# FINANCIAL (IL)LITERACY AND CZECH RETIREMENT POLICY

#### Jaroslav Vostatek

#### Abstract

The failure to respect recommendations of the relevant international institutions might be a token of financial illiteracy of the government. Even after the "small" pension reform, the Czech public pension pillar continues to lack transparency and is incomprehensible for its common participants, which may also have significant impact on public finance. In order to determine the potential effect of the lack of transparency and of the financial illiteracy, the paper analyses also the differences between the Czech and the U.S. public pension pillars, including the different statutory retirement ages.

*Keywords: public pensions, financial literacy, statutory retirement age, pension insurance, flatrate pension* 

JEL Classification: H55, H53, J26

### 1. INTRODUCTION

"Consumers in most countries are generally not well informed about pensions. Both general facts about the structure of the pension system and specific data on their own pension entitlements are lacking. ... many people form no expectations of their retirement income at all. These problems are probably general to pension systems of all types" (Whitehouse, 2000). The world literature addresses these problems, in particular, in relation to privately managed retirement savings accounts which place greater responsibility on individuals for planning their retirement income. At the very least, people must choose which of a range of competing funds should manage their pension assets.

With its ruling of 2010, the Constitutional Court of the Czech Republic has also marked a point in the history of the Czech pension policy. The applicable bend points provided for in Section 15 of the Pension Insurance Act were declared unconstitutional by the Court "because, in its consequences and in combination with other parameters and the existing structure of the pension system, [the provision] does not sufficiently warrant the constitutionally guaranteed right to adequate material security as provided in Article 30 (1) of the Charter of Fundamental Rights and Freedoms and results in an unacceptable inequalities between different groups of pension insurance beneficiaries" (Constitutional Court, 2010). In this connection, the Court also held in its ruling that "the entire complex structure of the pension system is lacking transparency to such an extent that it is *de facto* fully incomprehensible for its addressees; the calculated amount of pension benefits has become unverifiable for most beneficiaries".

In principle, the Czech public pension pillar does not fall under any pension social model (Vostatek, 2015a). While public pension pillars in other countries also exhibit greater or smaller deviations from pension models (Vostatek, 2015b), it is the degree of such deviation that matters. This paper is primarily interested in the overall comprehensibility of our "pension insurance" and the potential impact of increased comprehensibility thereof on public finance in particular, as compared to the basic public pension system in the U.S., the concept of which is strikingly similar to the overall general structure of the Czech "pension insurance". More specifically, the paper deals with the differences in the retirement age between the Czech Republic and the U.S. and strives to explain the different behaviour of participants in the two countries in this regard. "Retirement age is the most visible parameter of the pension system

and one which sets a clear signal for people in making economic decisions. As such, increases in pension age have often proved among the more contentious elements of pension reforms, compared with other changes to retirement-income provision" (OECD, 2014).

# 2. CZECH PENSION REFORMS

The basic structure of the present Czech system of public pensions dates back to the mid 1990's. In the preceding, mostly uniform communistic system, pensions were largely dependent on the earnings, with the preferred "work categories" (mine workers, other hazardous professions) receiving preferential treatment and the nearly non-existent private farmers and self-employed being discriminated by the regime. With these exceptions, it was a universal defined benefit retirement system; pensions were calculated from the final wage (the average wage level of the top five years within the last ten years).

In 1989, an ordinary employee with a national average wage received, after 45 aggregated years taken into account, a relatively high pension amounting to 85-90% of net wage. After 20 retirement years, however, the employee could expect a minimum pension ("social pension"), which was nevertheless at a level corresponding nowadays to CZK 8,000. The ratios of the national average pension to the net pay and to the gross pay were then 64% and 50%, respectively. Insufficient indexation of pensions was a typical phenomenon; its insufficiency was effectively caused, in particular, by the so-called hidden price inflation (the long-term average of hidden retail price increase was approximately 2.5% per year); one-off campaign-based increases in pensions did not take this hidden price inflation into account. Bend points were used in the pension calculation to reduce higher earnings; the reduction coefficients (percentages) applied then were retained until 2010 (with a single minor derogation). In 1989, however, the first bend point corresponded to 92% of the median wage, which was significantly (by 78%) more than in 2010. The wage up to the first bend point was not and even today still is not reduced. Officially, this scheme constituted a national "pension security" rather than a social insurance system – it was a tax-financed public expenditure programme.

