor and the period of performance for 10 years. When investing in ISČS Sporobond investor would for regular depositing 600 CZK for 10 years imposed částku 72 000 CZK, assuming a 3 % efficiency would yield for this period amounted to 12 054 CZK. A participant in a pension equal deposit regular stores the same amount as an investor in the previous case, 72 000 CZK. The proceeds of this amount are the estimated value 2.5 % was slightly higher item and the amount of CZK 12 091. This would still receive state benefits in the amount of CZK 18 000. In total, therefore, received 30 091 CZK, which is 18 037 CZK more than investing in the fund ISČS Sporobond. The result of comparison is the observation České spořitelny for clients is clearly more profitable to save their money into the pension fund than in ISČS Sporobond. Effectiveness is questionable, however, as the money from ISČS Sporobond can get away sooner and easier.

The comparison of two model cases to pension funds were selected funds with the highest performance. They include Allianz penzijní fond and Generali penzijní fond. With regular deposit CZK 600 per month in both cases the participants had saved 72 000 CZK and from contributions to the state would get 18 000 CZK. Assuming a 3.04 % appreciation of the Allianz penzijní fond participant received the amount of CZK 32 798, which is only 896 CZK more than Generali penzijní fond, for which the party won 2.87 % during the expected appreciation of the amount of CZK 31 902. Slight differences would also be paid on pension benefits. Allianz penzijní fond participant would receive a monthly pension of a man of 628 CZK, 566 CZK woman. Generali penzijní fond would amount men were paid 623 CZK and 561 CZK woman. The difference in monthly benefits paid by pension funds for both men and women amounted to CZK 5. Finally, it is possible to say that as the best way to invest in pension funds can be recommended Allianz penzijní fond of all pension funds out of the comparison as the best and most stable.

Comparison of selected Fund indicates differences between the funds and their advantages and specific design of the optimal solution the best way to invest your money with funds. This proposal could possibly serve as an aid to potential investors when deciding where and how to invest the amount of money. The proposal is designed to scream conservative investors and for investors who are not afraid to take risks and in the open-end mutual funds. Optimal investment is also interested in the proposed pension plan.

This work may also serve the school itself as a supplementary material for teaching other students.

All objectives were met thesis.

## Company's credit rating



Evropský polytechnický institut, s.r.o.  
Osvobození 699, 686 04 Kunovice  
<http://www.edukomplex.cz>, [epi@edukomplex.cz](mailto:epi@edukomplex.cz)

### Hodnocení bakalářské práce ústavem Ekonomika a řízení

Název bakalářské práce:

**KOMPARACE INSTRUMENTŮ KOLEKTIVNÍHO INVESTOVÁNÍ**

Jméno a příjmení autora práce: **Marie J e k l o v á**  
Studijní obor: Finance a daně

	Kritéria hodnocení	A	B	C	D	E	F
1.	Náročnost práce		X				
2.	Splnění cílů práce		X				
3.	Teoretická část práce			X			
4.	Praktická část práce			X			
5.	Formální úprava práce			X			

#### Abecední hodnotící stupnice

Číselné hodnocení	Abecední hodnocení	Slovní hodnocení	Anglický ekvivalent hodnocení	Procentuální rozpětí
1	A	excelentní	upper - excellent	90 – 100 %
2	B	výborný	lower - excellent	80 – 89 %
2	C	velmi dobrý	very good	70 – 79 %
3	D	dobrý	Good	60 – 69 %
3	E	dostatečný	sufficient	50 – 59 %
4	F	nevyhovující	Fail	pod 50 %

Práci doporučuji k obhajobě.

Bakalářskou práci navrhuji klasifikovat stupněm: **C – velmi dobrý**

Hodnocení vypracoval: doc. Ing. Jozef Strišš, CSc.

V Kunovicích dne: 15.5. 2012

podpis hodnotitele bakalářské práce

# ABSTRACT

Marie JEKLOVÁ *Comparison of instruments of collective investment funds*. Kunovice, 2012. Bachelor thesis. European Polytechnical Institute, Ltd.

