Projections of Pension system in Republic of Macedonia

Introduction

The 21 century will be marked by sharp demographic aging and most of the elderly population will reside in today's developing countries. In these regions, the aging process will be very rapid, while critical, longstanding problems related to education, health and employment remain unsolved. The consequences of greater longevity include increases in chronic diseases and disability, income insecurity given the frail economies and limitations of social security in developing countries, and social and family adjustments.

The implications of population ageing cannot be dismissed. In the more developed regions, the population aged 60 or over is increasing at the fastest pace ever (growing at 1.9 per cent annually) and is expected to increase by more than 50 per cent over the next four decades, rising from 264 million in 2009 to 416 million in 2050. (UN, 2009).Compared with the more developed world, the population of the less developed regions is ageing rapidly. Over the next two decades, the population aged 60 or over in the developing world is projected to increase at rates far surpassing 3 per cent per year and its numbers are expected to rise from 473 million in 2009 to 1.6 billion in 2050.

The primary demographic consequence of fertility decline, especially if combined with increases in life expectancy, is population ageing, a process whereby the proportion of older persons in the population increases and that of younger persons declines.
In 1950, just 8 per cent of the world population was aged 60 years or over. By 2010 that proportion had risen to 11 per cent and it is expected to reach 22 per cent in 2050.(UN,2009).Globally, the number of older persons(aged 60 years or over) will increase by a factor of 2.6, passing from 759 million in 2010 to 2 billion in 2050.In contrast, the number of children(persons under age 15) is projected to decline over the next 40 years, passing from 1.86 billion in 2010 to 1.80 billion in 2050 and their share of the total population will drop from 27 per cent in 2050.(UN,2009).

In Europe, during the last decades, low fertility and increasing life expectancy both reversed the age structure, leading to a shrinking number of younger people, to an aging and eventually shrinking work force, and to an increasing number and share of older people. Such an age structure can no longer be described as a "pyramid" as the gravity has shifted from the young to the old. This trend usually is called "demographic aging". As a result the mean age of Western and Central Europe's population has risen from 31 years in 1950 to 38 years in 2005. During the period 2005-2050, the mean age of the European Union's population (EU27) is projected to rise by 10 another years: from 38 to 48 years.(Rainer Münz,2007).Even immigration could not alter this change, since as a rule migrants come as adults, usually as young adults; and after arrival they are aging at the same pace as the locals.

It is not surprising, therefore, that there is increasing concern about the health of the pension systems. As a result, the review of viable retirement systems is now receiving much political attention. The economic importance of such a review is great as pensions are an economic commodity with very high costs on both current and future generations.

Mortality decline and the resulting growth of elderly populations have critical implications for the pension plans of many countries. There is no doubt that the important changes in age composition, more particularly the "ageing" of populations, will have serious socio- economic consequences. The proportional decreases of the working-age population-in general the population aged 20-64 years will create an serious strain on, among others, economic productivity and the payment of pension allowances.

According to medium-term population projections published by EUROSTAT[1], total population in EU27[2] will continue to increase until 2025 at a reduced pace. During the following period EUROSTAT expects a subsequent decline to 472 million in 2050, with all new[3] and many old EU member states facing a marked decrease of native populations. (Rainer Münz,2007).

Projected demographic change has a significant impact on future age structure. In the European Union the size of the working age population (age group 15-64) was 328 million in 2005. This group will start to shrink after the year 2015 reaching 314 million in 2025 and 268 million in 2050.[4] Within this group the momentum will also shift from younger to older people at employable age.

At constant labor force participation rates the number of economically active people would shrink from 235 to 188 million in 2050. In the absence of any international migration this decline would be even larger. Under such – rather unrealistic assumptions – Europe's working age population would fall to 233 million; and the number of economically active people would drop to 163 million by 2050 if labor force participation remain constant over time. On the other hand, as a result of increasing life expectancy and the aging of the baby boom generation the age group 65+ will grow from 81 million (2005) to 111 million in 2025 and to 141 million in 2050. This is an increase of some 60 million people (Rainer Münz,2007).

