

## The Effectiveness of the Pension System in Latvia: pensioner's point of view

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### Abstract

**Purpose** system, which is considered the most progressive and modern system in the world, for the pensioners themselves.

**Scientific aim** The aim of the paper is to analyze the effectiveness of the Latvian pension system and find out minimal values of the initial parameters, which have an influence on the effectiveness, to make a pension system more effective for pensioners within corresponding Latvian legislation.

**Methodology/methods** The analysis is based on the comparison of the advantages and disadvantages of the hierarchical structure of the Latvian pension system and modeling basic financial parameters to reveal its influence on generating financial flows for pension funds and the effectiveness of each pension tier in the final analysis.

**Findings** The findings prove non-effectiveness of the Latvian pension system for the needs of pensioners. Depending on the tier of the pension system pension money generating by future pensioners are non-effectively managed by all pension funds. Modeling future pension payoffs shows the boundaries of the effectiveness of the pension system paying attention to the needs of future pensioners. Also the results bring to light an interesting idea how a future pensioner can manage his own free assets very easily and more effective than professional participants maintaining the pension system in Latvia.

**Conclusions** The represented results expose the problems with the effectiveness of the Latvian pension system from future pensioners' point of view and do not consider the problems from government's side. It was shown that the effectiveness of the Latvian pension system could be improved and using the peculiarities of the Latvian economy a future pensioner can be more effective in his free money management than professional participants.

**Keywords:** Latvian pension system, effectiveness, pension funds, pension payoffs.

**JEL Classification:** H53

## Introduction

The pension system of Latvia consists of three tiers: mandatory state non-funded pension scheme (first tier), mandatory state funded pension scheme (second tier) and voluntary private pension scheme (third tier). Such system is established since July 2001. (International Labour Office, 2006)

The 1<sup>st</sup> tier of the pension system was started in January 1996. It includes the principle of generation and gender solidarity, i.e. the social insurance contributions made by working population are used to pay the old age pensions to the generations of pensioners and for men and women after their retirement the same pension payment period is foreseen. All socially insured persons whose social insurance contributions are registered in their personal account are involved in the 1st pension tier. A person, who had been socially insured for at least 10 years, is ensured by state pension. (Law, 2010b; International Labour Office, 2006)

The 2<sup>nd</sup> tier of the pension system was launched on 1 July, 2001. This tier assumes that part of social contributions are transferred to a chosen pension fund, which invest them into the financial markets and accumulate on the personal account of the 2<sup>nd</sup> tier participant, another part of social contributions goes to the 1st tier. Each socially insured person is entitled to be the participant of the 2<sup>nd</sup> tier, if this person was not older than 50 on the 1 July of 2001. Also all persons, who were born since July 1, 1971, are obliged to take part in the 2nd tier. (Law, 2010b)

The 3<sup>rd</sup> tier of the pension system was created on July 1998. The 3<sup>rd</sup> tier should stimulate the free choice of any person to create additional savings for their pension by paying contributions individually into the private pension funds. The State Revenue Service pays back 26% from invested money in the 3<sup>rd</sup> tier if its amount does not exceed 10% of gross income. (Law, 2010a; International Labour Office, 2006)

### 1 Analysis of the 1st pension tier

Pension benefits of the 1st tier of the Latvian pension system are regulated by the corresponding legislation and its amount does not depend on financial market opportunities to increase pension capital.

According to the Law On The State Pensions (2010) P is calculated by such formula:

$$P = \frac{K}{G} \quad (1)$$

where

K – accumulated life-time notional pension capital;

G – expected years for pension payout, based on projections of unisex life expectancy of the worker's age cohort, adjusted annually for new pension claims. In 2010 this coefficient is equal to 18.46.

