OLD-AGE PENSION BENEFITS: STATE RESPONSIBILITIES IN THE DESIGN OF PENSION SYSTEMS OF THE BALTIC COUNTRIES

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Abstract. The three Baltic States have reformed their pension systems in the mid of 90-ties by gradual introducing of modern three-pillar schemes. Nevertheless, many quite significant elements of their design differ from country to country. The paper is focusing on how state old-age pension benefits are earned by individuals during their pre-retirement years: handling of pre-reform service record: how the years of service during Soviet times and early 1990s are monetarised into pension rights; handling of "normal" productive years for wage-earners; handling of non-productive periods: how pension rights are obtained during the periods of temporary incapacity for work – maternity / paternity leaves, child care leaves, compulsory military service, unemployment, sickness, principles of indexation of pensions in payment; possibilities of early / deferred retirement; regulation of mandatory funded schemes.

The comparative analysis is based on the respective legislative acts, academic literature and the authors' personal interviews with country experts. The analysis reveals substantial differences between the three study countries with the highest overall involvedness of the state into the process of pension rights acquisition and the state readiness to share the risks of insufficient old-age income in Estonia and the lowest in Latvia.

Key words: *public pension, Baltic States, pension rights*

***JEL code**: H55 – Social Security and Public Pensions, H75 – State and Local Government: Health; Education; Welfare; Public Pensions, J26 – Retirement; Retirement Policies*

Introduction

The pension systems of three Baltic States are a very fruitful subject of research, as the study countries have entered the era of restored independence with identical social security systems, inherited from the Soviet times. Cultural, demographical and economic conditions are also quite similar among them. Pension reforms started in the mid of 1990-ties and now all three countries have three pillar pension systems. The research is all the more interesting for finding differences and discrepancies.

We would like to consider how state old-age pension benefits are earned by individuals during their pre-retirement years. Three Baltic countries have very much in common historically; they inherited the same social security systems from the former Soviet Union and underwent concurrent reforms in 1990s. In the middle of 1990s countries in transition were under the influence of a three-pillar model of pension systems propagated by the World Bank (World Bank, 1994). Therefore the general structure of reformed Latvian, Lithuanian and Estonian systems is practically the same and includes:

I. mandatory public pay-as-you-go pillar;

II. mandatory private funded pillar (voluntary in the case of Lithuania, but the vast majority of the working-age population are participating); and

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III. voluntary private pension funds.

Funded pillars function similarly, with some minor variations in secondary elements of their design (some of them would be discussed later in this paper), but the main principle involves keeping of individual funded accounts, where pensions are paid from a fund built over the years from members' contributions. The contribution rate is fixed (being at the same time subject to occasional or periodic revisions), and a person's pension is an annuity whose size is determined by the size of his lifetime pension accumulation, life expectancy and the rate of interest.

There is vast literature dedicated to reflections on social insurance and pension reforms in Estonia, Latvia and Lithuania, including comparative studies of two or three of them (e.g., Tavits, 2003; Aidukaite, 2003 and 2006), and even in a broader context of post-communist Central and Eastern Europe (Aidukaite, 2009 and 2011; Coman, 2011), They are mainly focusing on the transformation paths of social security systems, roles of political actors and policy transfer, discussions on welfare state concept, etc. The approach of this paper is closer to the one of Polish researchers (Kawinski et al., 2012) studying welfare state regimes in CEE: countrywise comparison of selected features and elements.

Some scholars (Bohle, 2007) have even grouped Estonia, Latvia and Lithuania as closely falling into the neoliberal model of the welfare state based on macroeconomic indicators of low welfare state spending, high income inequality, low minimum wage and low degree of decommodification in these societies. We would like to show that there are quite significant differences within this group, between the three Baltic countries.

Roles of the State

Gerald Hughes and Jim Stewart (Hughes & Stewart, 1999) have identified three roles of the state in pension provision: employer, provider and regulator. A significant part of wage workers are employed in public sector: they include employees of central and local governments, non-commercial public corporations, army, navy and police officers and ratings, educational and child-care institutions, cultural professionals, etc. In 2014, 26.54% of all employed persons worked in public sector in Estonia, 27.65% - in Lithuania, and 33.17% - in Latvia (data from national statistical bureaus). However, to the overwhelming majority of them generic norms of national pension legislation are applied, the state as employer not being different from a "normal" private employer. Few exceptions are made for military and police officers, diplomats, members of national parliaments and some other specific groups. This paper would not touch upon this question.

The second role of the state – pension provider – manifests in the design and arrangements in I pillar (pay-as-you-go). The state administers collection and registration of social insurance contributions (pension tax), as well as paying out benefits to existing pensioners. As noted by Nicholas Barr (Barr, 2014:74), mandatory public pensions require significant public sector capacity. Government should be able to: collect contributions effectively; track individuals across changes of name, jobs, employment status, and location; keep workers informed through regular statements; calculate benefits accurately, including actuarial calculations to adjust benefit levels for the age at which they start for an individual; pay benefits accurately and promptly; project future contributions and benefits to adapt the system slowly to evolving economic outcomes; and coordinate between central and subnational governments, if both are to have a role.

The third role of the state as regulator involves elaboration and updates of legislative norms defining, inter alia, pensionable age, minimum pension levels, pension benefit calculation and indexation rules, setting the contribution (pension tax) rates, stipulating "rules of the game" for private pension funds in II and III pillars and effecting control

and supervision over them. This legislative corpus is evidencing what obligations the states have assumed and what responsibilities they have undertaken. Government must be able to enforce compliance with contribution conditions, to protect asset accumulations, to maintain macroeconomic stability, and to ensure effective regulation and supervision of financial markets, including insurance and annuities markets.