After the Velvet revolution, the discrimination of the private sector was abolished; the same was the case, in principle, for the preferred work categories. The real level of pensions paid out in relation to wages decreased, in spite of the introduction of periodic pension indexation. The social pension was not indexed at all until its abolition from 1996, and its level in real terms dropped to 16% of the average net nationwide wage during this period. After 1992, the universal pension security system was subject to targeted efforts to increase progressivity (solidarity) through a significant downward shift of the real bend points (to a level that is nearly comparable to the basic pension system in the U.S.). This can be put into context with the liberal tendencies which were then pushed forward and which could have gone as far in its results as to bring about a transformation of the "pension insurance" into a flat-rate, universal pension.

The "basic amount" of the pension is a constituent part of all current public pensions in the Czech Republic; it was developed through transformation of the state compensation allowance since 1996, which was introduced ("on a temporary basis") in 1990 as a social compensation for the one-off abolition of negative sales tax that resulted in a single-time jump in retail prices, initially for all citizens. One year later, this cost-of-living allowance was already restricted to children and non-active pensioners while, just a few years later, it was fully "incorporated" into child allowances – and into pensions as their "basic amount".

From the technical point of view, the "basic amount" of the pension is an analogy to the basic amounts of pensions in the historical workers' social pension insurance schemes which were characterized by an overall low level of pensions and the basic amount represented a sort of universal pension for all beneficiaries, indicating the preference for workers with lower earnings. It was thus a redistribution device within the blue-collar pension system. With the increased level of blue-collar pensions, the purpose of the basic pension amount got lost. In our country, the basic amount was last in existence under the 1948 national insurance act and was replaced by the introduction of bend points for higher earnings in the calculation of old-age pensions.

The second component of all Czech pensions is the "percentage amount" of the pension which is, as a rule, significantly higher than the basic amount; its minimum level is 770 CZK. The percentage amount in old-age pensions is calculated from average earnings (since 1986) indexed to the present wage level and then reduced by the reduction coefficients. The introduced system of indexations of paid pensions also enabled the governments to unilaterally reinforce or, vice-versa, weaken the role of the basic amount in pensions.

The ruling of the Czech Constitutional Court referred to above should be a major lesson for the Czech pension policy. It was initiated by a complaint filed by a disability pensioner concerning the low replacement rate, namely 19% of his personal assessment base – which, in his opinion, did not constitute adequate material security that is declared as a right in the Charter of Fundamental Rights and Freedoms. The complainant considered it an absolute inequality in a situation where the average replacement rate for all old-age and disability pensions was 44%. The Constitutional Court upheld the complainant's view, basing its ruling on the fact that – in this area – we have had a "public social insurance" scheme since 1996.

The Constitutional Court derived the substance of the system, in fact, from the title of the Act – on "pension insurance". In principle, the Court had no other option because there is no provision in the Act itself or elsewhere (e.g. in the Constitution) that would provide for a definition of "pension insurance"; we lack the characteristics of the entire social system – unlike Germany, for instance, which has a code of social laws including a comprehensive concept. We are also lacking, among other, one important "detail" in the title of the Act: one additional adjective that would distinguish the statutory "pension insurance" from the private pension insurance. In practice, this results in complex formulations such as "pension insurance covered by the Pension Insurance Act".

The Constitutional Court did not reject the intra-generational redistribution associated with the existence of bend points and coefficients, although it had the option to do so, given the developments of the social pension insurance systems in Europe after WWII. In this regard, the Constitutional Court could have also rejected the existence of the basic amount of pensions or, possibly, "admit" it, but fully reject the reductions for the percentage amount of pensions. From the point of view of pension social models, the basic amount should be either abolished or replaced by a universal pension – for all residents rather than just for insured beneficiaries with insurance period above 30 years. Clearly, the Court did not dare to engage in such far-reaching "revolution" in the Czech "pension insurance". The Constitutional Court "only" repealed Section 15 of the Pension Insurance Act, containing the valid bend points applied to determine the reduced personal assessment base for the calculation of the percentage amount of the pension, and forced the Government and the Parliament to act swiftly. A general lesson to be learnt from this case is that the title and contents of laws should always be consistent. If we want to have a social pension insurance scheme, our pensions should be predominantly or (even better) entirely dependent on the insurance contributions paid (or, as appropriate, on the earnings from which the insurance contributions were paid).