Table 1: Medium variant projections: demographic and labor force development in the EU27 and other European countries by age group, 2005-2050 (millions)

	2005	*2025*	*2050*
Age group 0-14	*78.7*	*71.4*	*63.1*
Index	*100*	*91*	*80*
Age group 15-64	***328.1***	***313.6***	***267.6***
Index	*100*	*96*	*82*
Age group 65+	***81.0***	***111.2***	***141.3***
Index	*100*	*137*	*174*
Total	***487.9***	***496.3***	***472.1***
Index	*100*	*102*	*97*
Labor force	***234.6***	***218.5***	***187.9***
Index	*100*	*93*	*80*
Old age dependency ratio			
Age group 65+/Age group 15-64	*0.25*	*0.35*	*0.53*
Age group 65+/Labor force	*0.35*	*0.51*	*0.75*

Sources: EUROSTAT 2005, UN 2005, Münz (2007).

For Western and Central Europe the demographic process analyzed here can be characterized as shift from a society with quantitatively dominant younger cohorts to a society in which the elderly form a solid majority. This is reflected in the so-called "old age dependency ratio": Today for every 100 Europeans in working age group 15-65 there are 25 senior citizens in age group 65+. By 2050 this ratio will "deteriorate" to 53 senior citizens per

[1] Based on EUROSTAT's Europop 2005 projection (baseline scenario) to EU 27 (2005-2050).

[2] Multilateral association with EU27 within the framework of the European Economic Area (EEA): Iceland, Liechtenstein, Norway (= other EEA); bilateral association with EU27: Switzerland,

[3]Croatia, Macedonia and Turkey are EU candidate countries. Croatia and Macedonia will not be admitted before 2010. The prospects of Turkish EU membership are uncertain.

[4] Based on the 2004 Revision of UN World Population Prospects (UN Population Division (2004, 2005)).

100 Europeans at working age. Today in EU27 there are 35 senior citizens in age group 65+ per 100 Europeans actually working and contributing to the public coffer. Until 2050 (at constant labor force participation rates) this ratio would rise to 75 senior citizens per 100 people in the work force. This would constitute a dramatic old age burden for those still economically active and a threat to future pension levels.

Macedonia- General framework

In September 1991, the Republic of Macedonia achieved independence from the Yugoslav Federation. This historical change, however, did not immediately offer new prospects for progress and growth. Instead, a very difficult period followed, in both the economic and political arenas.

From an economic point of view, the collapse of Yugoslavia—in which R. Macedonia was the least developed republic—meant the end of transfer payments from the central government and a sharp setback because the new country's trade flows, which had been directed towards a shrinking Yugoslav market, were now treated as exports rather than domestic production. Moreover, the Greek economic embargo—a consequence of a dispute about the country's constitutional name and flag—impeded economic growth at least until 1996. These events forced Macedonian companies to rely on a consumer market that was less than one-tenth the size of the previous one and much poorer. The economic situation of the Republic has faced a long period of no growth in gross domestic product, exacerbated by other negative development tendencies, such as geographically unbalanced development which widened the gap between rural and urban areas, pollution of the environment at a time of growing industrialization, rising ethnic tensions etc. Many companies were unable to continue production, which contributed to a marked decline in GDP. The reduction was more pronounced for manufacturing, whose GDP share decreased, relative to services and, to a lesser extent, relative to agriculture. Despite the drop in economic activity, inflation soared, reaching 126.6 percent in 1994, while unemployment peaked at 38.8 percent in 1996. A phase of mild recovery followed but it was overshadowed by the country's political instability. All of these elements raised the level of economic insecurity and social exclusion for the citizens of Macedonia even before the onset of the transition process.

From a political perspective, independence coincided with the beginning of a period of institutional fragility and internal tensions, which culminated in the ethnic Albanian insurrection in 2001. Thanks to international intervention and surveillance, the conflict was kept under control, but the profound religious, ethnic, and social tensions that led to it are far from being solved.

This unhappy political development (10 years after independence) caused a sharp reduction in investment and trade (made worse by the intermittent closure of borders), an increase in public expenditures on security, and a general environment of uncertainty. A new, deep recession hit the country and caused a 4.5 percent contraction in GDP in 2001. The economic agenda included reforms, free trade, and regional integration. Growth hardly recovered at all in 2002, by only a tiny 0.3 percent, then rose to a more promising 2.8 percent in 2003. Unemployment—still at one-third of the workforce—remains perhaps the most critical economic problem.