Our main focus is exactly this last role specialisation: we'll demonstrate the levels of state involvement in various elements of pension systems of the Baltic States.

Funding of pensions

Pensions are financed from social budgets replenished by social insurance contributions made by insured persons and their employers. For some categories (e.g., self-employed, unemployed persons, those on sick-leave or maternity or child-care leave, working pensioners, etc., the contributions are made in accordance with special rules). Generic rates for persons participating / not participating in the 2nd mandatory funded pillar are given in the below two tables. More specific cases and chronological variations are considered in further sections.

Table 1

Rates of social tax for persons NOT participating in II pillar (generic case), as in June 2015

	Social insurance contributions (% of gross earnings)			
	Paid by		total	Of them to pensions
	Insured person	employer		
Estonia	-	33	33	20
Latvia	10.5	23.59	34.09	20
Lithuania	9	30.8	39.8	26.3

Source: authors' compilation from national social insurance agencies data

Table 2

Rates of social tax for persons participating in II pillar (generic case), as in June 2015

	Social insurance contributions (% of gross earnings)					
	Paid by		total	Of them to pensions		
	Insured person	employer		total	1st pillar	2nd pillar
Estonia	**2**	33	35	22	16	6
Latvia	10.5	23.59	34.09	20	15	5
Lithuania	**10**	30.8	40.8	27.6	24.6	3

Source: authors' compilation from national social insurance agencies data

In Estonia and Lithuania, 2nd pillar participants make additional contributions. Besides that, in Lithuania the state makes extra payments to II pillar pension fund from general budget (financed by other taxes).

The proportion between 1st and 2nd pillar contributions was changing and is subject to future changes.

The second pillar is mandatory in Estonia to the persons born in 1983 and later and in Latvia for the persons born on July 1, 1971 and later. Participation is voluntary in Lithuania irrespectively of age. Those who have joined the 2nd pillar voluntarily do not have right to "change their mind" and leave the pillar in all three countries (except

for the Lithuanian case, where II pillar plans participants had a "window" in 2013 to decide whether they stay in the scheme, or stop their participation).

Contribution rates to II pillar

In Estonia, the initial scheme provided 6% rate (2% paid by the employee and 4% taken out of those 20% paid by employer). This rate was planned to be constant. However the financial situation worsened and it was decided to stop all payments to the 2nd pillar in June – December 2009 and offer the participants two options: to make or not to make contributions in 2010 with different compensation proportions in the subsequent periods. In 2013, participants were offered one more choice – to increase personal contributions from 2% to 3% in 2014-2017 in return for the state reciprocal increase of its part to 6%.

In Latvia, the initial plan prescribed gradual increase of the II pillar share in pension tax from 2% in 2001 to 10% in 2010 (and further it was expected to stay at that level, by that the proportion between I and II pillar contributions would reach 50:50). However, after reaching 8% in 2008, it was cut down back to 2% in 2009-2012, and the current version of the law prescribes to raise the rate to 6% in 2016 without further increase.

Lithuania started from 2.5% in 2004, gradually rising the rate up to 5.5% in 2007, where it was initially intended to remain. But, similarly to Estonia and Latvia, the crisis has resulted in gradual reduction of the rate to as low as 1.5% in 2012. In the end of 2012 the system has undergone substantial reform. It was decided, that from the year 2014, the second pillar would be financed by three sources: in addition to the part of person's obligatory social insurance contributions, personal contributions should be made by workers (like in Estonia), and that **the state would also subsidize pension funds from state budget** (the amount of state subsidy is the same for all, irrespectively of the actual personal wage, it is calculated from average wage in the country and in 2015 it is 6.61 EUR per month per person).

Table 3

Rates of social tax for persons participating in II pillar in Lithuania (generic case)

	2014-2015	2016-2019	2020-…
Percentage points of obligatory pension insurance contributions	2%	2%	3.5%
Additional personal contributions as percentage of person's wage	1%	2%	2%
State subsidy as percentage of average wage in the country of the year before last (paid to the pension fund from the state budget)	1%	2%	2%

Source: Ministry of Social Security and Labour of Lithuania

In this way it was intended to reduce the part taken away from the current PAYG system on the one hand, but to make contributions big enough to enable saving an amount which would be an essential supplement to the general PAYG pension on the other hand. The new rules are fully applicable for the persons who join(ed) the system in 2013 and later.

Participation is voluntary – every person insured for full pension may decide to join the system or to stay only in the general social insurance (PAYG) system. In this case, no part of his/her contributions is directed to the personal account, but also no personal contribution is required and no state subsidy granted. Second-pillar participants who joined the system before 2013 were additionally allowed to choose other options. They might decide to stop their participation in the second pillar at all. In this case, their accumulated accounts remain in II pillar schemes until the former participant reaches retirement age (no further contributions are being paid, but no immediate money withdrawal) - this option was chosen by 2.3% of those who had this right (appr. 24 thous. persons have made this choice). Another option (the default one) - was to continue participation in the second pillar under old rules, i.e. with

no additional personal contribution (and with no state subsidy), it was chosen by 64.5% (684 thous.). 33.2% of pre-reform participants (352.5 thousands) of the second pillar have joined new scheme: increased personal contribution in return for additional state subsidy.[3]

One can clearly see, that Estonian and Lithuanian legislation is more flexible and offered more choices to II pillar participants, as well as demonstrated the state's willingness to assume more risks and responsibilities, than in Latvia.