Supervisor: Ing. Ondrej ŠABATA

Key words: collective investment, investment companies, investment funds, mutual funds, pension funds, stock funds, bond funds, mixed funds, funds of funds, money market funds, special funds, hedge funds, stocks, bonds, share certificates, investor, investment risk, liquidity, portfolio, dividend, depositary.

The aim of this thesis is the comparison of collective investment instruments, a comparison of selected funds and showing models of investment. The result is then an optimal way of investing funds.

The first part of the work generally deals with collective investment schemes, investment companies and to the history of collective investment schemes. It also gives an overview about the distribution of funds in the Czech Republic. The second section defines and characterizes the investment, mutual and pension funds. It is described in details and it is devoted to selected equity mutual funds, bond and mixed and all pension funds operating in the country. There is also mention of the Association of Pension Funds, as an organization, uniting all these pension funds. The third part of this thesis is interested in the comparison of selected mutual funds and pension funds comparison. The fourth section describes the test cases selected by investment funds, which are then compared and contrasted. The last part contains the application for optimal storage of investments.

This thesis may be used for educational purposes, can serve as a supplementary material in the classroom for other students. It gives features not only theoretical information on collective investment, investment, mutual and pension funds, but the comparison shows the differences between individual funds and their advantages. It also offers specific design of optimal investment for conservative investors and bold, in the open-end mutual funds and those interested in the pension plan.

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## List of Abbreviations

\$ - dollar

% - Percent

a.s. - Joint-stock company

etc. - and others

AKAT - The Association of Capital Market

APF - Association of Pension Funds

etc. - and so on

No. – Number

CZ - Czech Republic

ČSOB - Czech-Moravian Trade Bank

EEC - European Economic Community

EU - The European Union, the European Union

FEFSI - European Federation of Investment Funds and Companies

IKS - Investment Capital Company

ING - Investment Management

Ing. – Engineer

ISČS - Czech investment company savings

KB - Commercial Bank

CZK - Czech Koruna

max. – maximum

million - one milion

min. - at least

for example - for example

OMF - Open-ended mutual fund

p.a. - per annum, the yield calculated on an annual basis

PF – PF

PIAS - First Investment Joint Stock Company

s. – Page

No. – Collections

Co. - Limited Liability Company

ie. - that is, it is

UNIS CR - Union of Investment Companies of the Czech Republic

USA - The United States of America

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## **Appendix No. 1: The self diagnostic questions and answers, a sharp test**

.Standardní fondy v ČR jsou:

- ...podílové fondy otevřeného typu
- ..podílové fondy uzavřeného typu
- ..investiční fondy
- ..podílové fondy otevřeného i uzavřeného typu

.Mezi výhody kolektivního investování nepatří:

- ..Diverzifikace rizika prostřednictvím rozložení investic.
- ..Jednodušší přístup k instrumentům a trhům.
- ..Profesionální správa svěřeného majetku.
- ...Možnost investora zasahovat do řízení fondu.

.Mezi výhody kolektivního investování nepatří:

- ...Neomezená investiční volnost.
- ..Vyšší záruka proti ztrátám majetku zajišťovaná legislativou.
- ..Jednoduché a pohodlné investování.
- ..Vyšší záruka proti ztrátám majetku zajišťovaná legislativou.

.Mezi nevýhody kolektivního investování nepatří:

- ..Placení poplatků fondu za správu investovaných prostředků.
- ...Částečná možnost investora zasahovat do řízení fondu.
- ..Riziko ztráty hodnoty investice díky tržním pohybům.
- ..Neexistence státních systémů pojištění.