Accumulated pension capital is a sum of two pension capitals accumulated in the 1<sup>st</sup> and in the 2<sup>nd</sup> tier. Insignificantly simplifying calculations, accumulated capital in the 1<sup>st</sup> tier can be calculated as

$$FV_1 = k_t \sum_{i=1}^{12n} x_i \quad (2)$$

where

$k_t$  – special coefficient set by the law. For the 1<sup>st</sup> tier it is 0.14;

$n$  – length of working experience;

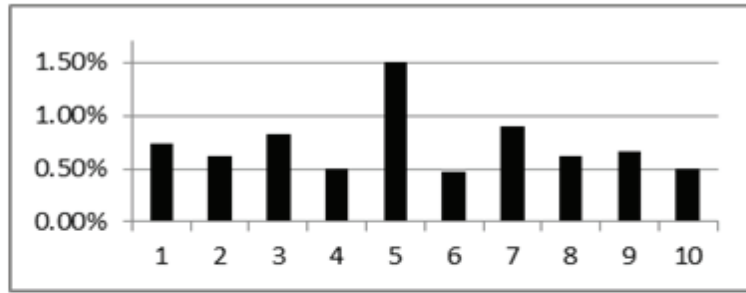
$x_i$  – monthly social contributions for pension capital (20% from gross income).

In practice the scale of pension is equal to half of average income. For example, if a person has average income of 626 EUR per month (Central Statistical Bureau of Latvia, 2010), pension benefits will be approximately 313 EUR per month. Taking into account the peculiarities of Latvian economic development a future pensioner has to take care about accumulating his pension capital from the first years of work. Statistical data shows that the average pension benefits are approximately 256.12 EUR per month in 2010. (State Social Insurance Agency, 2010) Unfortunately, this sum is too small to ensure own old age.

### 2 Analysis of the 2nd pension tier

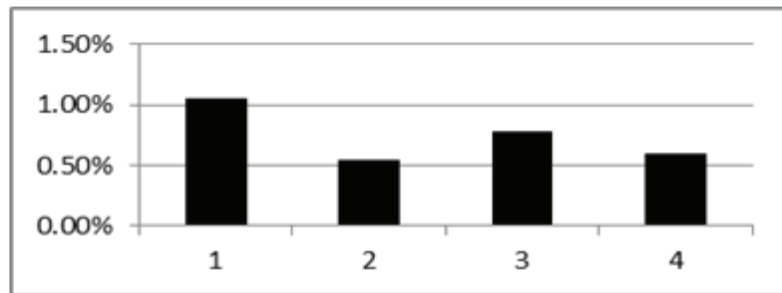
According to the Law On State Funded Pensions (2010), to increase pension capital the Latvian government offered to divide social contributions in two parts: one part goes to the 1st tier, another – to the 2<sup>nd</sup> tier, in which transferred money is invested in financial instruments. Investments are strictly regulated by the law and other legislative acts.

Latvian pension funds working in the 2nd pension tier offer 3 types of investments:



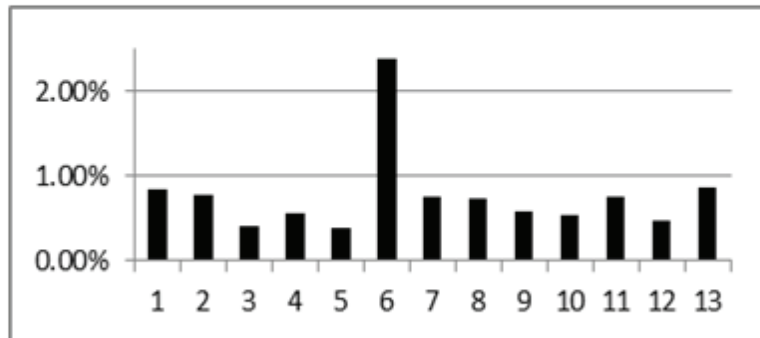
Graph 1 Average annual return on invested capital (conservative investments)

Source: www.manapensija.lv



Graph 2 Average annual return on invested capital (neutral investments)

Source: www.manapensija.lv



Graph 3 Average annual return on invested capital (active investments)