Taxation of pensions

In Estonia, all pensions are taxed by income tax (in 2015 – 20%), but there is an additional tax allowance for pensions. The tax-free income for pensioners is 374 EUR per month [June 2015] that is pretty above the average pension benefit, so the effective tax rate on pensions is very low.

In Latvia, state pensions are subject to income tax – 23%. The tax-free income for pensioners, like in Estonia, is higher than for those in working age and amounts to 235 EUR. This threshold is below the average pension benefit, so the majority of old-age pensions are subject to the tax. Working pensioners are paying not only income tax, but also social insurance contributions (but at a reduced rate: 8.84% instead of 10.5%).

In Lithuania no income tax is levied on pension benefits paid from statutory schemes.

Acquisition of pension rights during working career

1. Minimal old-age pension benefit

The eligibility for an old-age pension is restricted by minimum mandatory period of work experience. This period equals 15 years in all three countries (Latvian legislation prescribes the increase in the minimum mandatory insured service record to 20 years in 2025). In Latvia, the minimum guaranteed amount of pension depends on the length of service.

Table 4

Minimum amounts of state old-age pension benefit (June 2015)

<table>
<tr><th rowspan="2">Estonia</th><th colspan="2">Latvia</th><th rowspan="2">Lithuania</th></tr>
<tr><th>Length of service</th><th>Amount</th></tr>
<tr><td rowspan="4">158.37 EUR</td><td>15-20 years</td><td>70.43 EUR</td><td rowspan="4">94.50 EUR
social assistance pension</td></tr>
<tr><td>21-30 years</td><td>83.24 EUR</td></tr>
<tr><td>31-40 years</td><td>96.05 EUR</td></tr>
<tr><td>>40 years</td><td>108.85 EUR</td></tr>
</table>

Source: the authors' compilation of the national social insurance agencies data (situation on 08.06.15)

There are benefits for elderly persons who do not qualify for a social insurance old-age pension, i.e. have less than 15 years of insured service record. In Estonia and Lithuania such persons are receiving minimum benefits. Estonian legislation imposes on them additional 5-year residence requirement. In Latvia, in addition to the similar 5-year

[3]Figures from State Social Insurance Fund Board of Lithuania http://atvira.sodra.lt/en-eur/index.html (retrieved 02/05/2015)

residence requirement, age restrictions for such persons are stronger (only those whose age exceeds the pensionable age by 5 years may apply) and the very benefit – lower: only 64.03 EUR.

All three Baltic States are in a very short list (accompanied by Hungary and Malta) of European 'black sheep" – the countries that have not ratified ILO Social Security (Minimum Standards) Convention, 1952 (No. 102). The Convention sets the lower limit of the old-age pension benefit as 40% of the wage of a skilled manual male employee (or 50% of the average insured wage). Moreover, our northern neighbours – Finland, Sweden and Norway (as well as Germany, Austria, Switzerland, The Netherlands, Czech, Slovakia and Cyprus) have ratified the more recent and more generous ILO Invalidity, Old-Age and Survivors' Benefits Convention, 1967 (No. 128) prescribing even more generous lower limits: 45% of the wage of a skilled manual male employee (or 56.25% of the average insured wage). The corresponding figures in the Baltic countries are significantly lower: in 2014, the minimal pension made only 9.2 % of the average gross wage (12.6% of the average net wage) in Latvia, the respective figures in the other two countries are also very low: minimal pension in Lithuania made 14.0% of average gross wage or 17.9% of average net wage, and in Estonia 14.9% of average gross wage or 17.8% of average net wage.

2. I pillar old-age pension benefit

The first-pillar benefit in Estonia and Lithuania comprises two main components: a basic non-contributory (i.e. not depending on the actual amount of the contributions paid from a person's earnings) component, and insurance component (related to paid contributions). **Latvia lacks the first member of sum and has only insurance pension**. Many authors (e.g., Chłoń-Domińczak & Strzelecky, 2013;Hagemejer& Woodall, 2014) warn that it brings very painful consequences to individuals with shorter, broken careers (due to longer spells of unemployment, precarious employment,or family care responsibilities) and with low levels of lifetime earnings.

Basic non-contributory component

In *Estonia* the basic pension is absolutely flat and presently (June 2015) equals 144.2585 EUR (it makes appr 38% of average old-age pension). This amount is indexed annually.

In *Lithuania* the non-contributory component is not flat for everybody, but depends on the length of service record. The "basic pension" amount set by the government (presently – June 2015 – it is 105 EUR) is used as a basis for further calculations: persons with 30 years of work experience receive 110% of the basic, those with less than 30 years record are "punished" by reducing this amount by 3.3% for each 'missing' year below 30; those having working experience more than 30 years get extra 3% of the basic for each additional year. Thus, the non-contributory component may vary from 55% of the basic (57.75 EUR) for a person with 15 years qualifying period to 155% of the basic (162.75 EUR) for a person with 45 years of service record.

Insurance component

The insurance component of the first-pillar pension depends on how much social insurance contributions (or social tax, in terms of Estonian legislation) have been paid on the salary of the pensioner throughout his/her working life, but is also calculated in different manners: Estonia and Lithuania are using pension points (PP) schemes, while Latvia has notional defined contribution (NDC) system. In a PP system, workers earn pension points based on their earnings each year. At retirement, the sum of pension points is multiplied by a pension-point value to convert them into a regular pension payment. Pension points are calculated by dividing earnings by the cost of the pension point that can be equal, for example, to an average nationwide wage. The pension benefit then depends on the value of a point at the time of retirement.

