THE RESEARCH OF POSSIBILITIES TO INTEGRATE OCCUPATIONAL PENSION FUNDS IN LITHUANIA

Violeta Naraskeviciute¹, Dovydas Strumyla², Mantas Juodelis³
¹,²,³ Kaunas University of Technology, Lithuania
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Abstract

Retirement savings are very important source of income, when a resident withdraws from labor market. But not always retirement savings are a sufficient source for a dignified senility. Many researchers are discussing about the best ways to change and sometimes completely reform pension systems in countries around the world. Yet there is no unique answer or reform for all different countries. Our pension system’s model for Lithuania was based on two foreign countries, which have occupational pension systems. The model proposes benefits for system’s participants and advantages for country’s economy.

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1. Introduction

Pension systems in many world countries have faced difficulties during the global economic downturn. Also the downturn had an effect on countries’ social security policies and their pension systems. The outcome of economic crisis was visible in Lithuania too. It significantly worsened country’s economic and social environment, including pension system. From here the problem of creating a sustainable pension system rises.

Considering the raised problem, the purpose of this research is to analyze Lithuanian and other foreign countries pension systems (United States of America and Iceland), their experience and methodology in order to find effective improvements for Lithuanian pension system and also to find out about occupational pension funds integration possibility. As a result, such type of pension system would stimulate country’s economy and also it would encourage country’s residents to be more responsible for their future savings. In this paper we firstly analyze foreign countries’ U.S. and Iceland experience in their pension systems. In the second part of research we go to the occupational pension system’s model, proposed for Lithuania. And third, we give final conclusions.

In this paper we use research methods, such as comparative analysis, we compare foreign countries’ pension systems, also we use statistical analysis, where a gathered statistical data is used in financial prognostic model.

Pension systems in United States of America and Iceland

United States of America

Pension systems in the United States of America (U.S.) and Iceland consist from three pillars. State-sponsored social security schemes, for a majority of society such schemes provides a basic old-age security, about 96% of the employed country’s population. The first pillar is a major cornerstone of the entire system. The second pillar consist from pension funds (retirement plans), which are funded by the state or employers, pension plans with social welfare are based on the state and municipal employees, and private pension plans are based on companies or nonprofit organizations and their employees. The third pillar - personal pension plans, known as IRA (Individual Retirement Accounts), see Figure 1.
The retirement age in the U.S. is differentiated according to birth date. The majority of pensions are paid from 65 to 67 years, in exceptional cases, from 62 years old (pre-retirement). U.S. public pension system is not very generous to people, that why many retirees receive benefits from employers.

**I pillar** is based on pay-as-you-go concept, this social security system’s program is funded by employees and employers paid taxes. Currently, the minimal monthly pension is equal to 143.64 U.S. dollars. The average monthly Social Security benefit paid to retirees - 1230.50 U.S. dollars.

**II pillar.** There are two different private pension schemes in U.S. – a defined benefit plan and a defined contribution plan.

A defined benefit plan is funded by the employer, and plan is committed to pay benefits when the employee retires. Scheme can outline a potential benefit, or it can pay the exact amount of money, such as 200 USD per month. Quite often, for such plans there is formula which determines the size of benefits, variables such as worker's salary, age and labor length of service in company are included in formula. Benefit can be equal to 1 percent of an average salary paid in the last 5 years per whole career.

Nevertheless, the defined contribution plans has no obligation to pay a fixed size benefit when an employer retires. The contributions to employee's personal pension scheme are paid by both, employee and employer. In most cases, the employee is responsible for how the contributions will be invested and for which share of the salary will be contributed to pension scheme. The employer can add additional contributions to the employee's account and, in some cases, his contribution can be as high as employee’s share. Scheme’s value depends on how much money was contributed and on how well pension fund’s investments did on the market. An employee, when he retires, receives his account balance, where he can see his account’s balance, contributions paid to scheme and the return of invested assets and losses, as well as the pension fund administration taxes. The most popular defined contribution plans are 401 (k).