Source: www.manapensija.lv

conservative, neutral (balanced) and active. Practically each fund has been already working for 7 years (since 2003). Its statistics eliminates the problem of low return on invested capital in each offered program (see Graph 1,2,3). According to the statistics on the mandatory state funded pension scheme and voluntary private pension scheme (2010), average return on conservative investments does not exceed 1% in all offered plans except one which was created in 2009. (Graph 1)

The same results are on neutral or balanced investments: return rate hardly reaches 1% per year. (Graph 2)

Returns on active investments could not achieve 1% per year either except on invest-

ment program which was created in 2009. (Graph 3)

Comparing pension funds revenue performance with inflation rate in Latvia it is necessary to conclude that effectiveness of investment management by pension funds is very low and could be higher from future pensioner's point of view. (Graph 4)

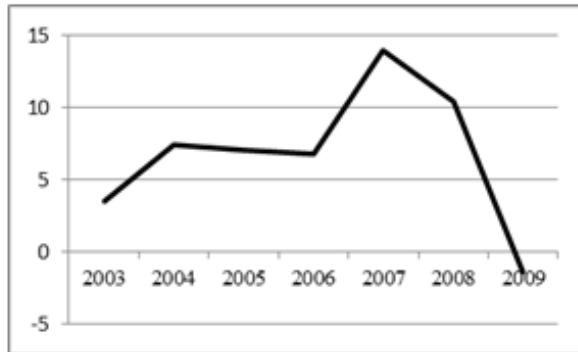
Simplifying calculations, accumulated capital in the 2<sup>nd</sup> tier can be calculated as

$$FV_{II} = k_{II} \frac{\left(1 + \frac{r}{12}\right)^{12n} - 1}{\frac{r}{12}} \quad (3)$$

where

- $k_{II}$  – special coefficient set by the law. For the 2<sup>nd</sup> tier it is 0.06;
- $X$  – monthly social contributions (20% from gross income);
- $r$  – profitability of the 2<sup>nd</sup> pension tier.

pension program depending on return rate. If return on invested capital increases, invested capital produces more benefits for the scale of future pension. If return rate is approximately 10% on average during all time till person's retirement, return on capital will be able to in-



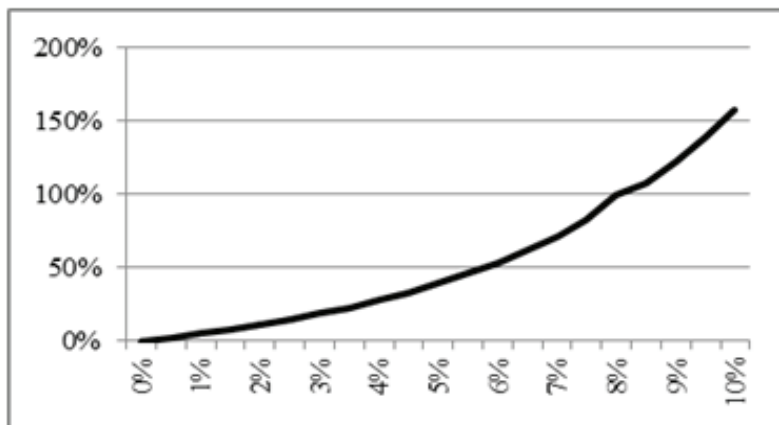
**Graph 4** Annual inflation rate in Latvia (%)

Source: Central Statistical Bureau of Latvia

Two criteria can influence on pension capital: social contributions and pension fund revenue performance. Social contributions depend on gross income. Obviously the weight of accumulated capital FVII in total pension capital  $K$  is in direct dependence from return rate: if average return rate increases, the weight of capital FVII in total pension capital also increases. If return rate is equal to 0, accumulated capital in the 2<sup>nd</sup> tier takes only 30% of total pension capital and does not differ from the 1<sup>st</sup> pension tier in the field of accumulating capital.

crease pension benefits per month on 158.37%.