In *Estonia*, each insured person is annually awarded with a number of points (known there as "annual factors"), that are equal to the ratio between his/her salary and nationwide average insured wage[4] in the respective year (average insured wage differs from average wage, since the first is taking into account those unemployed, on sick-leave, on maternity or child-care leave, etc.). Thus, if one's salary was equal to the average insured wage – s/he gets one point, if it was twice higher than average – two points, if twice lower – 0.5 points, and so on. The points earned throughout the working career are then summarized, and the sum multiplied by the monetary value of one point. Presently (May 2015) the monetary value is set at 5.245 EUR (this means that one year of employment with average salary adds 5.245 euro to future monthly pension benefit).

In *Lithuania*, the points (known there as "coefficients") are calculated by dividing individual's salary by the so called "insured income". When the pension calculation formula was introduced in 1994, the value of insured income was calculated according to the social insurance average contribution base data. Later, the government decided to discretionarily approve both components – basic pension and insured income. Due to this decision, the weight of one point is "devaluating" with the time going, while the salaries are growing. The monetary value of one point is presently (June 2015) set at 2.155 EUR (0.5% of the so called "insured income" amount - 431 EUR). A person may not be granted with more than 5 points per year in average (e.g., more than 150 points for 30 years of service), that means that persons with average lifetime earnings higher than 5-fold "insured income" are treated as if their earnings were exactly 5 times higher.

In both countries, if a person has opted or was mandated to join a second-pillar funded pension scheme, the amount of his/her first pillar pension benefit is reduced respectively: the points earned for each year of participation in a second pillar scheme are proportionally reduced.

In *Latvia* the insurance pension component is calculated according to a variation of NDC formula. The NDC approach follows the following general principles:

- The benefit is earned by insured individuals by "directing" part of their social insurance contributions to the personalized notional pension capital account. The contribution rate can be changed from time to time;
- The cumulative contents of the account are credited periodically with a notional interest rate, specified by the government. In Latvia, the accrued notional capital is annually valorized (uprated) in line with increase in the covered wage bill. These annual indices imitate the role of interest rates. When the total amount of wages on a nationwide scale drops below the last year figure – the interest rate is negative, and all prospective pensioners will suffer lower pensions.
- At retirement, the value of the person's notional accumulation is converted into an annuity, based on rules for measuring life expectancy;
- The account balance is for record keeping only, because the plan does not own matching funds invested in the financial market. This explains the term 'notional'.

Latvia also has an indirect "ceiling" for high pensions – wages above a certain level are not "taxed" with social insurance contributions, and are not, therefore, providing pension rights from the amounts earned above that maximum

[4]To be more precise, the ratio between the amount of social tax directed to state social insurance budget from person's earnings and average nationwide amount of social tax among all tax-payers in the respective period. For instance, if a part of social insurance contributions is directed to a II pillar pension fund the number of accumulated points is lower than for a person with the same salary but participating only in I pillar scheme.

value. In 2014, the ceiling exceeded the average insured wagemore than six fold[5].Thus, in contrast to Lithuania, a regressivity of taxis observed: those with higher salaries pay proportionally less taxes.

Although pension points and notional-accounts systems can appear very different, they are in fact closely related variants of earnings-related pension schemes. If the policy for valorising earlier years' earnings is the same as the uprating procedure for the pension point, the outcome (i.e., the amount of pension benefit) is thesimilar. Thus, in a generic case, typical wage-workers acuire pension rights quite similarly in all three Baltic countires, despite of very different formulations used in Estonian, Latvian and Lithuanian normative acts.

Pensionable service period component for the pre-reform period

While all three countries have implemented special mechanisms of translating the pre-reform earnings into post-reform pension benefits, their design is very different.

In *Estonia* the pre-reform service component depends only on the length of employment up until December 31, 1998 (i.e. years of employment and years deemed equal to employment, e.g. raising of children, compulsory military service, etc.). For one full year a person receives one pension point, irrespectively of actual earnings s/he had. These pension points are summarized with 'normal' pension points, earned after 1998 in accordance with the rules described above (insurance component), and have the same monetary value. E.g., a person with 15 years of pre-reform service shall, in May 2015, receive 78.68 EUR monthly in addition to the basic pension and insurance component.

In *Latvia* the pensionable service period component depends on the length of employment (and years deemed equal to employment; only full years count) up until December 31, 1995 *and* average earnings of the individual during the period January 1, 1996 till December 12,1999 from which social tax had been paid. The individual's average insured wage in 1996-1999 then is used for calculations and treated as if it were the person's wage during all pre-reform years taxed with 20% 'pension tax'. That is, 20% of the 'theoretical' cumulative pre-reform wage form the so called 'initial pension capital', which is each year up-rated with the same valorization indices as the 'normal' notional pension capital.

An individual's average insured wage is calculated by dividing the total sum of his/her insured earnings (salary, unemployment benefit, sickness pay, etc.) in this four year period by 48. That means, that if a person had interruptions in employment and was receiving no insured earnings during some period(s) within these four years, the average insured wage would be lower. In a point of fact, those years 1996-1999 were quite hard to Latvian economy and to many Latvian individuals who suffered from low wages, long-term unemployment without benefits, grey under-the-table salaries, being unaware of the importance of this period for the amount of their future pension. Therefore, the rules were complemented with two amendments:

1) For persons, whose average insured wage used for calculation of initial pension capital was lower than the average countrywide insured wage, this countrywide average is used instead of individual one, provided that such persons have accumulated at least 30 year-long service record. If their service record is shorter, and the average insured wage used for calculation of initial pension capital uprated by valorization indices is lower that 40% of the average countrywide insured wage in the year preceding the year of retirement, then the latter figure is used for calculating the initial capital.