.Vývoj kolektivního investování v České republice je rozčleněn do:

- ...3 etap
- ..2 etap
- ..4 etap
- ..5 etap

.K rozsáhlejšímu rozvoji kolektivního investování došlo v Evropě:

- ..po I. světové válce
- ...po II. světové válce

..po roce 1890

..po roce 1990

.V České republice podle zákona č. 189/2004 Sb., o kolektivním investování se dělí fondy na:

..standardní fondy a luxusní fondy

..běžné fondy a luxusní fondy

...standardní fondy a speciální fondy

..běžné fondy a speciální fondy

.Speciální fondy jsou:

..pouze otevřeného typu

..pouze uzavřeného typu

...otevřeného a uzavřeného typu

..otevřeného i uzavřeného typu

.Speciální fondy se dále dělí na:

...speciální fond cenných papírů, speciální fond nemovitostní, speciální fond fondů, speciální fond kvalifikovaných investorů

..speciální fond cenných papírů, speciální fond nemovitostní, speciální fond fondů

..speciální fond cenných papírů, speciální fond kvalifikovaných investorů

..speciální fond nemovitostní, speciální fond fondů, speciální fond kvalifikovaných investorů

.Legislativa České republiky neumožňuje zakládat:

..uzavřené investiční fondy

..uzavřené investiční fondy ani otevřené investiční fondy

...otevřené investiční fondy

..uzavřené podílové fondy

.Investiční fondy jsou v ČR zakládány:

...na dobu určitou, maximálně na dobu 10 let

..na dobu neurčitou

..na dobu určitou, maximálně na dobu 5 let

..na dobu určitou, maximálně na dobu 15 let

.Investiční fondy vydávají:

..podílové listy

...akcie

..investiční certifikáty

..podílové listy a investiční certifikáty

.Podílové fondy vydávají:

..investiční certifikáty

..podílové listy

...podílové listy a investiční certifikáty

..akcie

.Na českém trhu v roce 2011 působilo:

..5 penzijních fondů

..20 penzijních fondů

..15 penzijních fondů

...10 penzijních fondů

.Uzavřený podílový fond:

..Může prodat libovolný počet podílových listů, podílové listy může vydávat pouze určitou předem stanovenou dobu, poté prodej končí.

..Může podílové listy vydávat po neomezenou dobu, ale s ohledem na předem vymezený počet podílových listů, poté prodej končí.

..Může podílové listy vydávat po neomezenou dobu, počet vydání podílových listů není nijak ohraničen.

...Může prodat pouze předem vymezený počet podílových listů, podílové listy může vydávat pouze určitou předem stanovenou dobu, poté prodej končí.

.Uzavřené fondy:

..Nezajišťují od podílníků zpětný odkup podílových listů, podílník je ani nemůže odprodat jinému zájemci.

..Zajišťují od podílníků zpětný odkup podílových listů, podílník je však může odprodat i jinému zájemci.

..Zajišťují od podílníků zpětný odkup podílových listů, podílník je ale nemůže odprodat jinému zájemci.

...Nezajišťují od podílníků zpětný odkup podílových listů, podílník je však může odprodat jinému zájemci.

.Otevřené podílové fondy:

..Jsou omezeny při emisi podílových listů, počet podílníků je limitován.

..Jsou omezeny při emisi podílových listů, dobou a počtem podílníků, který je limitován.

...Nejsou ničím omezeny při emisi podílových listů, počet podílníků není tedy limitován.

..Jsou omezeny při emisi podílových listů, pouze dobou, která je předem stanovena.

.Správce otevřeného podílového fondu je ze zákona povinen:

..Vyhovět požadavkům podílníků na zpětný odkup podílových listů, a to nejpozději do jednoho roku ode dne, kdy o to podílník požádal.

..Vyhovět požadavkům podílníků na zpětný odkup podílových listů, a to nejpozději do dvou let ode dne, kdy o to podílník požádal.

..Vyhovět požadavkům podílníků na zpětný odkup podílových listů, a to nejpozději do šesti měsíců ode dne, kdy o to podílník požádal.

...Vyhovět požadavkům podílníků na zpětný odkup podílových listů, a to nejpozději do jednoho měsíce ode dne, kdy o to podílník požádal.