Despite these difficulties, R. Macedonia tried to move toward a market economy and, with the support of international institutions, starting a wide range of economic and institutional reforms aimed at achieving the double objectives of economic stabilization and structural adjustment.

After that, the transition to a market economy, including privatization of state owned enterprises, faced many external political and economic pressures and negligence in the process of privatization and economic restructuring, consequently gross domestic product suffered a significantly reduction in the first few years of transition. It led to a decline in the standard of living and an increase in poverty. The privatization process also inevitably widened the social gap among the different social groups, because the transition from a socialist system to a liberalized new social and economic system, in addition to being very inelastic with respect to social security of the population, shows exceedingly bad results with respect to its economic efficiency as well.(UNDP Report 2001). Nowadays country's hopes are mainly focused on attaining European Union membership.[5]

Ageing and Population projections in Macedonia

Ageing populations are global phenomenon. Ageing and its inevitable effect on the future liabilities of the state are the same for every country. The level of pension development, however, differs significantly from country to country. As might be expected, the transformation of Central and Eastern European (CEE) countries and South Eastern European countries (SEE) from command to open market economy has placed pension reform on the top of their agendas. However public pensions have also attracted much attention in Western Europe, due to ageing and stagnating productivity. Though, all countries follow one general pattern of reform, many universal, as well as local factors, influence on developing reforms that differ significantly from one country to another. They include: "changes in the age structure of the population; fundamental structural changes of the employment situation linked to globalization processes; integration of the former socialist countries into the world distribution of labor; and rapid changes of the financial markets". (Center for research and policy making, Skopje 2005).

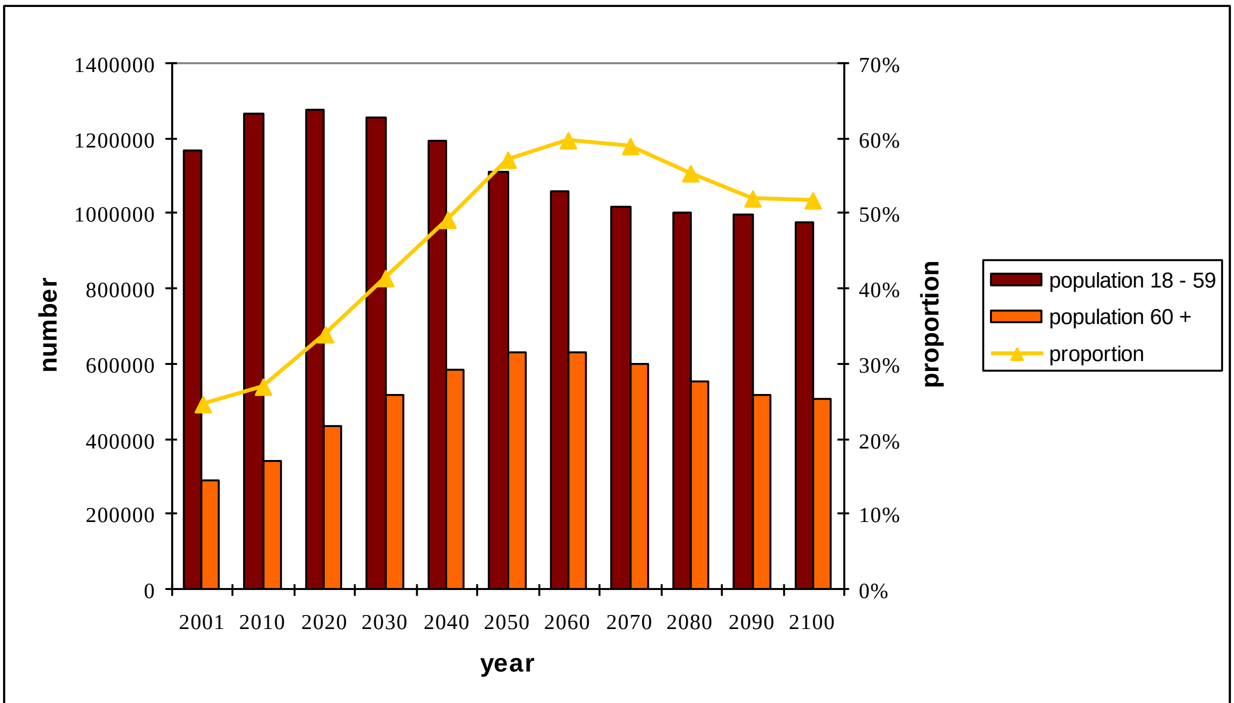
Most of the world is experiencing demographic aging due to lower fertility rates and prolonged life expectancies. The demographic aging process will result in a significantly different economic environment, which will require tangible changes to existing economic policies. (Nikola Altiparmakov, 2009).One of the areas most directly affected by demographic ageing is the area of (public) pension insurance. Thus, for the last couple of decades, significant efforts have been put into researching the most feasible reform approaches that would enable pension systems to "successfully" accommodate the demographic aging phenomena, which is projected to accelerate in the coming decades.

