THE IMPACT OF PENSIONS SAVING AND EDUCATION DEFICIT ON THE LIVING STANDARDS IN ROMANIA, IN THE POST-ACTIVITY PERIOD

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Abstract
The present paper starts with the study on the annual pension deficit in the EU member states, elaborated by AVIVA and DELOITTE companies in 2010. The paper analyzes the impact of pensions saving and education deficit on the living standards in Romania, in the post-activity period. It comprises the following sections: an introduction to the analysis, several definitions and the calculation method employed in the above-mentioned study, comparisons between Romania and other EU members states, focusing on the pension deficit, as well as a brief overview on the pension systems in Romania.
In the end of the paper, we propose a debate on good financial planning that can make the difference between poverty and a decent standard of living at the time of retirement.

Keywords: *saving deficit, pension, private pensions, financial planning, and calculation methods.*

1. General aspects

The history of pensions begins in Germany, under the leadership of Chancellor Bismarck, more than 120 years ago. The empire centered around the Hohenzollern dynasty, strongly supported by the aristocratic and bourgeois political elites, was attempting to establish a new state. Nevertheless, the working class and its Social Democratic representatives opposed the respective initiative from the very beginning. However, the leadership brutally repressed them and banned hostile organizations, without getting the expected results. During the same period (the 1880s) a new economic crisis emerged, and the social unrest convinced Bismarck that the integration of the working class into society was the only way to overcome the respective deadlock. Therefore, *three insurance laws* were adopted, for the first time: *the sickness insurance law* – on June 15, 1883, *the accident insurance law* – on July 6, 1884, and *the insurance against old age* – on June 22, 1889. The last one is extremely interesting, because it paved the way for the current state-run pension system initially adopted by the Austro – Hungarian Empire, later – by Benelux countries and, finally, by the whole Europe. Its beneficiaries had made payments for at least 30 years, receiving their pension at the age of 65 or more. The pension fund came from taxpayers, as well as company owners and the state, the second category being also involved in the financial resource management.

Although in a Europe dominated by liberal policies, the social legislation promoted by the German Chancellor seemed to be a long term failure, it was validated and, gradually, the elites became aware of the fact that social protection was compatible with economic growth and that the integration of the working class into society could not harm capitalism.

Basically, the state-run pension system has always required contributions from a sufficient working class which paid money to the pension fund, during periods characterized by stability and economic growth. The respective system has been applied in Romania, too, especially during Communism. Even today, there are talks about the capitalization of important resources during that period, which could guarantee the long term and very long term stability of the pension fund. The respective hypothesis is not entirely correct, because we cannot consider that the economically active

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age depositors create intangible funds, benefiting from them at the time of retirement. The pension is a property gradually built up as the main source of effective contribution. However, it does not mean that, for example, if the depositor has accumulated 300 million lei in 30 years, he or she will benefit from the same amount from the state-run pension fund, each month, for the rest of his or hers life - 5 or 10 years (taking into account the average life expectancy).

First of all, it happens because there is a history of money, specific to the respective period, during the depositor's economically active life. Let us assume, again, that we are talking about a person who has contributed to the pension fund since 1966 through 2008. During 42 years, our depositor has witnessed two political regimes, two economic regimes (a centralized economy and a market one), triggering different financial regimes, exchange rates (under Communism, the dollar exchange rate was established through state decrees), devastating inflations, not to mention the demographic growth (especially after 1966) and, later, its increasingly sharp decline, the liquidation or privatization of state properties or the significant decrease in the number of public employees and in the demographic ratio of economically active population and pensioners, subsequently reversed. In addition, many still believe that, in the 1990s, the pension fund was used for other purposes, a move with negative consequences. To conclude, no contributor can benefit from the entire amount of the deposit, which, well capitalized upon, may earn him or her at least a decent living, at the age of retirement. And that happens because the (extremely inconstant) ability of the national financial institutions to cover payments based on the available resources at the respective moment is relevant for the state-run insurance system.

Therefore, the state cannot afford to pay more than it possesses at a certain moment. As a result, it can only establish rigorous criteria to calculate pensions based on contributions and their length, hierarchizing beneficiaries, applying a very simple rule: the person who has contributed large amounts for a long period of time may enjoy more benefits than a person who has contributed smaller amounts for a short period of time.