.V České republice jsou klienty v daleko větší míře využívány z podílových fondů:

..uzavřené

...otevřené

..dlouhodobé

..krátkodobé

.Prvním státem, kde se začalo investovat kolektivně, byla:

...Belgie

..Francii

..Velké Británii

..Itálie

.Podle investičního zaměření je možné rozdělit otevřené podílové fondy do několika základních typů na:

...fondy peněžního trhu, dluhopisové fondy, akciové fondy, smíšené fondy, fondy fondů, nemovitostní fondy, zajištěné fondy

..fondy peněžního trhu, dluhopisové fondy, akciové fondy  
..fondy peněžního trhu, dluhopisové fondy, akciové fondy, smíšené fondy, fondy fondů,  
..fondy peněžního trhu, dluhopisové fondy, akciové fondy, smíšené fondy, fondy fondů,  
zajištěné fondy

.Fondy peněžního trhu investují na peněžním trhu do:  
..dlouhodobých finančních dokumentů  
...krátkodobých finančních dokumentů  
..krátkodobých, střednědobých a dlouhodobých finančních dokumentů  
..střednědobých a dlouhodobých finančních dokumentů

.Akciové fondy jsou fondy, které se trvale zaměřují na:  
...akcie a investují do nich minimálně 2/3 majetku  
..akcie a investují do nich minimálně 1/3 majetku  
..akcie a investují do nich všechny svůj majetek  
..akcie a investují do nich minimálně 20 % svého majetku

.Fondy fondů jsou ty fondy, které:  
...2/3 svých zdrojů investují do akcií a podílových listů jiných fondů.  
..1/3 svých zdrojů investují do akcií a podílových listů jiných fondů.  
..veškeré své zdroje investují do akcií a podílových listů jiných fondů.  
..20 % svých zdrojů investují do akcií a podílových listů jiných fondů.

.Smíšené fondy investují vklady podílníků do:  
..různých cenných papírů pouze na jednom trhu. Skladba akcií či dluhopisů v jejich portfoliích není nijak limitována  
...různých cenných papírů na různých trzích. Skladba akcií či dluhopisů v jejich portfoliích není nijak limitována  
..různých cenných papírů pouze na jednom trhu. Skladba akcií či dluhopisů v jejich portfoliích je limitována minimálně 55 %  
..různých cenných papírů na různých trzích. Skladba akcií či dluhopisů v jejich portfoliích je limitována minimálně 55 %

.Nemovitostní fondy ukládají:

..méně než 50 % svých investic do nemovitostí a také do majetkových účastí v realitních společnostech, jež stavějí, spravují nebo prodávají nemovitosti.

...více než 50 % svých investic do nemovitostí a také do majetkových účastí v realitních společnostech, jež stavějí, spravují nebo prodávají nemovitosti.

..více než 30 % svých investic do nemovitostí a také do majetkových účastí v realitních společnostech, jež stavějí, spravují nebo prodávají nemovitosti.

..více než 80 % svých investic do nemovitostí a také do majetkových účastí v realitních společnostech, jež stavějí, spravují nebo prodávají nemovitosti.

.Zajištěné fondy se nazývají tak:

...Hedgeové fondy

..Hadvonové fondy

..Fadvonové fondy

..Fadrové fondy

.Zajištěné fondy garantují investorům návratnost:

...100 % vstupních investic a k tomu také podíl na výnosech fondů a to k datu splatnosti.

..50 % vstupních investic a k tomu také podíl na výnosech fondů a to k datu splatnosti.

..40 % vstupních investic a k tomu také podíl na výnosech fondů a to k datu splatnosti.

..70 % vstupních investic a k tomu také podíl na výnosech fondů a to k datu splatnosti.

.Penzijní fondy začaly vznikat na území České republiky:

..od roku 1999

..od roku 1984

..od roku 2000

...od roku 1994

.Dávky poskytované penzijními fondy se dělí do:

... dvou skupin na dávky jednorázové a opakující se

..tří skupin na dávky jednorázové, dvourázové a opakující se

..čtyř skupin na dávky jednorázové, dvourázové, třirázové a opakující se

..dvou skupin na dávky jednoetapové a opakující se