2) In 2006, the supplements for each pre-reform year of service amounting to 0.25 per year were introduced (in 2009 the sum was increased to 1 EUR). Initially, they were granted only to persons with low pensions and long service record, but later extended to all pensioners. This was the only example of egalitarian

[5] The maximum annual amount which was subject to social insurance contributions was equal to 46,400 EUR (Cabinet Regulation No. 1478 dated 17/12/2013), while the monthly average insured wage – to 622.50 EUR (VSAA Statistics retrieved on 11/05/2015 from http://www.vsaa.gov.lv/lv/budzets-un-statistika/statistika)

approach in the Latvian pension system. However, in 2012 the assignment of those supplements has been cancelled: those who retired before 2012 are still receiving the supplements, but posterior pensioners are not. In 2014, the payment of the supplements is effected not from the special (social insurance) budget, but from the general state budget.

In *Lithuania* there are two options for calculation of the pre-reform component:

1) for each year of pre-reform employment (until December 31, 1993) an individual gets as many pension points (called annual earnings coefficient- a ratio between the individual wage and average nationwide insured wage in a given year) as is his average annual number of pension points in the period from January 1, 1994 until the date of retirement; or

2) for each year of pre-reform employment an individual gets as many pension points as were his/her best 5 best consecutive years between January 1, 1984 and December 31, 1993 (but not more than 5 points per year), provided there are reliable data on the individual's earnings in that time.

The first (simplified) option has been introduced in 2013, because the second option required much paper work in archives, since the data for 1984-1993 was often not so easy to be found. Initially, the legislators planned to substitute five best consecutive years before 1994 with five best consecutive years after 1994, such law-in-draft was prepared in 2008, but due to crisis has not materialised. The simplified rule, adopted instead, is criticized by experts (Medaiskis & Jankauskiene, 2013) for discouraging people in their pre-retirement age from working on jobs with low salaries, since it the becomes more 'profitable' not to work at all (contrary to Latvian case, periods with zero earnings are not counted). Secondly, since pension benefits are recalculated also for the persons who continue to work after retirement, the same effect can manifest for a person whose post-retirement salary is lower than average pre-retirement one.

3. Early / deferred retirement

The Baltic States have started with pensionable age inherited from the previous Soviet scheme: 60 years for men and 55 years for women. In the mid 1990-s all three countries have started to increase the statutory pension age, in 2010-2011 all three countries took a decision on further gradual increase of the retirement age. The targeted figure – 65 years for both men and women by 2026 – is the same across the three states, but the schedules differ. All three countries provide a possibility for individuals to invoke their pension rights earlier or later than the official statutory pension age.

In *Estonia* a person can retire with the early-retirement pension up to three years before the legally stipulated retirement age, but in such case the amount of pension is reduced by 0.4% for each month falling short of the legally stipulated retirement age (4.8% per year, total maximum reduction is therefore 14.4%). As to the postponed retirement pension, the pension is increased by 0.9% for each month by which a person postpones his or her application for the pension (that is 10.8% per year).

In *Latvia* a person having the insurance period of minimum 30 years can request premature pension benefit 2 years before reaching retirement age. Early retirement benefit is calculated using the same NDC formula and dividing the obtained result (called "granted pension") by 2 (the proportion was 80% before July 1, 2009). This benefit does not depend on the actual number of months remained until statutory pension age. It is worth to mention that the real proportion is even lower due to the influence of the *G*-factor (average remaining life expectancy), which, naturally, is greater for those retiring earlier. When a person reaches statutory pension age, the "granted amount" is automatically becoming his/her 'normal' old-age pension. Since the factor of average life expectancy (G) is a part of general formula, the benefit is automatically increased with decrease of G when a person opts to retire later than the official pensionable age and no additional incentives for late retirement are provided.

In *Lithuania* early retirement is possible five years before the official retirement age for a person who was registered as unemployed during the entire previous year and had acquired a minimum of 30 contributory years. The pension is decreased by 0.4% for every month of retirement before the official pensionable age (4.8% per year, total maximum available reduction is therefore 24%). It is also possible to postpone the beginning of pension payment, with an increase of pension value by 8% for each year of postponement.

Pension legislation of all three Baltic countries allows pensioners to continue employment after retirement and combine full or partial wage with full pension benefit, therefore, deferred retirement incentives are practically insufficient and do not encourage people to postpone their retirement.

4. Indexation of first pillar pensions

Estonian pension law prescribes yearly indexation of basic pension and monetary value of one year of employment. Benefits are adjusted annually in April according to changes in the consumer price index (20%) and the annual increase in social tax contributions (80%). The obtained figure *K* is then used for indexing the main parameters of first pillar pension: national pension is multiplied by *K;* basic pension is multiplied by *K x 1.1;* monetary value of one pension point is multiplied by *K x 0.9*. Thus, **the basic pension is increasing relatively higher in order to strengthen redistribution in favour of less paid employees.** Should *K* be lower than 1, no indexation takes place. During the crisis and early post-crisis years in 2009-2014, the Estonian government made ad hoc amendments to indexation rules (a smaller increase than prescribed by formula in 2009 and in 2012-2014, but no decline in 2010 and 2011).