Although since mid-1990s, there have been numerous signals about the fact that the state will no longer have the ability to pay, amid the uncontrolled increase in the number of pensioners below retirement age limit or sick and the accelerated decline in the number of economically active people. However, although thorough calculations indicated that the pension funds were no longer self-sustaining, being financed from the state budget, the political elite remained indifferent. Moreover, the leadership of law enforcement institutions (the Ministry of Interior, the Ministry of Defense, and the Ministry of Justice) promoted special laws in the Parliament, according to which their employees would receive pensions equivalent to 80% of the last salary (including abusively increased benefits). Thus, an abnormal situation was created, and people who had long been retired benefited from pensions that exceeded the highest salary earned by a public employee. During that period, many people belonging to the respective social category justified their privileged pensions invoking their former positions within law institutions (such as the judiciary, considered to be the third power) or military structures, disregarding the other professions. The decline has accelerated, as the politicians have constantly promoted the myth of increased pensions, to win the support of a major part of the electorate represented by pensioners. As a result, during the 2005-2008 boom years, the pensions were constantly increased, however justified, but without the necessary economic support, completely neglecting the fact that once increased, the new pension fund should further be financed. However, finally, the political elites could no longer deny reality, admitting that the current state-run pension system faced collapse, ratifying the private pension system and the compulsory pensions - comprehensively approached in the following section - that could improve our future.

In 2009, when Romania faced the economic crisis overnight, the only solution to balance the situation was to ask for the IMF, the EU and the WB support. The conditions imposed during the respective negotiations focused mainly on cutting the budget deficit. Thus, in order to balance it, a series of laws were adopted, including revised pension rules, taking into account the state's economic and financial situation, instead of people's needs. Thus, the solid base of the new law was established by adjusting pensions according to the minimum average wage, contributions, and the retirement age - 63 for women and 65 for men. In addition, the incorporation and recalculation of special pensions, according to the contributions paid, has led to massive protests. However, it is obvious that further measures will be adopted, and that the reform will continue to adjust pensions, either increasing or decreasing them. Unsurprisingly, after the political leadership's announcement that Romania overcame the crisis and that the economic recovery was visible, the pensions for people working under hard labor conditions increased. However, as far as future developments are concerned, the present paper offers a potential solution, based on AVIVA and DeLoitte reports on the savings deficit in the EU member states and Romania.

2. Basic definitions and calculation methods

The above discussion was meant to prove that pension funds had always faced deficits, due to various reasons, and the respective situation would not change in the future.

The word "deficit" comes from French, being defined in the encyclopedic dictionary "Larousse" as something that lacks, triggering disequilibrium between earnings and spending; and the resulting state of affairs. The Romanian dictionary "Dex" and other dictionaries as well, including the recent Romanian illustrated dictionary [12] nuance the term, defining it as expenditures that exceed earnings or lack of money for 'inventory' or during the audit period.

I have highlighted the respective definitions in order to stress that the deficit is always identified by examination (inventory or audit), revealing events that have occurred. The present paper assesses the pension deficit nowadays (for the recent past) and for the future, through prognosis based on potential scenarios. To that end, the paper analyzes three types of deficits: *the annual retirement income gap* – denoted by X, *the capital shortfall at retirement* –Y, and *the annual pensions savings gap* - T.

The annual retirement income gap - X represents the shortfall between required income and forest income in retirement.

The capital shortfall at retirement –Y represents the capital required at retirement that, when annuitised, would produce sufficient income to close the annual retirement income gap.

The annual pensions savings gap – T represents the additional annual savings required to meet the capital shortfall at retirement.

The three definitions highlight the difference between the savings accumulated during the time when people were economically active and the spending at the age of retirement, in order to enjoy a decent living standard. In mathematical terms, the three definitions are the following:

1. We have the next formula of the *annual retirement income gap* – X:

$$X = Y - Z$$

where Y represent *required income at the age of retirement and* Z represent the forest income *at the age of retirement*.

We also have the next formula of Y:

$$Y = A \times B$$

where A represent the *salary at retirement* and B represent *the replacement rate* (for example 70%),

and the formula of Z:

$$Z = C + D + E$$

where C represent *the state pension income*, D - *the private pension income* and E – *net non-pensions income.*

2. The formula of *the capital shortfall at retirement* – W is:

$$W = X \times a$$

where *a* represent the annuity factor.