Occupational pensions are controlled by The Employee Retirement Income Security Act of 1974 (ERISA), which provides that all the minimum living standards would be ensured to everyone who takes part in voluntary private pension schemes. The management of pension plans and their performance reports are controlled in accordance with federal law.

Many 401 (k) plans are flexible and retirees have several options how they can get pension benefits from their scheme accounts. These options can be one-time, partial or defined monthly payments, as well as annuity payments. Also it is possible to defer payments until a certain age.

According to Z. Bodie (2012) in U.S. many defined benefit plans went from being well funded to underfunded and PBGC found itself facing a deficit. Now quite many pension plans have

**Figure 1. The characteristics of U. S. pension system**

*Source: made by authors*
been defined contribution and many sponsors from defined benefit have switched to defined contribution plans (Bodie, 2012).

III pillar. Pension plans guaranteed by employers comprises about 65% of the pension plans assets, and about 25% of the pension plans are individual retirement accounts (IRA).

Individual’s contributions, which are in IRA’s account, are exempt from taxes only then when individual is aged to 59.5 years or more. If money is prematurely withdraw from an account, money is taxed at 10% rate, however there are exceptional circumstances when money is not taxed:

- expenses for higher education;
- expenses for the first house (mortgage loan);
- in the event of medical difficulties.

Pension funds in the United States have the right to invest in equity and debt (national and corporate) securities, mutual funds, real estate, bank deposits. In U.S. there are not many investment constraining rules for pension funds, but there are general diversification requirements (OECD Survey, 2010). Also it is required that pension plans ownership rights would be under U.S. legal jurisdiction. In order not to confuse public interests there is a general agreement that no more than 10% of personal pension plan assets may be invested in employer company’s shares or real estate (OECD Survey, 2010). Also there are other different rules and regulations for pension funds.

A loan from 401 (k) pension plans. 401 (k) plans must have loan granting procedures and their participants can take a certain size loans from pension funds. Credit price must match a reasonable level of interests and the resident must have a deposit before borrowing. The size of the credit cannot exceed more than 50% of the pension plan’s value, or more than 50,000 USD, moreover, the loan must be paid within 5 years (unless a participant takes a mortgage loan).

Termination of pension plan. U.S. federal laws provide a set of measures that protect employees, who are involved in pension plans (defined benefit and defined contribution), when the company goes bankrupt, or when companies merge. When the pension plan is terminated employee has a title to all accumulated pension plan’s benefits.

Company bankruptcy. In case of bankruptcy, company’s employees confront with two important problems, first, when it is associated with their pension benefits, its security and continuity, and the second, when it is associated with pension plan’s assets. In most cases employees assets do not suffer from any danger when company is filed for bankruptcy because, under the federal law it is required for occupational pension funds to keep their assets segregated from company’s assets. Thus, if the employer filed for bankruptcy employee’s pension fund is protected from company’s creditors. Furthermore, the mismanagement and misuse of pension fund assets is prohibited by federal law.

Also, contributions to pension funds can be insured by the Federal Government. Defined benefit plans are protected by the Pension Benefit Guaranty Corporation "PBGC". If the pension plan is terminated in case of employer’s financial difficulties (when he is unable to pay contributions and the pension plan does not have sufficient funds to pay benefits), then the PBGC assumes responsibility for the plan. This federal institution pays benefits up to a certain insured maximum.

Pension benefits’ fate after leaving the company before retirement age. If an employee has signed a defined benefit plan (except the cash balance plan) and leaves his workplace he cannot withdraw benefits before an appropriate age.

When an employee has signed a cash balance plan, he has an opportunity to transfer part of his pension plan’s assets in his individual retirement account or to his new employer's pension plan.

When an employee leaves a company and he has signed a defined contribution plan, such as 401 (k) plan, in many cases it is possible to transfer plan’s assets to another employer's plan.