Pension indexation rules have been recently amended *in Latvia*. The pre-crisis formula was prescribing annual indexation according to changes in the consumer price index, but it was revoked in 2009, and since then the government has only made ad hoc indexation of small pensions (not exceeding 285 euros) in 2013. It actually led to confusing cases when a person with a benefit equal to, to say, 284 euro after indexation started to receive a higher pension than his fellow with 286 euro benefit whose pension was not indexed at all. In 2014, another ad hoc indexation took place: indexation applied to all pensions, but only to the part under 285 euros. Further on, the threshold amount for indexation will be set at 50% of average insured wage and the indexation ratio is to be based on both the consumer price index (75%) and increase in the covered wage bill (25%).

In *Lithuania*, no rules for pension indexation exist. The levels of basic pension, insured income and other multipliers are revised and approved on discretionary basis.

5. Acquisition of pension rights during non-productive periods

The three Baltic states are distinguished by the manner of treating the unproductive periods, when a person is not employed: is a military conscript, or having maternity/paternity and child-care leave, sick-leave, receives unemployment benefit.

As of today, Estonia is the only Baltic country having compulsory military service, Latvia and Lithuania abandoned conscript armies. When the last two had conscripts, the state was paying social insurance contributions (to I pillar) for them from minimum wage. In Estonia, the state is paying social tax for soldiers not from minimum, but from countrywide average insured wage (this amount is revised once a year based on the previous year statistics), i.e. conscripts are getting one pension point per year of service.

Likewise, Estonians are the most generous in granting pension points to the parents of young children. There are special provisions to the parents / foster parents in multiple children families, to parents /foster parents and guardians of disabled children in all three countries, but here only simple generic cases would be discussed.

In Estonia, the state makes contributions (pays social tax) for one parent of a child under three years from the countrywide average insured wage (this figure is calculated by the Estonian National Social Insurance Board annually on the basis of the social tax information of the previous calendar year). At the time of writing these lines (June 2015), this yardstick equals €792.75. That means, that a person gets one pension point per year to his/her I pillar account.

The State makes additional contributions from the general budget to II pillar pension funds for one parent (either a mother or a father, and also a guardian or a caregiver) of a child born on 01/01/2013 and later. The amount of the contribution is set 4% of the countrywide average ensured wage (presently - €31.71), this is the amount that the state transfers to pension funds for one parent. Such additional contribution is paid from the date of childbirth until the child becomes three years old, regardless of the fact whether the parent has returned to work or not.

If a child's parent was born before 1983 and is not therefore participating in the II pillar (unless s/he had joined it voluntarily), s/he will get a supplement to the I pillar pension – by adding three pension points to a monthly pension benefit, provided this parent would have been raising the child for at least 8 years.

Before 2013, parents received less than one pension point per year: the state did pay social tax for parents only from minimum tax base that was considerably lower than the average taxable earnings. In order to remunerate the parents who raised children in those years, they are now granted with additional pension points: one parent (spouse of a parent, guardian or foster parent) for each child born during the period 31.12.1980 - 31.12.2012, whom they have been raising for at least eight years gets a supplement in the value of two pension points (from 2018 will become one pension point).

In addition to the pension points, for the parent who received parental benefits, 1% of the value of parental benefit was additionally transferred to the funded pension scheme in 2004-2012.

It was estimated that on average a parent with two children may receive an increase of their pensions of around 4-10% (Vork & Paat-Ahi, 2013). Accordingly, this would decrease the gender pension difference, as in most cases it is a mother who is eligible to the pension supplement.

Latvian mothers/fathers are accumulating notional pension capital during receiving maternity/paternity benefit – social insurance contributions (including pension contributions) are paid from these benefits (the maximum length of receiving maternity benefit is 140 days, paternity benefit – 10 days). Then, a parent may start to receive a child-care benefit or a parental benefit until the child becomes 1.5 year old – during this period social insurance contributions are paid for the benefit recipient only from the amount of 142.29 EUR (formerly 100 lats) irrespectively of the actual amount of the benefit.

In *Lithuania*, maternity/paternity and child-care benefits are treated like wages for pension point calculation (i.e. full amount counts). No transfers to II pillar funds are made, pension rights are accumulated only in I pillar.

In all three countries, during the period of unemployment a person gets as many pension points / notional capital as if his unemployment benefit were his/her wage. If a person retains the status of unemployed but is not any more entitled to receive the benefit – no pension rights are accumulated.

Regulation of private pension funds (II pillar)

1. Investment strategies

Each II pillar pension fund may offer one or several pension plans fitting under certain classification: the plans are divided into three or four groups in accordance with the investment strategy they use:

- conservative (not investing in stocks)
- balanced or small equity funds

- active or medium equity funds

- aggressive (investing in stocks mainly)

The borderlines among groups vary, e.g., in Estonia the proportion of stocks in fund portfolios is set in increments of 25% for the four groups (zero; < 25; 25–50; 50–75), while in Lithuania the limits are settled as follows: zero; < 30%; 30%–70%; > 70%. In Latvia up to 2007 the permitted share of stocks was defined as < 15% for the balanced plans and 15%–30% for the active plans; however, since 2008 the rules have been the same as in Estonia: < 25% for balanced plans and <50% for active plans. **Therefore, for instance, a plan having 35% of its assets as stocks in 2007 was considered "balanced"in Lithuania, "active" – in Estonia and not-permissible at all –in Latvia.**

The group of "aggressive" plans has been added in Estonia since 2010, earlier three first groups existed only (as they still are remaining in Latvia). Conservative plans have lower administrative costs than more active ones.