3. The formula of *the annual pensions savings gap* – T is:

$$T = f\left(W; p\%; n\right)$$

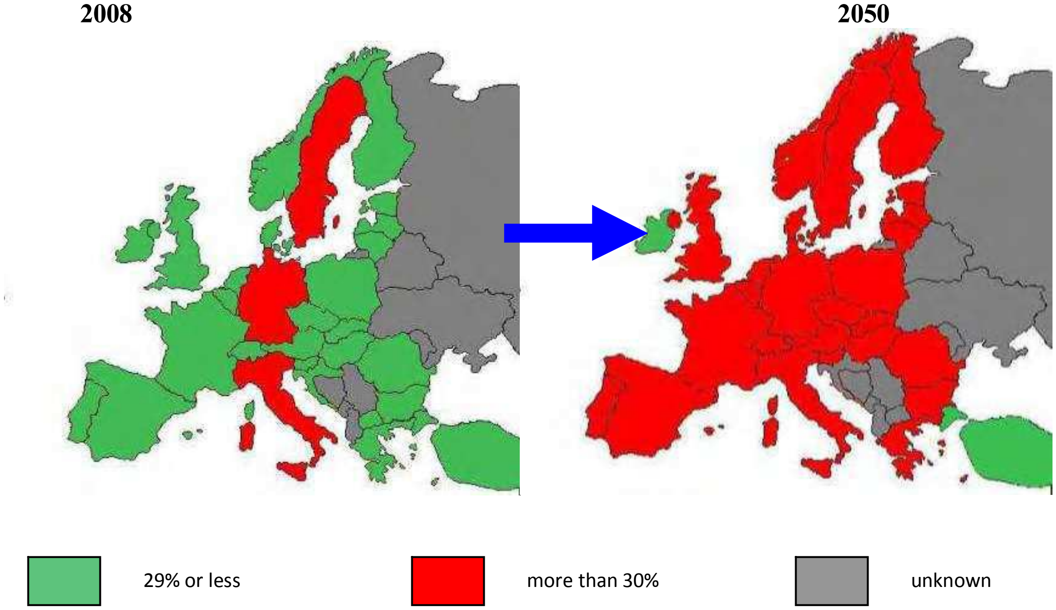
where p% represent *the interest rate* and n represent *the number of years remains until the age of retirement.*

3. Efforts to balance the savings deficit in Romania and other European countries

Providers of pension and life insurance products are increasingly aware that the pressure over the European pension system will grow, as a result of the rise in the average age of retirement and the modification of the balance between economically active and inactive persons, amid the constant growth in the number of pensioners. The graphic below clearly shows that if in 2008 pensioners accounted for 30% of the population from several geographic regions, such as Norway, Germany or Italy, in the next 40 years, the respective percentage would emerge in Western Central Europe states, such as Finland, the Baltic states, Romania, Bulgaria and Greece. After another 10 year period, the economically active population is expected to decrease by 12%, and the respective percentage of pensioners will generalize to the whole Europe.

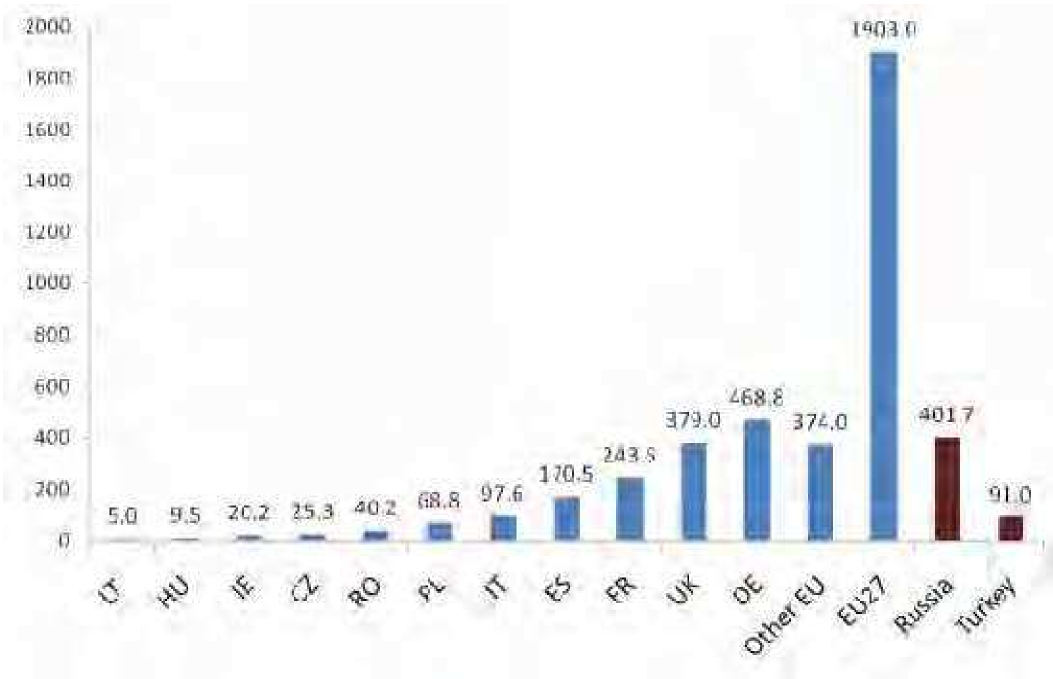
The report pensioners/total population

2008 **2050**



There are two relevant AVIVA tables. The first one illustrates the savings deficit in 11 EU member states, as well as in Russia and Turkey.