Options of withdrawing funds from a defined contribution plan:

- A lump-sum benefit. You can choose to receive a lump sum payment from the fund, cashing all money in an account. By doing this you may be required to pay income tax and in some cases even a penalty.
To transfer funds from one pension plan to another. An employee can ask his employer to transfer funds to another employer’s pension plan, but only then, when the plan has such opportunity.

The employee can request his employer to transfer the funds to an individual retirement account.

Rollover and trustee to trustee transfers. Transferring funds by avoiding additional taxes and penalties, from one pension plan to another are quite easy. There are two ways to transfer funds, they are called rollover and trustee to trustee transfers. Securities and Exchange Commission’s and the IRS’s (Internal Revenue Service) rules ensure that funds transfers are exempted from taxes.

1. By selecting the rollover transfer type the manager of an old pension plan’s account has to issue a check, which value is equal to the current account value. All securities must be liquidated before making a transfer. When the check is received, sixty days term is given to cash it in a new pension fund, otherwise taxes will be put on the check. Trustee to trustee type directly transfers old account’s content to the new one, without any additional taxes and without requirements to liquidate securities.

2. It is also possible to transfer the funds of pension plan to another account, which is in the same company. An employee can transfer 401 (k) plan funds into an individual retirement account or transfer funds from IRA to another account without any penalties.

3. Funds transferred from the old pension plan to a new one, will be managed by new plan’s rules. Also, the IRS allows changing pension plan only once a year.

4. If funds from pension plan’s account are transferred to generally approved broker’s or bank’s account, additional tax penalties are imposed. But if the funds, in sixty days, from pension fund are transferred back into the pension plan’s account, then tax penalties are avoided.

Iceland

Icelandic pension system consists of three pillars. The system is also a hybrid form of defined benefit and defined contribution. Since 1969 Icelandic pension system has been reformed several times in 1990 and 1998. The official retirement age in Iceland is the same for both men and women - 67 years. Furthermore, state pension is not paid before the official retirement. State pension amounts to 10 -15% of the average salary. So, in Iceland state pension is usually low and most of the person’s income is from an occupational pension funds.

I pillar – public pension. This pension is quite low and only amounts to 10% of an average salary, received by unqualified worker, also state pension can be reduced by 30% if pensioner’s income reaches a certain income level, special additional pension is only paid to single people and it can be also reduced. The maximal pension is payable to pensioner who does not have any additional income. This pension is the same level as the national minimum wage.

The source of basic state pensions is the social security tax. The current social security tax rate is 8.65%. This tax is paid by the employer.

II pillar – mandatory occupational pension funds. Under the current pension act, adopted in Iceland (which entered into force in 1998), all working people or individuals who have sole proprietorships belongs to an occupational pension fund, which has to operate in accordance with Icelandic laws and it should be approved by the Ministry of Finance.

The current mandatory contribution to an occupational pension fund in Iceland should be at least 12% of payroll. Contribution rate to the fund is determined by the labor contract or by law, the employee pays into the fund 4% of his salary and employer adds 8%. Contribution can be divided into two parts, to defined benefit and to defined contribution.

Accumulated contributions in occupational funds are indexed by the consumer price index. Participants of occupational funds can get benefits from fund when they age to 67, however there are exceptional cases when it is possible to retire at 65, but then the pension is reduced, when worker retirees at 70 then his pension increases.
Paying contributions to defined benefit plan (such plans depend on the amount of accumulated assets) for 40 years long length of service should yield a minimum pension of 56% of average earnings. Contributions to pension funds are exempt from tax, but pension payments are fully taxable.

Occupational pension funds are quite economically important in Iceland, country’s pension funds’ assets account for a bigger amount than country’s gross domestic product (Ministry of Economic Affairs, 2011). Also according to Gudmundsson (2003) under certain conditions a funded pension system could increase national savings rate and also increase the capital stock and the growth rate. Pension funds effect on financial market development is very significant (Gudmundsson, 2003).