In the period 1948-2006, the representation of the population between the age of 0 and 14 in the Republic of Macedonia has declined by 38.4%, whereas the representation of the population aged 60 and over has increased by 58.6%.(UNECE Report 2007-09).Changes demonstrated in the representation of age groups in the Republic of Macedonia indicate to the fact that the aging population process has commenced. Namely, it is considered that, according to the indicator, the population commenced its ageing, if the representation of the population aged 60 and over has reached 12%. In other words, the age rate (the ratio between the population aged 60 and over and the total population) has reached its critical value of 12% for the population of the Republic of Macedonia in 1997 and it quotes 13.8%. Namely, in the period 1953-2006 it is perceived that the average age of the population of the Republic of Macedonia increased from 25.9% in 1953 to 33.5% in 1997.

[5] Republic of Macedonia became a formal EU candidate country in December 2005 but, as of early December 2009 no date had been set for starting accession talks. However, the European Commission has recommended to the Council of the European Union that the country (with Montenegro and Serbia) be given visa-free access to the Schengen area.

The age structure of the population ,undoubtedly, is very important factor for demographic and economical development of a country.There are a many factors from different nature influencing the process of population ageing, as demographical, economical, social, health factors etc. As much as population is getting older, that means little chances for its reproduction and growth.
Indicator for ageing of the population is the proportion between old population, i.e 60+ and age working population, i.e 18-59. This ratio has been shown of the next figure.

Figure 1:Ratio -between population 18-59 and population 60+



Source: Ministry of Labor and Social policy. Republic of Macedonia

The number of age working population in the first 15 years of the projections continuously is growing and then gradually has been decreasing because of the low fertility rate and its status quo level. Life expectancy increasing due to better life conditions, better health services and so on, is the reason for continuous increasing of the number of the population over 60 years.

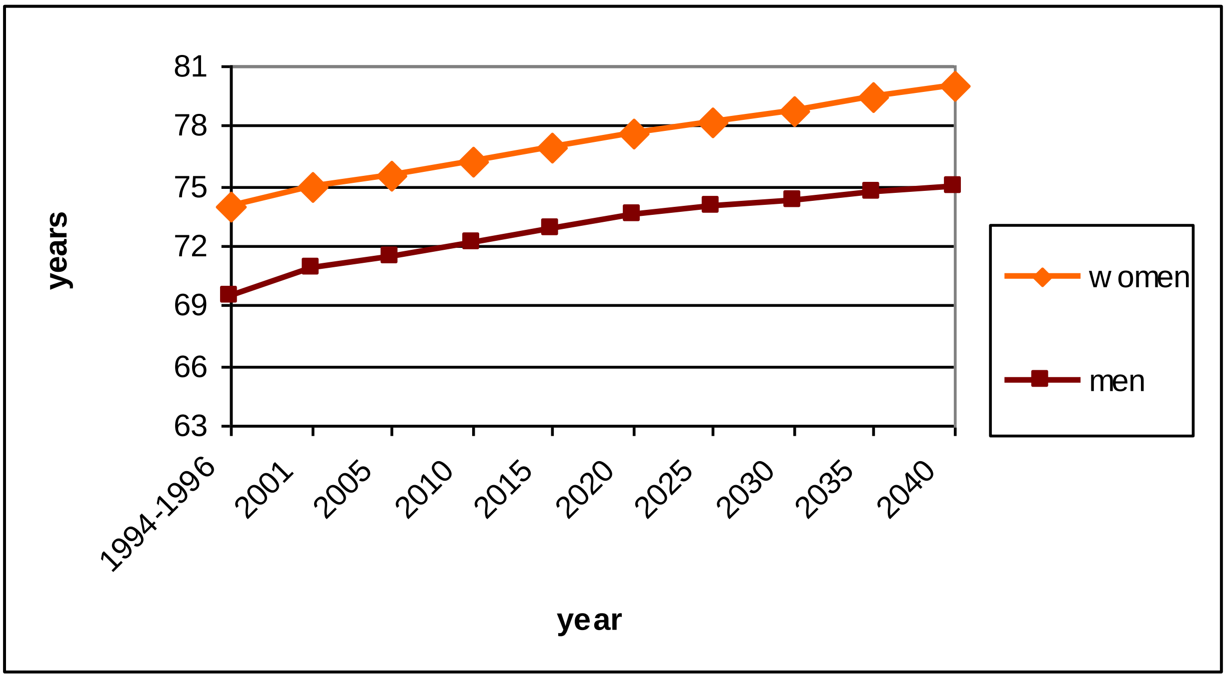
Namely, it is expected that the same intensity of the demographic ageing process of the population in the Republic of Macedonia continue in the further period as well. According to the most probable option of the Projection of the Population of the Republic of Macedonia to 2020, by the end of the projected period it is expected that the population aged between 0 and 14 will represent 17.2% in the total population, having an decline of 28% compared to 1997. The population aged 15-59 will represent 60.9% of the total population, a slight decline of 2% compared to 1997. (UNECE Report, 2007-09).Finally, the population aged 60 and over will represent 21.9% of the total population, with an increase of 57% compared to 1997. It means that the process of demographic population ageing will intensify to 2020 simultaneously increasing needs for social and health protection of older persons.