The pensions gap for different states from EU, Russia and Turkey

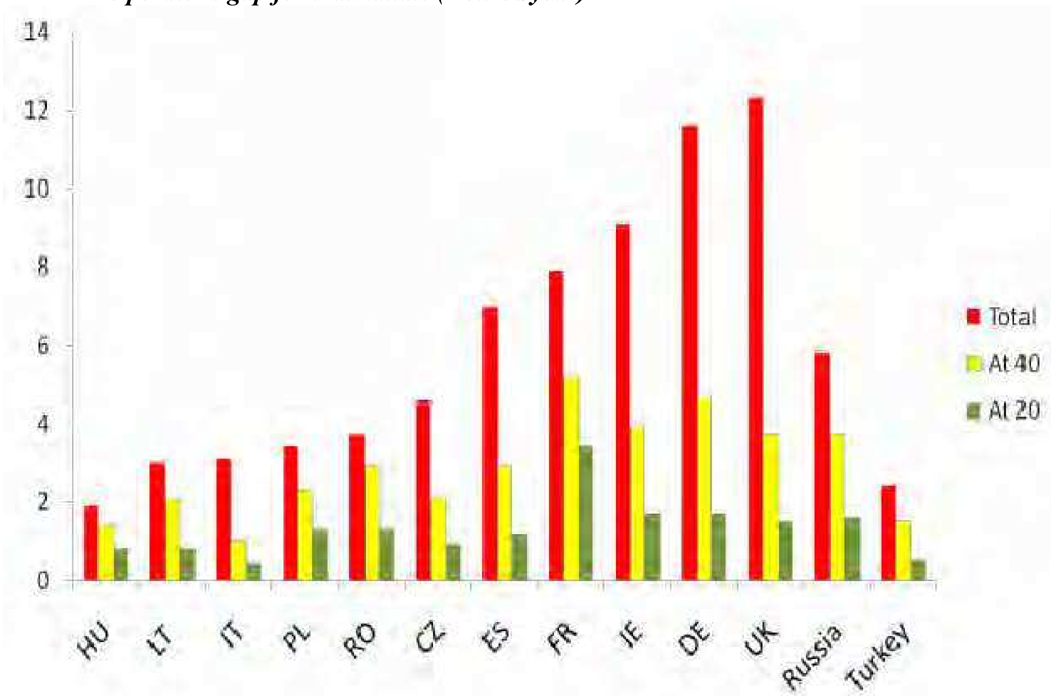


Romania should save 40.2 billion euros each year, four times more money than Hungary (9.5 million euros, and half of Romania's population) and approximately less than half of Poland's savings (68.8 million euros, and a significantly larger population). The deficit is higher in developed countries, where the population has high wages and pensions (for example 97.6 in Italy, 170.5 in Spain, 243.5 in France, and, the highest of all - 468.8, in Germany).

The total deficit reaches 1,900 billion euros in the 27 EU member states and 91 billion euros, namely twice as big as in Romania, in non-EU countries such as Turkey or Russia – 401.7, a smaller amount than in Germany. The good news is that the prediction model enables us to calculate the savings necessary to enjoy a decent living standard at the age of retirement, in the next 50 years. The bad news is that we might need more money to cover the deficit.

The second table shows the data on the savings deficit per capita, establishing the average deficit, denoted by *k euros/year*. Of course, the proportion is not different from the global one. Therefore, it is obvious that a Romanian citizen will have to save less than a Spanish resident and more than a Hungarian one, according to the average age and the demographic growth rate.

The pensions gap for individuals (k euros/year)



The table also shows the contributions paid since the age of 20 years and, respectively, 40 years, as well as the global contributions, highlighting the levels reached in Spain, which occupies the middle position. Here, the contribution should represent 1.2 K/per year for people aged 20, 2.9 k/per year for those aged 40, the global contribution reaching 7 k/per year. Thus, people could enjoy a decent living standard at the age of retirement. It is also important to mention that one should start paying the respective contribution as early as possible.