Taking into account statistical information on pension funds revenue performance and assuming that average return rate remains 1% during all time, this capital growth generated by investments will give only 4.97% to pension benefits. It means that during last 7 years the effect of the 2<sup>nd</sup> pension tier is minimal. If pension funds could raise its investment management return to 5% or 6% on average, it could increase monthly pension benefits on 39.35% and 53.71%, respectively. Pension benefits



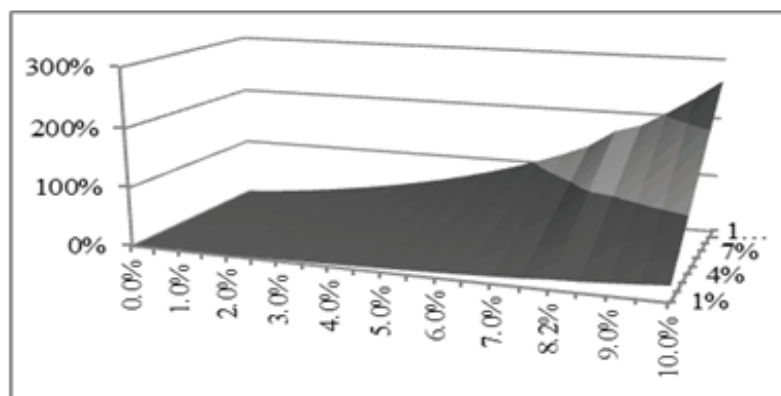
**Graph 5** The influence of return rate on pension capital

Source: author's compilation

Analyzing pension capitals accumulated under the influence of return rate and without it, makes possible to estimate the role of return rate in total pension capital. (Graph 5). Graph 5 shows possible potential of funded

could be doubled if return on investments achieved 8.23% per year. Thus, optimal return should be started from 4%-5%.

In the other hand the government could increase the amount of transferred money from



**Graph 6** The influence of return rate and amount of transferred social contributions into the 2<sup>nd</sup> tier on pension capital growth  
Source: author's compilation

social contributions (now 6% of gross income) to the 2<sup>nd</sup> pension tier proportionally decreasing the role of the 1st pension tier (less than 14% of gross income).

The Graph 6 represents the speed of pension capital growth depending on two factors: return on investments (zone 0-10%) and amount of social contributions transferred into the 2<sup>nd</sup> tier (zone 1%-10%). Changes in proportion between two tiers (now 14% from gross income goes to 1st tier and 6% - to the 2<sup>nd</sup> tier) for benefit of the 2nd tier affect pension capital growth more significantly than return on investments. Due to heavy financial situation in budget deficit caused by financial crisis and half-baked long-term development policy of Latvia in the government there are some speculations about changes in that proportion for benefit of the 1st tier to reduce budget deficit.

Graph 6 proves that such reduction in financing of the 2<sup>nd</sup> tier decreases total accumulated pension capital and effectiveness of the 2<sup>nd</sup> tier. From pensioner's point of view any growth of the weight of the 2nd pension tier should be encouraged.

annual return on invested capital is 5%. In this pension tier a future pensioner can use as the opportunities of a pension fund as the opportunities of reinvesting paid back money from the State Revenue Service.

Prevalent conjecture of interest rates in Latvian lats (LVL) on deposits in credit institutions engenders non-risk speculations on the difference between interest rates on deposits and profitability of the 3<sup>rd</sup> pension tier for individuals.

Average weighted interest rates in LVL on deposits in credit institutions are relatively high (see Table 1) and can compete with profitability of 3<sup>rd</sup> pension tier schemes.