The proportion between these two groups of population shows growth from the current 25.5% to 60.6% in 2060 and decline to 51.2% in 2100.That means that in the future about one third of the population over 18 years will be old population.

Explaining of the old pension system in Macedonia

Social end economical changes in the Republic of Macedonia at the beginning of the 90s had an influence on the pension system, as well. The pension system faced financial difficulties in its operations, particularly in the regular payment of pensions.
The longevity of the population as a world trend did not bypass Macedonia. The analyses show that life expectancy is expected to increase by 5 years in the following 40 years.

Figure 2: *Ratio between women and men in R. Macedonia*



Source: Ministry of labor and Social policy. Republic of Macedonia

Increased number of elderly people in total population, at the same time means increased number of pensioners, while increased life expectancy means longer usage of pension benefits. Additionally, unfavorable developments in the economy influenced decrease of active contributors, on one hand, and increased number of pensioners, on the other hand. Because Macedonia had PAYG system these factors had very important influence on the pension system: decline in the ration of contributors to pensioners, increase in the ratio of pension expenditures to GDP, etc. Especially, all these factors have strong impact on the long-term solvency of the Pension and Disability Insurance Fund of Macedonia and actuarial projections show that the system would function with deficit that would increase rapidly and extensively. Republic of Macedonia has amore of 50 years old pension system.[6]

In the last 50 years of socialism the Macedonian pension system was based on so called Intergenerational Solidarity or Pay-As-You-Go system.[7] This is by no means a bad model especially having in mind the socio-economic and demographic circumstances.

The Macedonian pension system exists for 50 years. The system was created at earlier stage when the population was younger and was developed to redistribute the income

[6] In order to provide continuity in the pension system, the Government of Republic of Macedonia after declaring independence developed a Law on Pension and Disability Insurance (PDI Law) in December 1993 ("Official gazette of the Republic of Macedonia" num. 80/93). The intention was to independently regulate relations and rights in the sphere of the pension and disability insurance.

[7] Pay- As-You-Go systems are currently financed, or in other words pension benefits are paid from the current contributions made by each employed individual.

among generations of employed citizens by providing mandatory pension and disability insurance for all of them. For 40 years the pension system, financed on pay-as-you-go basis, has been successful.[8] Just when the Macedonia's pension system has begun to mature, the conditions conducive to a successful pay-as-you-go scheme, started to disappear. Population growth started to stagnate, fertility rates began to fall and life expectancy continued to increase.[9] At the same time, due to the transition from command to market economy, the employment rate went down, consequently it impact on the contributors number in a long term period.