According to AVIVA report, the savings deficit should reach 1,900 billion euros, in 2011-2051, namely 40.2 billion euros in Romania, accounting for one third of our country's GDP or 3,700 euros per capita. Signaling that, „AVIVA Europe" recommends the following four measures:

1. Establishing the budget of the pension system of each country, per GDP, for each pillar. That target would encourage national governments to facilitate the development of the culture of saving.
2. Creating the European Quality Standard for Pensions, enabling thus providers to guarantee the quality of their products, increasing at the same time clients' confidence.
3. Issuing a pension declaration, encouraging consumers to consider the state-run pension system as part of the mixed strategy for providing for their future, and to act in order to obtain additional benefits.
4. Reviewing the National Plan to boost personal savings, taking into account the efficiency of the current incentive programs, their impact and visibility, as well as their ability to change consumer behavior, encouraging them to save more money.

The AVIVA report reveals that the state-run pension system still plays a vital role in the EU member states, amid the increasing presence of private pensions. Thus, the respective pension systems were introduced in 1994 in the Czech Republic, as non-compulsory pensions, in 1998 – in Hungary, and in 1999 – in Poland. The additional contributions and the compulsory pensions were introduced in Romania in 2007 and in the non-EU countries in 2001, for example in Turkey (the additional pensions) and in Russia – in 2002, through state decree. Thus, in all European countries surveyed, the state-run pension system and different compulsory and non-compulsory pension schemes have been adopted, providing the beneficiaries the opportunity to save money and to enjoy more benefits at the age of retirement. At the same time, the coverage of private pension systems is gradually extending, tending to replace the state-run one. However, in the future, the value of state pension funds will further decrease, amid a drop in the number of economically active persons and an increase in the number of pensioners. In Romania, the respective ratio has exceeded the critical value (1). Moreover, according to forecasts, more than half of the working population will retire in the next 40 years. Unfortunately, there are fairly few global solutions: to save more money, to use non-passive assets, to retire at an older age or to accept lower living standards when retired.

There are two tables that show us the saving rate for persons aged 20-50, in 2010, and, respectively, the detailed situation, based on a scenario for the same category, briefly reviewing three types of contributions, gradually providing wage replacement rates (70%, 60%, and 50%), the savings efficiency, the 10% lower or higher state pension, the increase in the pension age limits – by 5 or 10 years, as well as the savings efficiency at the age of retirement.

	The age in 2010			
All pensioners in 2011-2051 aged up to 65 years old	50 years old	40 years old	30 years old	20 years old
3700 EUR/year	4800 EUR/year	2900 EUR/year	1700 EUR/year	1300 EUR/year

The best scenario is the following: a 20 year-old person in 2010, who will work 5 years longer than currently stipulated and who can save only 300 euros per year, and the worst scenario – a 50 year old person, in 2010-2011, who wants to benefit from 70% of his or hers wage, having thus to save 5,700 euros per year.

The average annual savings gap for pensioners in 2011-2051 according to age (thousand euros)

The scenario	The average annual savings gap for all pensioners in 2011-2051	The average annual savings gap for a 60 year-old person in 2010	The average annual savings gap for a 50 year-old person in 2010	The average annual savings gap for a 40 year-old person in 2010	The average annual savings gap for a 30 year-old person in 2010	The average annual savings gap for a 20 year-old person in 2010
The reference case	3,7	unavailable	4,8	2,9	1,7	1,3
Replacement rate 70%	4,6	unavailable	5,7	3,4	2,0	1,3
Replacement rate 60%	3,0	unavailable	4,2	2,5	1,4	1,1
Replacement rate 50%	1,5	unavailable	2,7	1,6	0,8	0,6
The interest rate 8%	2,9	unavailable	4,0	1,9	0,9	0,5
The interest rate 3%	4,3	unavailable	5,5	3,7	2,4	2,1
The state pension: -10%	4,2	unavailable	5,3	3,1	1,9	1,4
The state pension: +10%	3,1	unavailable	4,4	2,6	1,5	1,1
The age at retirement: +5 ani	2,8	4,4	3,1	1,6	1,2	0,9

The age at retirement: +10 ani	2,2	3,2	1,9	1,0	0,7	0,6
The interest rate 8% The age at retirement: +5 ani	2,3	4,0	2,3	1,0	0,6	0,3

The authors of the study start from the premise that in Romania, the salary will represent 80% of the average European one, by 2023. The middle class will face the most pressure on revenues, as beneficiaries have enough assets to enjoy a decent living standard at the age of retirement, while poor people are protected by the state through social protection programs.