In the Czech "pension insurance" (under the Pension Insurance Act), redistribution of social nature prevails over the insurance components, which is also manifested in the so-called "progressivity index", reaching a level of 62.2 – significantly higher compared to all other neighbouring countries: Germany with 26.8, Austria with 27.9, Poland with 1.0 and Slovakia with 13.9 (OECD, 2013a). The progressivity index of 100 belongs to universal pensions and,

on contrary, the progressivity index of 0 goes hand in hand with a pension fully dependent on the earnings, i.e. an insurance system (whether social or private). In spite of that, employees and employers in our country pay, to the national budget, "insurance premiums" to the old-age "pension insurance" at a rate of roughly 20% of the wage (the theoretical old-age component of the total rate of 28%). If the current Czech old-age pensions would be divided into an insurance component and a solidarity component and if the insurance component would be financed from the insurance premiums, these premium rates would range at 7-8% of the wage – judging by the progressivity index referred to above. This, too, shows a considerable degree of deformation in the value relations in the Czech public "pension insurance" system and in the Czech tax system.

The Government and the Parliament had to respond quickly to the Constitutional Court because Section 15 was repealed with effect from 1 November 2011. The response was not as radical as would be appropriate for the Court ruling. The first bend point was newly just parameterized as 44% of the general assessment base (national average earnings, NAE); below that threshold, earnings continue to be exempt from reduction. The most significant change consisted in setting the second bend point at 400% of NAE instead of the previous ca. 114%, with a reduction rate of 26% newly applicable up to this substantially increased bend point (following a transition period) and 0% above that bend point. Figure 1 shows the group that benefited the most from the small pension reform – employees with earnings, say, above 150% of NAE. The disability pensioner, in whose favour the Constitutional Court ruled, would receive a significantly higher pension today. In the range of gross wages up to CZK 40,000 per month, the changes were relatively small, but affected rather a lot of beneficiaries – and a number of those opted for early retirement, under the influence of information provided in media, with the corresponding impact on the state budget as well.





#### Source: Author

When the Czech Government, in response to the ruling of the Constitutional Court, decided to retain the system of bend points and coefficients, it should have – from the systemic point of view – abolished the basic amount of the pension. Even in this case, however, it would be desirable to provide expert explanations as to why the bend points and coefficients are or should be set at the respective levels. In an evidence-based case, one can only rely on the existence of such a system in the U.S., which is very little from the perspective of pension theory and policy. We know how the bend points and coefficients came into existence – before the Velvet revolution, however, the key first bend point was set at 77% of NAE; since 1996, it decreased to approximately 52% of NAE, then it continued in the gradual decrease (with small fluctuations) down to 42% of NAE; since the small pension reform, it has been annually adjusted to remain at 44% of NAE or, to be more precise, of the general assessment base. In

other words, we know how the bend points came into existence and how they developed, but nobody even tries to explain why the key bend point is set just at the level of 44% of NAE.

# 3. U.S. "SOCIAL SECURITY"

The 1935 U.S. "Social Security" Act was enacted in response to the Great Economic Crisis; its most important component is constituted by public old-age pensions "packaged" as social insurance. The primary aim of this mandatory "old-age insurance" was and is to prevent poverty by providing pensions at the level of subsistence minimum (Kinsella and Gist, 1995); nevertheless, the benefits should also reflect individual equity and the system is financed through "insurance contributions", making the benefits an "earned right" – rather than social assistance or a tested benefit, as appropriate (Barr et al., 2014).

The insurance contribution rate is fixed at 12.4% of the wage, of which half is paid by the employer. This "contribution", commonly referred to as payroll tax, is deducted from the wage up to an earnings ceiling, amounting to USD 118,500 in 2015 or approximately 290% of the average wage in the U.S.

The U.S. "pension insurance" system is (particularly for us) remarkable in that it applies bend points when calculating pensions from the previous average (indexed) monthly earnings (up to the earnings ceiling). In 2015, the following two bend points were applied: USD 826 and USD 4,980. As Figure 2 shows, 90% of earnings below the first bend point, 32% of earnings between the first and second bend points, and 15% of earnings above the second bend point are taken into account in the pension calculation. The maximum level of pension granted in 2015 was USD 2,663. The bend points and coefficients are reflected in the so-called progressivity of pensions, similarly to that in the Czech Republic.