The Baltic States are not providing any protection to funded pillar participants in the way of setting minimum guaranteed rates of return, unlike other CEE countries. Such guaranteed yield may be expressed in relative value – when minimum required rate is calculated on the basis of industry's average (as in Bulgaria, Croatia, Poland and Romania); or in the form of absolute return guarantee of protection of nominal rate of return („at least zero" – Chech Republic, Romania, Slovak Republic) or real rate of return („at least real value of accumulated assets" - Hungary) (Kawinski et al, 2012). During financial crisis negative yields were observed in all tghree countries (Rajevska, 2013).

2. Pay-out phase: payments from the mandatory funded pillar

Upon reaching the pensionable age the 2nd pillar pension benefit can be received in several ways.

Estonia

The payment options depend on the total value of the units belonging to the owner of the units.There are four available options of converting the accumulated fund units to money:

1. Entire sum at once (bulk payment) – if the accumulated amount is too small to bring any worthful annuity (less than 10 national pensions, that means less than 1,583 EUR in absolute figures in June 2015)
2. Regular payments from pension fund (funded pension contract) – for accumulations not exceeding 50 national pensionēs. A pensioner should choose a suitable schedule in respect of the overall duration on the contract and frequency of payments. The older the person, the shorter the period across which the payments can be distributed. The payments can be arrangedmonthly, quarterly or annually.
3. Lifetime payments from insurance company. As a rule, a person concludes a funded pension insurance contract with an insurer for payment of the amounts contributed to a pension fund, and after the conclusion of the contract the fund transfers the amount contributed by the person to the insurer selected by such person. If the accrued sum is not sufficient (is less than 50 times the rate of the national pension), the insurer has the right to refuse to conclude the pension contract. The payments are made on the basis of the pension contract as lifetime annuities, i.e. until the death of the person receiving the pension or the policyholder. The payments made until the death of the policyholder are calculated by the insurer, using the annuity formula. The payments can be taken as monthly or quarterly payments. The sums may be in equal or increasing amounts and the payments can be received at least once in a quarter.
4. Lifetime payments from insurance company AND from pension fund. If the total value of the units accrued to a pension account is700 times the rate of the national pension, upon concluding a pension contract with an insurance premium corresponding to at least the 700-time rate of the national pension (i.e. 110.859 EUR in June 2015), the owner of the units has the right to keep the remaining units at their pension account. Further, these remaining units

- can be taken out as a single payment if the sum remaining on the pension account is less than 10 times the rate of the national pension,
- may be taken out as periodical payments from the pension fund (fund pension),
- may be used for concluding another pension contract,
- or paid as an additional insurance premium later.

If the fund pension agreed on for additional payments, the minimum calculated duration of the fund pension will be shorter.

Latvia

At retirement, the insured can purchase an annuity or have the funds credited to his or her NDC account, adding them to the first-pillar pension capital – in the latter case the general benefit formula reviewed above shall be applied to the both parts of the capital. However, the first option is practically not in use yet, since the only three insurance companies offering those policies require the applicant to have at least 4,500-5,000 EUR accumulated in a second pillar pension fund[6]. Very few Latvian residents have managed to accumulate such money: on 31/12/2013 the average accumulated capital was 1,372.22 EUR and even those with the longest possible record (12 years of participation) had on average 2,120.69 EUR[7]. In general, Latvian legislation regulates payments of funded pensions to a much lesser degree than Estonian and Lithuanian ones.

Lithuania

Regulation of payments is similar to that in Estonia, and also offers three ways of capital redemption: entire sum at once, periodical payments from pension fund, and lifetime payments from insurance company. Alternatively to NP-scale in Estonia, the reference frame is defined in terms of the "basic pension annuity" - an indicator of the preliminary amount of pension benefit payable every month for term of life. This indicator is calculated according to the procedure laid down by the regulatory authority. Then the result is compared to the 'basic pension', which is presently (June 2015) equal to 105 EUR. Depending on the comparison, the pension company determines how savings, in full or in part, can be paid out to the pension system member.

If calculated amount of basic pension annuity is lower than ½ of the basic pension (in June 2015 it means 52.5 EUR and corresponds to personal accumulations in II pillar pension funds of 10,572 EUR or less[8]), then a person can take the money as a one-time lumpsum benefit, or split it into drawdown payments. Participants with larger savings in the II pillar are obliged to by a lifetime annuity from an insurance company with at least quarterly payments.

On the opposite side of the savings scale, if the calculated amount of basic pension annuity is three times higher than the basic pension (315 EUR, or, respectively, more than 63,434 EUR[9] accumulated on pension fund accounts), the share of assets in excess of the lump-sum payment for the basic pension annuity which is triple the amount of the basic state social insurance pension can be paid out as a lump-sum pension benefit or in periodic instalments.

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[6]VSAA, 2015.Valstsfondētopensijushēmasdarbība 2014.gadā, Retrieved from http://www.vsaa.gov.lv/media/uploads/UserFiles/vfps_statistika/2_pensiju_limenis/2014_gada_rezultati__majas_lapai.doc [retrieved on 20.03.2015]

[7]VSAA, 2014.Pārskats par valsts fondēto pensiju shēmas darbību 2013. gadā, p. 23. Retrieved from [[retrieved on 18.03.2015]

[8]Central Bank of the Republic of Lithuania, 2015. http://www.lb.lt/pensiju_anuitetas [retrieved on 25/04/2015]

[9]AB SEB Bankas, 2015. https://www.seb.lt/eng/private/pension/building-pension-savings/second-pension-pillar/payment-pension-benefits

3. Succession of funded pension.

Estonia

If a participant dies before reaching the pension age and starting receiving payments from the 2nd pillar fund units of mandatory funded pensions are inheritable. The inherited units may be transferred to the heir's pension account or cashed out. The same applies also to when the pensioner opted to receive payments from the pension fund without entering into insurance contract and dies before "depletion" of his fund units.