It means that a future pensioner can reinvest paid back money into a bank deposit and gain higher return. Such investments can give more significant effect for accumulating pension capital. Graph 7 eliminates the weight of reinvested capital in total accumulated capital in the 3<sup>rd</sup> pension tier: the more difference between bank interest rate on deposit the more reinvested capital is accumulated. Besides, deposit money can be used relatively in any time,

**Table 1** Average weighted interest rates in LVL on deposits in credit institutions (%)

	Long-term	Short-term
2004	4.8	3.3
2005	4.0	2.8
2006	4.3	3.6
2007	6.7	6.2
2008	9.9	6.3
2009	11.9	8.0

Source: Central Statistical Bureau of Latvia

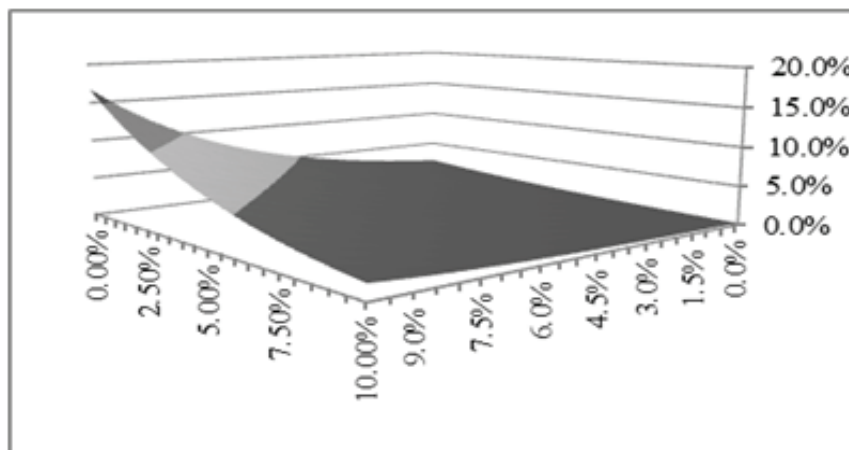
### 3 Analysis of the 3rd tier

Statistics on pension funds of the 3<sup>rd</sup> tier shows relatively optimistic results. Average

but money in the 3<sup>rd</sup> tier is not accessible for a participant for a long time (till 55 years old).

Thus, choosing between reinvesting paid money or its consumption a future pensioner could increase his accumulated pension capital in the future or can consume it today.

Contributions transferred to the 2nd pension tier proportionally decreasing the weight of the 1st pension tier, of course, according to the situation with paying pension benefits to present



**Graph 7** The weight of reinvested capital in total accumulated capital in the 3<sup>rd</sup> pension tier

Source: author's compilation

### Conclusion

Pension system plays a significant role in the social field of any state. In Latvia speaking about a new generation an individual has two options: accumulate pension capital in the 1st and 2<sup>nd</sup> pension tier by social contributions from gross income or voluntarily take part in the 3<sup>rd</sup> pension tier investing own money from net income.

Unfortunately, the 1st pension tier cannot guarantee high pension benefits in case of wages lower than average within the state.

The second pension tier can accelerate capital accumulation if average annual return rate is high. Statistics shows that during last 7 years 2nd tier pension funds revenue performance cannot exceed average annual return rate more than 1%. In this situation if profitability of the 2nd tier pension funds remains at the same rate pension benefits in future will be increased by 4.97% only. To raise total pension capital more significantly average annual return rate should be at least 5%. On the other hand the government could accelerate pension capital growth increasing total amount of social contri-

generation of pensioners.

The 3rd pension tier is more attractive for investing money due to its profitability but it is possible only from net income which is much lower after all taxes. The state program of paying back a part of invested money in the 3rd tier and existing conjecture of deposit rates offer interesting opportunities for an individual when a part of net income is invested in the 3rd tier and paid back money from the State revenue Service is reinvested into bank deposit. Such capital management technique can provide more effective capital growth in the 3rd tier and remarkable addition on bank deposit which can be used for other aims in future relatively in any time instead of 3rd tier capital which is not accessible till 55 years old.

Thus, if an individual wants to ensure his old age within the scope of present average wage he should use 3rd pension tier for accumulating pension capital more effectively than 1st and 2nd tier pension funds do and reinvest paid back money into bank deposit rejected its consumption today.

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