III pillar – personal voluntary. This pillar came into force in 1998. The reform allowed for employees to deduct from their taxable income a contribution to authorized individual pension schemes. At this time the maximal contribution from employee's income to individual pension scheme is 4%, moreover, employers are met, that they will add to employee's contributions additional 2% if the employee has paid the required amount of contribution. The total contribution to the fund can reach 6%. Personal savings from this scheme cannot be withdraw until the age of 60 and the payments from scheme must be paid in equal installments for at least seven years.

The first and the second pillars of Icelandic pension system comprise the largest part, the third pillar is the smallest, because it is not mandatory and, also payouts from occupational pension funds are much bigger than from the first pillar (Olafsson, 2011).

**Pension plan rules.** Pension taxation. In Iceland pensions are taxed under EET basis (Exempt-Exempt-Taxed) (Jonasdottir, 2007). This means that:

- Pension contributions up to a certain maximum are partially covered by the employer and the employee;
- Pension funds generated return is exempt from taxes until pension payments;
- Pension funds are exempt from capital gain taxes;
- Pension payments from occupational pension funds are subject to income tax.

A loan from pension fund. Pension funds in Iceland can provide real estate loans to their members, allowing them to choose a fixed or a floating interest rate, loan interest rate is indexed by consumer price index. Pension funds can finance the real estate in two ways. The first one is give loans to pension fund members to purchase their residential housing. Another way is to purchase securities that are issued by the state home loan system.

2. Model

This part of the paper covers the model of Lithuanian pension system, its assumptions and characteristics. The new system consists of three parts, the old one, Pay–As–You–Go (PAYG) system (first pillar), private pension funds (second and third pillars) and new integrated occupational pension funds. The possibility of occupational pension funds integration was also considered by Lithuanian sociologist Lazutka (1998), he suggested introducing occupational pension schemes in Lithuania long ago, these schemes would be provided by individual employers, their associations and labor unions, the participation in such schemes would be collective according to work contract. Our concept of new pension scheme is based on Icelandic and U.S. pension systems.

**Assumptions for the new system:**

- Modeling period starts from the beginning of 2013.
- For both genders, women and men, pension age begins at 65 year.
- Participants would be only those workers, who entered the labor market starting from 18 years old.
- In integrated occupational pension funds system will be involved 30% of the working-age population, the number of early participants will consist 11%.
All the participants in new occupational pension system will receive only basic pension from SODRA.

Employee's part paid into the occupational pension funds consists 0%, employer will have to add 20%. The rest part of the social taxes will be transferred to SODRA, for unemployment, accident, sickness and maternity.

In this paper we are going to assume that SODRA part is related to old-age pensions.

The model of new pension system is based on three pillar pension system, but exceptional new feature is occupational pension funds integration in current system (Figure 2).

**Figure 2. New Lithuanian pension system**

New system of occupational pension funds consists from two pillars. The first one is **main** and the second is **supplementary**. The **main** pillar is going to be mandatory and **supplementary** is going to be voluntary.

**Minimum requirements for business.** Business entities wishing to participate in the system will have to match such criteria as:

- Time criteria – minimum requirement of operation time is 4 year.
- Criteria of responsibility – businesses will have to submit quarterly financial statements to board of occupational pension funds and supervisory authorities.
- Criteria of revenue – last 3 years average revenue have to be bigger than 1 million.
- Participants' criteria (legal entities) – in order to establish an occupational pension fund, at least 20 legal entities must be involved in the establishment.
- Criteria of an authorized capital – company will have to contribute 10% of its last year transfers into social security fund.

**Formation of an occupational pension fund (OPF).** Companies wishing to take part in new pension saving system will have to establish an occupational pension fund in order to separate potential pensioners' funds from companies’ assets. Also founders of the fund will have to hire pension fund management company which is going to be responsible for management functions.

Entities which are establishing an OPF, will have to create an authorized capital, which will exist for the rest time of pension funds operation period, but this capital will not give any rights to fund's decision making (all decision making rights will be distributed evenly among OPF participants). Such authorized capital is needed to decrease the risk related to the lack of working capital (valid only for social security insurance contributions). Company which is incapable of paying social security payments on time, authorized capital will be decreased by the shortage of working capital. Used capital must be replenished to minimum margin within 90 days. Otherwise,
for each day, will be paid interest (annual VILIBOR + occupational pension fund Board additional margin).