To cover the 40.2 billion euro deficit, each category should save money. Thus, people aged 30 should save 1,300 euros each year, the segment aged 30-40 – 1,700 euros each year, and those aged 50-65 – 4,800 euros per year. That means 80 euros monthly (for the young people), 142 euros (for those aged 30-40), and 400 euros (for the third category).

However, what else can we do? First, the 20th century *mentality* should change. According to it, the state should take care of its citizens, who should not be preoccupied with their needs. As I have said, the state pensions cannot be increased, and the state will be forced to borrow more and more money to make the respective payments. Subsequently, the state will be unable to pay debts, being thus compelled to cut pensions. According to the worst scenario, in the future decades, pensions paid by state will be only 10% - 15% of the average wage, and respectively, 20% - 25%, in the developed European countries, insufficient for a decent living standard at the age of retirement.

Private pension funds (Pillar II and III) may represent a solution, being already adopted by many European countries. However, the state will temporarily nationalize them, if the budget deficit exceeds the limit (as it happened in Hungary, where a scandal has recently broken out), endangering thus the future of pension funds. Unfortunately, all those warning signs are usually neglected. It is still a hot summer day, and a bright blue sky. One could hardly spot a few clouds in the distance. Who can anticipate the looming tempest? However, despite inflation problems, the waste of public resources, the crisis and its negative impact, the state has paid pensions up to date, with sacrifices known only by the financial elite. Moreover, the political leaders competing in a never-ending election campaign, being aware of the needs of pensioners, have promised and will further promise a major increase in pensions, despite the collapsing system, endangering our country's future.

Therefore, we should learn to save money after years of wasting money, heavy consumption and destruction. Who will teach us? The young people, aged 20 – 30, are oriented towards present, instead of future. To convince them to save money in order to enjoy a decent living standard at the age of retirement, after 40 years, seems impossible. But it can be done, telling them over and over again that their contribution is small at the respective age, and that they can stop spending on expensive things, such as vacancies abroad or luxury items, to gather 1,300 euros, each year.

The age group of 30- to 40-year-olds or the 40 – 50 year-olds, is usually married, with children, having a stable job. They also got bank loans (for houses, cars and other necessary assets). Although enjoying a decent living standard, they are responsible and willing to save money in order to enjoy the same living standard at the age of retirement. Thus, they can be easily convinced to save 1,700 euros per year, with sacrifices, of course.

The other category, soon to retire, can be hardly influenced, and not only because their contribution should be greater. They are experienced enough and their personality is well-shaped. Many of them have been taught to save money and they have already done that, so, they can be easily convinced. However, others rely on state pensions, even though knowing that they may not enjoy a decent living standard at the age of retirement. Some of them believe that they could do something else, if healthy and experienced enough to get a part-time job, in order to preserve the same living standard at the age of retirement.

What else could we do? The insurance companies strongly recommend us to make investment choices, such as bank deposits, state bounds or houses, whose value increases, as time passes. For example, they can rent one of their flats, to earn more money, exceeding sales price. Thus, efficient investments may represent a solution for you to enjoy a decent living standard at the age of retirement.

For those who cannot do it, the companies recommend measures already implemented in various European countries, such as increasing the age limit or working part-time in retirement. Although contested (for example, a new wave of pension protests has hit France, nevertheless failing to change the leadership's decision), the first solution will be gradually adopted by every country. One thing is sure: raising the state pension age by 5 years may reduce the budget deficit by one third. In the past 10 years, in Romania, the age limit was raised from 57 to 60 years for women, until 2015, and, in the next 20 years, it will probably rise to 63, until 2030.

A small change to the state pension age was also adopted for men, namely from 60 to 62 years, and later, to 65, until 2015, raising, in the next 20 years, to the same level.

For example, the new education law and the future status of teachers stipulate the same age limit for pre-university teachers (eliminating the opportunity to work for three years more, after retirement) and university professors (who could work until they were 70, if approved by the faculty leadership). But let's not deplore their fate, as their experience and expertise is still needed after retirement (they could offer consultations, teach pupils at home, getting paid by hour, publish their works abroad or in our country, attend conferences, and so on).