Figure 2: Bend points and coefficients in old-age pension calculation in the U.S. (2015)

Source: Meyerson (2015)

The shapes of the curves in Figures 1 and 2 are very similar to each other, in particular when we compare the U.S. curve with the Czech curve before the "small" pension reform. The U.S. and the Czech reduction coefficients up to the first bend points were and still are today at 90% (U.S.) and 100% (Czechia). The same coefficients to take into account earnings between the first and second bend points were and are set at 32% in the U.S.; in Czechia, the reduction coefficient was 30% in 2010 and 26% today. Above the second bend point, a 15% coefficient was and is applied in the U.S. while, in Czechia, the same coefficient was previously set at 10% and today is zero. The earnings ceiling for pension calculation is set at 264% and 400% of the average nationwide wage in the U.S. and in Czechia, respectively. There is a greater difference between the relative level of the first bend point in the U.S. (22% NAE) and in Czechia (44% NAE). The second bend point in the U.S. is set at 133% of NAE; in our country, it amounted to 114% of NAE before the reform and now it is set at 400% of NAE.

To close the comparison of calculations of the reduced average earnings, we can conclude that the reduction structure is overall identical – and equally comprehensible. If the clients or experts or, as the case may be, politicians accept substantial reductions of higher employee earnings to be applied for the calculation of old-age pensions, it is a comprehensible structure – a structure which, however, has essentially nothing in common with the social insurance model as we know it in Europe, in particular thanks to the initial social pension insurance systems in Germany, Austria or Czechoslovakia. In any case, the figures specified above confirm that both the Czech and the U.S. "pension insurance" systems can be classified as Beveridge type rather than Bismarck type systems.

The basic modern Beveridge-type concept of old-age pensions, however, does not operate with bend points and coefficients. A modern liberal solution consists, in particular, in flat-rate pension provided at the level of the subsistence minimum, to be understood as including housing costs; 30% of NAE can be considered a benchmark (still reasonable upper limit) here (Mercer, 2015). By coincidence, it would be relatively easy in the current Czech earnings and pension circumstances – in the technical, redistribution-oriented terms – to implement a pension reform consisting in dividing the current Czech "pension insurance" into a flat-rate old-age pension at the level of 30% of NAE and a genuine (fully earnings-related) old-age insurance pension, with a premium rate at 9-10% of the wage. The corresponding political assignment aiming towards full transparency and comprehensibility of public pensions, however, is unavailable in our country at present – and it remains a question whether this situation cannot be easily explained by financial illiteracy or by simply different interests of the current pension experts in the political parties.

If we disregard the real possibility or the need to split the current Czech public pension pillar into two clear-cut public pillars (which was also recommended by the World Bank), we are left with the option of abolishing the existing basic amount of pensions with the rate set at 9% of the average wage. Flat-rate pension at this level makes no sense, as it is simply absolutely insufficient; if the party experts are not willing to triple this "amount", they should eliminate it altogether – for the sake of the logic of the matter and, thus, for the sake of a greater comprehensibility that would result from the substantial simplification of the pension structure. At the same time, we assume also adjustments to the bend points and coefficients; this proposal is not aimed at decreasing or increasing the overall relative level of old-age pensions.

A higher comprehensibility of the U.S. system of public pensions is also determined by the simple calculation of the average earnings of the clients for the purpose of determining the reduced assessment base. In the U.S., the indexed average of earnings for the 35 best years is calculated. Unlike in Czechia, no substitute insurance periods (not even for children), excluded periods, etc. are used here. Here, too, a reform implemented according to the recommendations of the international institutions would significantly increase the transparency of the Czech system.

# 4. **RETIREMENT AGE**

In our country the National Insurance Act (1948) introduced dual retirement age depending on the insurance period: if the insurance period exceeded 20 years, it was possible to retire at the age of 60 years. The other option was a retirement age of 65 years requiring 5 years of insurance period. Since 1957, retirement age of 55 years was introduced for 1<sup>st</sup> category employees (underground mine workers and airmen) and for women. A worldwide rarity consisted in the retirement age of women being differentiated based on the number of children, which was introduced in Czechoslovakia in 1965 in the following form: 57 years for childless women, 56 years for women with 1 child, 55 years for women with 2 children, 54 years for women with 3-4 children, and 53 years for women with 5 and more children.