The authorized capital can be invested to none risky liquid assets. At the start of every year, the board of occupational pension fund will recalculate the size of authorized capital to all companies. If there will be gap between recalculated and existing authorized capital, businesses will have to replenish the gap, in case of surplus – the board will be able to use it for their own needs.

**Occupational pension funds supervisory authority.** All oversight function of occupational pension fund will go to the Bank of Lithuania.

**The operation principles of the new system.** Employees participating in the new system will be differentiated by age group and monthly income, depending on such criteria, they will be asked to choose from different occupational pension schemes that have different risks and benefits (see Table 1).

**Table 1. Employee’s age and revenue differentiation**

<table>
<thead>
<tr>
<th>Employee’s age</th>
<th>Revenue integers, Lt</th>
<th>OPR1</th>
<th>OPR2</th>
<th>OPR3</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-34</td>
<td>[800-2000]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35-50</td>
<td>(2000-4000)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51-65</td>
<td>(4000 and more)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The first two letters refers as Occupational Pension, the third letter and number show the level of risk and its degree. Table 2 shows the distribution of the various retirement schemes.

**Table 2. Different retirement plans**

<table>
<thead>
<tr>
<th>Ticker</th>
<th>Risk level</th>
<th>The degree of risk</th>
<th>Weight coefficients of portfolio, %</th>
<th>Use of capital gains and accumulated capital portion, %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Stocks</td>
<td>Bonds</td>
</tr>
<tr>
<td>OPR1</td>
<td>Risky</td>
<td>1</td>
<td>70</td>
<td>30</td>
</tr>
<tr>
<td>OPR2</td>
<td>Risky</td>
<td>2</td>
<td>70</td>
<td>30</td>
</tr>
<tr>
<td>OPR3</td>
<td>Risky</td>
<td>3</td>
<td>70</td>
<td>30</td>
</tr>
<tr>
<td>OPA1</td>
<td>Average</td>
<td>1</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>OPA2</td>
<td>Average</td>
<td>2</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>OPA3</td>
<td>Average</td>
<td>3</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>OPC1</td>
<td>Conservative</td>
<td>1</td>
<td>30</td>
<td>70</td>
</tr>
<tr>
<td>OPC2</td>
<td>Conservative</td>
<td>2</td>
<td>30</td>
<td>70</td>
</tr>
<tr>
<td>OPC3</td>
<td>Conservative</td>
<td>3</td>
<td>30</td>
<td>70</td>
</tr>
</tbody>
</table>

Employer must offer all possible plans for employee who is starting to participate in new system, based on Table 1 and 2. For example a 37 years old employee, who earns 2,700 thousand Lt, will be able to choose OPA1 and OPC1 2,3, but higher risk level and a higher degree of pension risk plans are prohibited.

Members of the fund who are borrowing at the credit institutions will be able to use capital gains as collateral, depending on table 2 ratios. For example, there are 2 employees in the company, one have chosen OPC2 scheme and the other OPR3, also the first employee have accumulated 2000 Lt fund and the second fund is worth 4000 Lt. According to the table 2, company could use 2300 Lt as collateral. Also companies will be provided with borrowing option from occupational pension fund:

- For working capital, however, a loan cannot be more than 1% of the total capital gain, and the total loan amount - 10%, of occupational pension fund assets.
- For development. Companies will be able to borrow the accumulated amount of occupational pension fund (excluding capital gains), but the borrowed amount will have to
be insured. Loan cannot exceed 20% of occupational pension fund assets (excluding capital gains).

As for legal entities individuals also could use some additional perks. Employees will be provided with opportunity to use his/her accumulated capital as collateral for:

- First home.
- Car.
- Loan for children education.
- Use for serious health care issues.

Percent for collateral is based on table 2 column “Use of capital gains and accumulated capital portion, %”, but the ratio will be recalculated – 1-percent/100=percentage that can be used as an collateral.