The same applies to experts in various fields, who can offer their services without obstructing the young people's access to top-level positions, where they are preferred, offering them instead best and valuable services, based on their expertise. For example, the Romanian-Austrian engineer Emil Prager (1888 - 1985), who built many representative buildings, such as the Royal Palace, the Ministry of Interior Palace, the Military Academy or the Elias Hospital, in Bucharest, as well as in other Romanian cities. In 1950, at the age of 62, he became advisor to the then Energy Minister. Until the age of 90, he helped the Ministry to build dams, thermal plants, hydro plants, under the Communist regime. His example has been recently vehiculated by the Romanian media outlets.

1.4. The public pension schemes in Romania

As most beneficiaries nowadays rely on state pension alone, it is important to briefly present the three-pillar architecture of our country's retirement income systems, which, altogether, could provide a decent living standard at the age of retirement.

- The first pillar (or state pension) is a distributed system, the compulsory contributions being paid each month by the employees (10.5%) and the employers (20.8% - 30.8%), in accordance with the Labor Standards Act;
- The second pillar (compulsory private pension) is financed from the contributions paid by the employees, amounting to 2%, in 2008-2009, expected to increase up to 6%, by 2016. It is mandatory for people aged under 35 to join it, while the 35-40-age segment, benefiting from state pension funds, may not;
- The third pillar (additional voluntary private pension) is based on the same principles. Contributions amount up to 15% of gross earning, paid each month by the employees or the employers (tax-free up to an amount of 400 euros), since 2009. It is not mandatory.

According to 2010 estimates, the average pension in Romania reaches 736 RON a month, namely 51% of the average wage of 1,436 RON, while in Europe the average pension reaches 85%.

The paper will present the third pillar (additional voluntary private pension), preferred by many social categories, including public employees, budgetaries, businessmen, liberal professionals and farmers.

Below, I will present two such products, namely the ING Classic and ING Optim, provided by ING. The two products have the same structure, but different deposit guarantee schemes. They are based on investment tools whose risks and opportunities are worthy of, such as bonds issued by the Romanian state or public companies, as well as by other EU or SEE countries, as Explicit Government Guarantee Bonds.

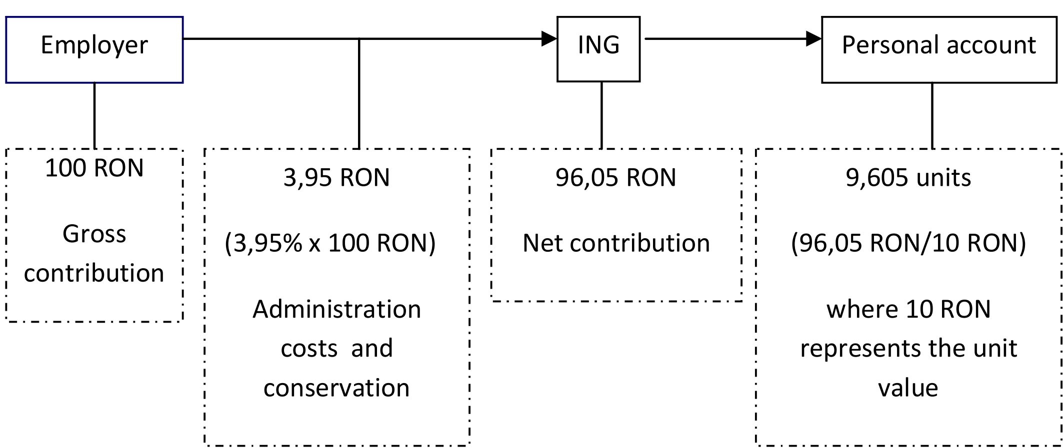
The first product offers relative guarantees on the market (achieving a greater efficiency rating than other additional pension schemes, calculated by the Private Pension System Supervisory Commission which controls the assets and transactions operated by the funds).

The second product is based on Deposit Guarantee Schemes (the payment of at least the value of gross contribution, in addition to the value of transferred assets).

The table below illustrates the tax expenditure by type and level:

	Value	Mentions
ING Clasic Fund		
Monthly administrative costs and conservation	3,95%	Deducted monthly from the total contribution paid Legal maximum level – 5%
Annual administrative costs and conservation	1,24%	Deducted monthly from the funds total net asset Legal maximum level – 2,4%
Transfer costs	5%	Charged when the transfer occurs within the first two years after accession No charge is made if the transfer to another ING fund
ING Optim Fund		
Monthly administrative costs and conservation	3,95%	Deducted monthly from the total contribution paid Legal maximum level – 5%
Annual administrative costs and conservation	1,36%	Deducted monthly from the funds total net asset Legal maximum level – 2,4%
Transfer costs	5%	Charged when the transfer occurs within the first two years after accession No charge is made if the transfer to another ING fund

It includes two fee adjustments for monthly administrative costs and conservation, covered by the participant and the managers of the fund, namely an adjustment from 3.95 to 4.85 (ING Classic and ING Optim), and, respectively, from 1.24 or 1.36, up to 1.95. The latter has already been approved by the Commission, entering into force since September 23, 2010.