Since 01.01.2014, legal entities have the right to inherit the units of the mandatory funded pension. In case of succession, the legal entity may take the inherited units out in cash. As a rule, when the pensioner opted to receive payments on the basis of an insurance contract, those annuities are not inheritable. However, there are joint insurance contracts and insurance contracts with fixed duration of guaranty that can be, to some extent, considered as inheritable.

Latvia

Neither fund units (shares) of mandatory funded pensions nor the benefits are hereditable. On a contributor's death, funds are returned to the first pillar pool and subsumed in the overall pensions budget. However, should a person opt not to append the second pillar capital to the one accumulated in NDC scheme, but to buy an annuity – joint insurance contracts are possible with fixed duration of guaranty that can be considered as hereditable.

Lithuania

If a participant dies before reaching the pension age and starting receiving payments from the 2nd pillar fund units of mandatory funded pensions are inheritable. If a participant dies after reaching the pension age whether the sum left after the person's death can be inherited will depend on the type of annuity he/she chose – with or without succession rights.

4. Administrative costs

The administrative costs of asset managers in Estonia are included into the net value of a share: the management fee is deducted from the market value of the assets of the fund daily and the net asset value of a unit or the value of the investment made by the owner of the unit into the pension fund is decreased by it. The management fee varies from 0.7% to 2% (conservative plans being the 'cheapest' while active and agrressive – the most 'expensive' for their participants). There is also a special redemption fee – 1%, but Estonian legislation in contrast to Latvia and Lithuania allows aperson to participate in several funds simultaneously todiversify his/her risks.

In Latvia this management fees varied from 0.9% to 2.1% in 2014 (average being appr 1.55%), and fees are shown separately, not being included into the unit value. Starting from 2015, the fee is linked to the actual performance of the fund and now consists of two parts: a fixed part being 1% plus a variable part depending on rate of return, but the total fee should be not more than 1.5% for conservative pension plans and 2% for other plans.

In Lithuania the management fee is consisting of two parts: 1) assets fee (like in Estonia and Latvia described above) capped at 1% for all pensions plans escept for conservative ones (for them the limit is lower: 0.65%), and 2) contribution fee – charged on contributions: in 2013 the upper limit was reduced from enormously high 10% (although real market fees were significantly lower - about 3%) to 2% with further annual decrease by 0.5% (thus, today, in 2015, it equals 1%), totally disappearing by 2017. Fees are not included into fund unit value, but shown separately.

Latvia has one more administrative fee levied on contributions – taken not by fund manager, but by State Social Insurance Agency! The maximum amount is set at 2.5%, but so high rate was applied only once – in 2004. In the last 5 years it reached its peak in 2011 (0.79%) with the lowest rate in 2014 – 0.32%.

These rates are extremely high. For example, the median level of total administrative fees in funded systems around

the world ranged from 0.16 percent to 0.70 percent of total assets under management in 2011 (Volskis, 2014:359) As demonstrated by leading experts in pension issues, Nicholas Barr and Peter Diamond (Barr & Diamond, 2008), 1% of administrative fees may result in 20% decrease in final pension benefit after 40 years of contributions. While, for example, Latvian legislation allows for up to 4.5% (actual avereage historical figures being about twice lower), Lithuanian legislation today allows 2.5%, and Estonian – 2%. Small countries have limited options for economies of scale, and even more so in countries where most people have low earnings.

Conclusions, proposals, recommendations

1. Pension systems of the Baltic States have a lot in common, including the general structure and functional role of the three pillars. However, the design of the state pay-as-you-go pillars in Estonia, Latvia and Lithuania consist of different elements. Estonia and Lithuania have introduced variations of pension-point systems accompanied by basic non-contributory component; Latvia uses a notional defined contribution system with no basic component.
2. Despite of very different formulations in national legislations, in a generic case, during normal productive years wage-workers are accumulating pension rights in a similar way in all three countries: proportionally to individual wage and its ratio to average countrywide wages.
3. The approach of translating the pre-reform service years into pension rights varies the most significantly: Estonia has applied a fully egalitarian method; Lithuania offers its pensioners two options: a) based on best five consecutive pre-reform years, or b) based on average post-report wage; and Latvia has chosen average 1996-1999 wage as a basis. Latvian approach has brought the highest level of inequity, overproportionate number of extremely low pensions, which in turn lead to need for further ad-hoc amendments and supplements.
4. Indexation of pensions in payment is the most elaborated in Estonia and Latvia, with lack of clear rules in Lithuania. Therefore the government intervention with discretionary measures is most expressed in the latter.
5. Estonians are most generously entitled with pension rights during non-productive periods of temporary incapacity for work; a well-designed system of parent pensions has been developed in this country. Latvian parents are least socially insured.
6. Legal framework for II pillar is most elaborated in Estonia. Estonia and Lithuania demonstrate a more flexible attitude to funded pillar participants. All countries have enormously high administration fees at II pillar funds and have not legislated any guaranteed rates of return.
7. The overall involvedness of the state into the process of pension rights acquisition and the state readiness to share the risks of insufficient old-age income among the Baltic States are the highest in Estonia and the lowest in Latvia.

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