The statutory retirement age has been gradually rising in Czechia since the relevant 1995 act. In 2011, the Government decided to "accompany" the small pension reform with further raising of the basic retirement age, and this time for infinity. Based on this act, the retirement age in 2051 and in 2100 should be 68 years and 75 years, respectively. Starting from persons born in 1975, the retirement age of women and men should be fully unified. Men born in 1953 are subject to a retirement age of 63 years, which they will reach this year. Childless women born in the same year are subject to a retirement age of 62 years, which they reached in 2015.

A general comparison of the statutory retirement ages indicates that, in the U.S., the retirement age is 66 years (to be increased to 67 years between 2021 and 2027), while in the Czech Republic it ranges between 56 and 63 years. We must take into account the different life expectancy for seniors, for persons aged 65 years for instance; their life expectancy is 84.1 years in the U.S. and 82.8 years in Czechia (WorldLifeExpectancy, 2015) – this implies that the statutory retirement age in the U.S. is, in relative terms, roughly 3 years higher than in our country. The net replacement rate for earnings at the level of 100% of the average wage is (was) 62.4% in Czechia and 47.3% in the U.S. (OECD, 2013a) – in other words, we can indicatively state that state pensions are about 24% lower in the U.S. The pension insurance premium rate is 28% of the wage in the Czech Republic and 12.4% of the wage in the U.S. and in Czechia, the figures roughly "fit together", especially if we would also take into account the "premiums" for health insurance of Medicare senior employees, and show that a higher "full pension" (OECD model – life-long employment, no interruption) is reflected – together with the lower retirement age – in the higher insurance premium rate in our country.

It is an issue of public choice: on a model basis, we could have a higher retirement age with a higher replacement rate or, instead, a system with higher wages and a lower insurance premium rate. It is a trade-off, a give and take. Pension theorists use three interlinked variables insurance (premium rate, average length of pension benefits /period of retirement/ and level of pensions) for basic explanation: when two out of the three variables are determined, the third one is just computed. However, things do not work that way in public policy, in particular in a defined benefit pension system and especially in the conditions of the Czech non-transparent "pension insurance" system: the most transparent variable out of the three specified above is indeed the retirement age.

The EU Council has repeatedly recommended that our country should accelerate the increase in the retirement age: "the statutory retirement age is planned to increase over the long run but too slowly in the medium term" (EU Council, 2014). The Czech government refuses to do so, arguing that the current pace of increase of the retirement age corresponds to the life expectancy development; consequently, the average period spent in retirement is not higher than in most other member states (Government, 2015). Our analyses show that the Czech government could or, possibly, should be more open-minded. The statutory retirement age of men and its increase is adequate in relation to Germany, for instance; however, this is not the case with women – there is scope for acceleration of the extension of the retirement age.

An accelerated increase of the retirement age for women in the upcoming period is, naturally, a politically very sensitive issue; in addition, the relevant point of the coalition agreement of Sobotka's government is indirectly headed towards fixing a ceiling of the retirement age, which is interpreted as setting a ceiling at 65 years. Minister Marksová submitted a "legislative intent for an act to end the increase of the retirement age upon reaching 65 years of age and to implement a regular review mechanism for the fixing of the retirement age." "The proposed review system for the fixing of the retirement age", which was approved by the Potůček Pension

Commission, does not foresee any changes in the level of the retirement age until 2044 when, under the applicable law, the statutory retirement age should increase to 67 years: with the rate of increase of the retirement age being set at 2 months per year after 2030. This is on the understanding that there will be no major changes, particular in the demographic developments. The head of the competent team, T. Kučera, expects the life expectancy of persons aged 65 years to be at 20 years in 2030. The period spent in retirement thus corresponds to 25% of the total lifetime of those persons. According to the Commission, this 25% share should be the crucial relevant value for further regular (possible) adjustments of the statutory retirement age; the final decision should still belong to politicians. The legislative intent of this act gives the impression that fixing a ceiling for the retirement age at the level of 65 years is somehow compatible with the review mechanism that should operate on a continuous, indefinite basis. A solution to this stalemate could be to guarantee the gradual increase of the retirement age until 2030, on the understanding that, in the upcoming period until 2044, the retirement age would increase by 2 months per year, unless decided otherwise by the Parliament. A correction of the existing tables for the increase of the retirement age is of pragmatic use only if it is accompanied by another amendment to the Pension Insurance Act.