During the contract period, the specific transactions take into account the modification of the contribution limit, the suspension, cessation or resumption of payments, the change of employer and transfers from or to other funds.

As far as benefits are concerned, they can be received by the 60 year-old beneficiary who has paid 90 monthly contributions, the value of personal assets being subsequently established. The participant will then receive the respective amount. If the two pre-conditions are not met, the amount will be paid off as a lump sum or annuity over a 5-year period. The same strategy is to be applied if the participant gets sick and is unable to hold a job. If the beneficiary dies, there are two methods: if he or she dies before submitting the necessary request, the deposit amount will be paid to his or hers heirs, under succession or, if he or she dies after submitting the written request, the amount will be paid to the designated person.

As far as deductions are concerned, the tax free employee or employer contribution is shown below.

The employee's annual contribution	Over 400 EUR	The employee pays: - CAS (9,5% + 5,5% + 1%) for this amount because it is part of salary - income tax (16%) for this amount
	400 EUR	The employee pays: - CAS (9,5% + 5,5% + 0,5%) for this amount, which is basically an amount withheld from the salary - NO income tax (16%) for this amount
The employer's annual contribution	Over 400 EUR	- The employer pays CAS (19,5%/24,5/29,5 + 5,5% + 1% + etc) for this amount - NO profit tax (16%) because this amount is considered an advantage in cash
	400 EUR	The employer does NOT pay - CAS (19,5%/24,5/29,5 + 5,5% + 1% + etc) for this amount - NO profit tax (16%) for this amount

The second table illustrates several scenarios, according to the periodic payments over a fixed period of time.

Scenarios			
Annual contribution (EUR)	Monthly contribution (EUR)	Contribution period (years)	Monthly pension (EUR)
200[1]	16,7	10	14
		30	57
400	33,4	10	27
		30	114
800	66,7	10	54
		30	228

[1] 200 euros represent the limit of the deductible amount per fiscal year

Alternative scenario:

A female person (x years old) contracts a voluntary private pension. For this, she contributes for n years (up to 63 years) with 66,7 euros/month (800 euros/year). It is considered that the interest rate paid by the credit institution (the fund's average annual interest rate) is 5% per year. To determine the monthly pension that a person will receive from the retirement age is using the formula:

$$\text{Monthly pension}=\frac{\text{Annual contribution}}{12\times\left(\text{life expectancy -retirement age}\right)}\times\frac{N_x-N_{x+n}}{N_{x+r}}$$

where N_x represent a switching number and it can be found in the switching table, x represent the person's age, n represent the contribution period and r is the time after the person begins to receive the pension.

Thus,

$$\text{Monthly pension}=\frac{800}{12\times\left(73{,}5\text{ -}63\right)}\times\frac{N_{37}-N_{63}}{N_{63}}$$

As a recap, we can say that whatever type of voluntary pension chosen by the participant, its advantages are consistent. Thus, besides increasing the pension is not paid tax on contributions (the amount to be contributed is deducted from the income tax, maximum 400 euros per fiscal year), the money will be protected in all circumstances including permanent disability or death, freedom of movement (the participant decides: the period that is willing to contribute, the contribution level, the pension fund type).

In conclusion, regardless of the pension system joined by the participant, the *benefits* are significant, including important retirement benefits, tax-exempt contribution amounts (representing the equivalent of 400 lei in a fiscal year for each participant), protected funds, no matter what happens with the beneficiary, including in the case of his or hers death or permanent disability, encouraging at the same time the freedom of movement (the beneficiary establishes the contribution period, the amount paid, the pension fund).

Conclusions

In the end, it is important to highlight that the employees are free to choose either one big basket of eggs or just one egg in a small basket. The amount of state pension could be increased if joining a private pension fund, including the voluntary one, which, along with other benefits (a bank deposit, share holding, life insurance policy, and gold or real estate investments) might provide you with the opportunity to enjoy a decent standard of living at the age of retirement.

The issue of *pensions* is extremely important at the global level, especially in Europe, the old continent where people enjoy the world's best living standards and the longest life expectancy. But money is needed to further enjoy it at the age of retirement.

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