**Fund management expenditure.** All the management expenditure is divided to equal parts for employee and employer.

**Payout.** At the age of retirement resident must purchase an annuity from a life insurance company, which:

- Below the prescribed minimum annuity, the pension will be paid in a lump sum.
- Greater than the minimum required annuity, the pension is paid as periodic payments. Person can choose one payout option from three alternatives:
  - Require an electronic retirement check from the occupational pension fund, which can be sold to pension fund obtaining one-off payment.
  - Transfer an e-retirement check to participant’s family members (applies only to pension savings), by transferring the money or occupational pension fund’s managed assets.
  - Not to use an e-pension check, and for the full amount of value buy an annuity.

All payments from the occupational pension fund are taxed at a current personal income tax rate.

**Changing the workplace.** When employee is leaving his job, an occupational pension fund will write forward an e-check, which must be used in 30 days period, by choosing one of the options:

- Doing nothing with the e-check, accumulated financial assets are left in old occupational pension fund.
- Use it within 30 days, transfer the accumulated amount of money or its equivalent financial assets to a new pension fund or occupational pension fund. With pension fund or occupational pension fund must be agreed for the money, or the transfer of financial assets.

**Company’s bankruptcy.** In case of sole company’s bankruptcy, occupational pension fund is left to other participants (legal entities). Employees of bankrupt companies can choose one of two options, transfer accumulated funds to other pension fund or stay in an old fund. If more than 2/3 of participating companies would bankrupt, fund management will be taken by the supervisory authority.

### 3. Pension model’s results

In order to calculate new system’s pensions and compare them to existing ones four different assumptions were made. In case of aggressive investment strategy – 70/30, average annual fund return would be 4 %, at moderate risk plans – 50/50 %, annual return rate 3 %, at conservative risk schemes – 30/70 %, annual return rate 2%. Residents will not accumulate money in additional third pillar. Also at pension age, they will not use such possibilities as transferring half of accumulated sum to their family members. All the participants of the new occupational pension system, will not change workplace.
Based on such assumptions, participants of the new pension model, during their retirement age will receive 6439.64 Lt pension, and gross replacement rate (GRR – pension divided by gross average wage before retiring) will be 0.77 (see figure 3). Participants starting from 27 will end up with 5064.79 Lt and 0.6 GRR, compared to people which will start to participate from 35 year, their pension is going to be 14.25% lower – 4342.68 Lt, and gross replacement rate – 0.52. Employees starting to participate from 45 and 55 will get almost the same pension – 3818.43Lt and 3758.37 Lt. It is because of low pension from professional pension fund 454.19 (55 people cohort) and because of big pension from private pension fund – 1262.34 Lt and state-funded pension – 2041.84 Lt. Despite this fact 55 years old people cohort replacement rate is relatively small, only 0.45.

4. Discussion

Theoretical data analysis showed that foreign countries give to their pension funds wide investment possibilities, however there are some restrictions, which are used to ensure investments diversification. Also in this paper there was used U.S. pension system’s methodology, when the participant transfers his savings between pension funds.

U.S. and Iceland pension systems are based on occupational pension funds. That is way these countries experiences were used to create a model for Lithuanian pension system. Also there were taken into account U.S. and Iceland pension system’s exceptional cases such as benefit payments, changing the workplace and pension funds, employee’s and employer’s perks in the system.

In order to ensure successful pension fund’s activity, clear pension funds regulation rules are necessary.

A proposed new type of pension system for Lithuania consists from three pillars. The first pillar’s pension depends from the pension plan’s type, the second pillar are private pension funds and occupational pension funds, the third – supplementary pension insurance.

The analysis of empirical data showed that occupational pension funds system’s implementation success depends from system’s stability, continuity, relationship between employer and employee.

The new type of pension system will be able to stimulate country’s economic activity, increase competition and due to bigger number of private pension funds the inadequacy of PAYG system is eliminated. The new pension system model gives more benefits than the old one. It gives more perks to employee and employer.

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