Foreign and international research concluded that increasing the retirement age in a universal public pension system is not limited by health-related aspects. If, in certain professions, it is impossible to continue working after reaching the age of 60 or 65 years, for instance, it is a problem of that specific profession or the competent branch, which can be solved through occupational pensions. From the health perspective, the increase of the retirement age in a universal pension system can be accelerated so that life expectancy in retirement would decrease to 15 years, for example.

Setting the statutory retirement age at such a level so that the target life expectancy of the participants in the year when they reach the statutory age is at the level of 15 years, is still feasible today or even in the future, for that matter – also in the opinion of the World Bank experts (Schwarz and Arias, 2014). In 2050, the corresponding retirement age in Czechia and in Western Europe would be approximately 72 years and 74 years, respectively. It goes without saying that this would eliminate potential future problems with the financial sustainability of pension systems or possibly create scope for increasing pensions or reducing the premium rates. It is a challenge, but its acceptance by the politicians probably cannot be expected by anyone.

In the initial social insurance systems, the statutory retirement age was set relatively very "strictly" – there was no possibility for early retirement, and it was also not possible to benefit from a pension while being engaged in a gainful activity. This has changed significantly in most countries after WWII. A fixed retirement age is nowadays typical for flat-rate and means-tested pensions; in principle, it makes no sense here for anybody to retire early, as these are universal benefits. In countries with a social insurance system, early old-age retirement experienced a boom – this is a sign of flexibility on one hand (pension can be adjusted using actuarial methods), while also (partially) solving problems outside the pension system (unemployment) on the other hand and, last but not least, it is attractive also from a purely political perspective, especially if the funds are available in the system. Early retirement was used, for various reasons, even without cutting the level of pension or, as the case may be, on the condition of a long insurance period. Once the pension systems started facing strong financial pressures for different reasons, there was a strong turn in the policy in most countries and, for instance, early retirement started to be limited, including its increased sanctioning (high reductions for the earliness of the retirement compared to the common actuarial method). Any reform of review of the retirement age should also take into account the related pension issues, such as the minimum insurance period, reduction and bonuses for earlier or later entry in the system to benefit from pension.

Early and later retirement – compared to the statutory retirement age – is or might be, as appropriate, also an essential modification of this retirement age as well as of the computations of the pension level in relation to the previous earnings. There are significant differences between various countries, for that matter. Sweden, for example, has two differently designed retirement ages (without the possibility for early retirement): one for the NDC system (61 years, with actuarial incentives to continue working) and one for tested ("guaranteed") pension (65 years, no incentives). The Swedish retirement age concept is highly reasonable – in most other countries, this is a product of political mechanisms where problems are often not solved systematically from the model perspective.

In our country, the possibilities for early retirement have been relatively limited following the small pension reform. At present, early retirement is only possible at the age of 60 at the earliest, which means that women with more children are not able to retire early at all. In 2013, nearly all early old-age pensions were granted no longer than one year prior to the statutory retirement age, while in the period 2009-2011, there was a large majority of pensions granted 2-3 years before the statutory retirement age. The small pension reform caused a flow of early retirements, under the influence of information provided in the media. The reform increased the reduction rate for the assessment of early old-age pension where the period between the pension being granted and the person reaching the retirement age is longer than 360 days. The reduction rates for the calculation base are now scaled by 90 days (also commenced) as follows:

- 0.9% for the period of the first 360 days;
- 1.2% for the period of the next 360 days;
- 1.5% starting from the  $721^{st}$  day.





Source: Queisser and Whitehouse (2006)

Increased reduction rate for early retirement more than 2 years before the retirement age to 6% per year is certainly commendable; nevertheless, the reduction rate should also be increased for the first two years and, in addition, 6% per year is not a sufficient reduction in actuarial terms, also because the reductions do not affect the basic amounts of the pensions. A fundamental reform of early old-age retirements is a must in our country. The actuarially neutral level of reduction rate for early old-age retirement is roughly 7-8% per year (Queisser and Whitehouse,

2006); based on the 2002 mortality data, the necessary neutral reduction rate for Czechia might be approximately 7.4% per year – see Figure 3.