Moreover, this model was also practiced by many European countries with great success regardless of their political system. However, there were several factors and trends in the last few decades that initiated a big debate in the academic community (mainly in the developed countries) concerning the sustainability of this model and the urgent need for reforms for all pension funds organized in this manner. Namely, those factors can be classified into two major categories: demographic and socio-economic.

The crucial issue for the stability of any Pay-As-You-Go system is the ratio between the current number of employees and the people receiving pension benefits. This is because the system itself is 'currently financed'. In the case of Macedonia, the growth of the population was stagnating.

This ageing of population resulted in increased number of individuals entitled to receive pension benefits. In addition, life expectancy has been constantly rising thus creating a big gap in the future pension fund liabilities. Like in many other transition countries, the process of privatization resulted in harsh consequences. As the global market was putting pressure on Macedonian economy, unemployment was constantly growing and the country was lagging in economic development. This process created increasingly severe market conditions.

In Macedonia an increase of the number in pensioners and the replacement rate were most important factors in explaining an increase in pension costs. The number of contributors declined slightly and did not contribute greatly to the growth in pension expenditures.(World bank,1996).

The ratio between current number of employees and people receiving pension benefits was decreasing dramatically.

The financial situation in the Macedonia's pension system worsened dramatically during the 1990s, due primarily to:

- a significant decline in the contribution base, caused by high unemployment and a large non-taxed informal economy;
- a large number of beneficiaries, due to rapidly aging demographics, low retirement age and early retirement policies widely used in the first years of transition;
- a generous benefit level.

Pension expenditures remain high, particularly given the relatively young population structure. Initial early retirement policies for laid-off workers combined with a declining contribution base have exacerbated imbalances in the pension system, despite wholesale reforms of recent years, including a lowering of minimum benefits for new retirees at the beginning of 1997. (Simon Maurano).Unemployment represents one of the most severe economic and social problems facing Macedonian society. Reforms to social protection benefits gained momentum in the late 1990s despite initial delays. Economic and political instability resulted in delayed government reforms in a number of areas particularly relevant for labor market functioning and social protection. The main laws on employment, unemployment compensation, labor relations, social protection and others were introduced

[8] Pay-as-you-go (PAYG): in its strictest sense is a method of financing whereby current outlays on pension benefits are paid out of current revenues from a tax, in the Macedonian case, a payroll tax

[9] The two crucial variables for pay-as-you-go pension systems are: population growth and real wage growth

only after 1997 and the first approved versions of these laws contained significant inconsistencies and measures not entirely relevant or useful for labor market development. (World Bank,2004).

Simulations indicate that the aging population will lead to a future destabilization in the finances of the Pension Fund unless the structure of benefits is changed further.

Reforms of pension system of Macedonia

The ratio between the contributors and retirees is very important for a PAYG system, because the benefits for the current retirees are paid with the contributions from the current contributors. Macedonia spent 13 % of economic output on pensions. Pensions also represented a large share of total government outlays in Macedonia. Macedonia spent nearly a quarter of all government outlays.(World Bank,1996).Contributor's decline and the raise of the number of pensioners strongly impacts on the sustainability of the traditional pay-as-you-go funded scheme and influence the debate about the urgent need of reform of the pension system.

Prominent feature of these reforms was the introduction of mandatory individual retirement saving accounts.

The Republic of Macedonia, with the technical consultancy of the World Bank, had been reforming its pension system which includes the introduction of the mandatory fully funded pension insurance to supplement the existing PAYG (pay-as-you-go) pension system.[10] The private pension funds will be managed by pension companies whose responsibility will be to invest the pension funds' assets in accordance with the investment limits stipulated in the Law on Mandatory Fully Funded Pension Insurance.

In Macedonia pension reform was initiated in 1997 and in 2000 the Pension and Disability Insurance Law was adopted. This reform allowed for the introduction of a mandatory second pillar pension system to supplement the first pillar pensions. The second pillar has only recently become operational i.e in 2007. In Macedonia the first and second pillars are strongly integrated. Under the previous pension system, the employer paid 21.2% of each employee's salary to the Fund for Pension and Disability Insurance of Macedonia . In the reformed system the same contribution will be paid. In the meanwhile two private pension funds have been established. The total of 21,2% contribution is divided into two parts: 13,78% will remain in Pension and Disability Insurance Fund and 7,42% will be transferred to an individual account in the chosen private pension fund.(Gijsbert Vong,2007).