In practice, the system of reductions and bonuses for early or later retirement represents (so far) a significant correction of the statutory age in the defined benefit system of social old-age insurance, although this did not have to be (and initially was not) the case. In an NDC (notional defined contribution) system, statutory retirement age works as a minimum value which one cannot fall below; in theory, this is considered to a major advantage - the signal role of the retirement age and the continuation of gainful activity is more accentuated and transparent here. In an NDC model, mortality tables are reviewed automatically and, in this manner, the conversion rates used to transform balance of the NDC personal account to lifelong old-age pension are also continuously adapted. In the respective countries, these issues appear (at least until now) to be somehow out of the (undesired) reach of politicians. In countries with a defined benefit system, on contrary, the statutory retirement age and early retirements are still significant (purely) political issues, in spite of the strong efforts of the pension theory to eliminate early retirement. If one or other retirement age "review mechanism" is to operate successfully, it must also include the issue of early retirement – especially in our country, because, under the applicable Pension Insurance Act in force, the gradual increase of the retirement age will extend the scope for early retirement, underlined by the failure to respect the actuarial equivalence.

Pokorná (2016) carried out a lay advantage test of early retirement for a man born on 5 January 1953, without taking into account the time factor (interest) and pension indexation, and concluded that this man (with average nationwide earnings and life expectancy of 20.4 years after reaching the age of 63 years, with 46 years of insurance period) will receive, in total, 425 CZK more in the form of old-age pension if he retires one year before reaching the statutory retirement age. A more accurate calculation would have to take the time factor into account, and one can expect the conclusion that the most favourable option is to opt for early retirement as soon as possible, i.e. now after reaching the age of 60 years in Czechia.

At present, Czech insureds are not informed about the advantages of the early retirement; the lack of information in this regard actually causes financial "illiteracy" of the clients. In the U.S., the general level of awareness in this respect is apparently much higher. Upon early retirement (at the age of 62 years at the earliest), the pension is permanently reduced by 5/9% for each month (ca 6.7% per year) up to 36 months, increased by further 5/12% per month (ca 5% per year) for an even earlier retirement. Bonus rate for pensions for longer gainful activity is set at 8% per year, up to the age of 70 years.

Altogether, our retirement age for men and the increase thereof is set at a level comparable to Germany and other Western European countries. This does not exclude its correction in case of a more significant change in policy or in the economic or other circumstances. Changes of such type take place also in occupational and personal retirement schemes. The increasing of the statutory retirement age for women, where we still apply an unfounded differentiation based on the number of children brought up, is a highly topical issue and this problem can also be addressed in the context of a broader or narrower pension reform and family policy. Increased retirement age will also result in increased levels of pensions paid to women – thus reducing the gender gap in this regard. Strong motivation for early retirement caused by the low reduction rates for early retirement is a crucial weakness of the Czech pension legislation. Transition to an NDC system would increase motivation for a later retirement, given the actuarial equivalence typically applied in this system (Chłoń-Domińczak and Mora, 2007).

#### 5. CONCLUSIONS

The complexity, lack of transparency and incomprehensibility of the Czech "pension insurance" scheme for its clients is not determined primarily by their financial illiteracy (in this regard), but by the quality (literacy) of the Czech pension policy. A major fault of the Czech "pension insurance" consists already in the actual combination of the universal basic amount of pensions and the percentage amount of old-age pension, the calculation of which reduces significantly any earnings above 44% of the national average wage. Compared to the U.S., we have "in addition" not only the basic amount of pensions, but also — the substitute insurance periods and excluded insurance periods. At the same time, there is scope for a very efficient, fundamental pension reform which would not modify the current level of redistribution (progressivity index) and would respect the today's modern pension policy requiring a strict separation of the social pension insurance (with the pension fully dependent on the insurance premium contributions paid) from the tax-financed flat-rate pension.

In our country, the statutory retirement age plays a crucial role in the decision-making of the clients about the starting date of old-age pension payments, also due to the fact that the clients are not informed (by the state or by the media) about the advantages of early retirement. Increased literacy of the clients in this regard may easily bring about serious fiscal impact. Also this perspective makes the transition to an actuarially neutral scheme of early and delayed oldage retirement sensible. Modern pension policy goes hand in hand with the elimination of early retirements and their replacement – solely in a modern social old-age insurance system – by a lower statutory retirement age with adequate incentives to continue gainful activity.

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# **Contact information**

Jaroslav Vostatek University of Finance and Administration 101 00 Praha 10, Estonská 500 jaroslav.vostatek@vsfs.cz