However, it was only in March 2000, when the new law that regulates the reformed pension system was adopted. The new system was introduced under the heading of "three-pillar pension system" and is consisted of:

- The first pillar, compulsory and financed on PAYGO basis
- The second pillar, compulsory and fully funded
- The third pillar, voluntary and fully funded

The system was an operational from 1 January 2005. According to this scheme eligible for a retirement benefit are contributors with 64 years of age (for man), i.e.62 years of age (for woman) and minimum 15 years of pension service. The employers provide funds for the pension and disability insurance rights and the persons insured under Pension and Disability Insurance Law. The contribution rate is 21.2% of the gross salary for contributors who will

[10] In Macedonia, the current reform of the pensions system was structural, accompanied by the introduction of mandatory private pension funds

remain in the mono-pillar system. Those who will choose or by law belong to the two-pillar system are going to contribute with 14.2% of the gross salary for the PAYGO pillar and 7% of the gross salary for the second, fully funded pillar. This means that the contribution rate of 21.2% is just divided between the two pillars.

The contribution of 14.2% of the gross salary will be collected and managed by the public Pension and Disability Insurance Fund, which will use the funds for paying the pensions to the present and future pensioners. The additional 7% of the contribution rate will be initially paid to the public Pension and Disability Insurance Fund, which is responsible to transfer the funds to the private company for pension fund management. Every individual will have her/his own personal investment account operated by afore mentioned private companies and audited by the Agency responsible for providing security for the funds in the second pillar. Contributors will also keep the rights to transfer funds from one into other company for pension fund management.

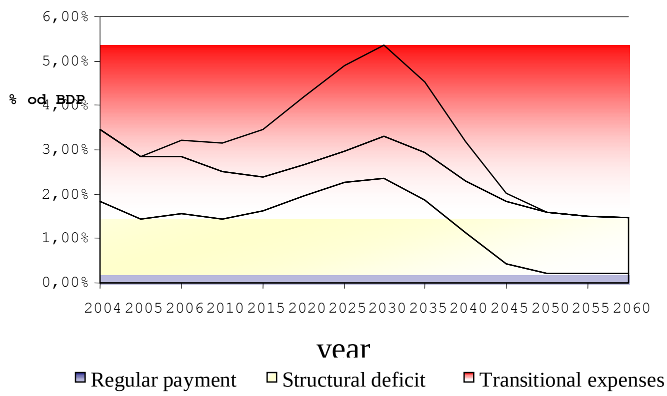
The third pillar is designed to provide additional protection for people who want more income and insurance in their old age. It is consisted of personal savings plans managed by a private company and fully funded by the ones who will decide to become contributors in this financial and administrative arrangement. Thus, the third pillar operates on voluntary basis without defined contribution rate and depends on the decision of every individual.[11]
Within the completion of the Pension System reforms, there are two important activities for the next 3-5 years: (1) Support of the development and functioning of the Second Pillar of the Pension Fund and (2) Design and support to the Third Pillar.[12]Starting with January 2006, the functioning of the Second Pillar is expected.

Pension system planning in Republic of Macedonia

On the next figure has been shown the needed budget transfer of the country of Macedonia for the incomes and expenses balancing of the Fund. It consists of: regular payment budget transfer, financing transfer of transitional expenses due to setting up of a second pension pillar and fund transfer due to covering of the structural deficit.

[11] In July 2009 the voluntary pension insurance system ("third pillar") became operational, completing a seven-year pension reform intended to harmonize Republic of Macedonia's social insurance legislation with that of the European Union
[12] USAID Macedonia: "Assessment of the Enabling Environment for Business in the Republic of Macedonia" - Final Draft - Skopje, 25.05.2005.

Figure 3: Budget transfer structure



The transitional expenses has an interim period character and such expenses will have disappeared during the time.They start in the first reform year due to ebb of Social security contributions to the second pension pillar and their ammount is 0.37% of GDP.(Jovan Pejkovski,2009).Their maximum,will be reached in 2030 and in this period of time also there will be increasing of work force participation in the second pension pillar and also with that, the ebb of expenditures from the first pension pilllar will be significant and their ammount is about 2.05% of GDP. The transitional expenses will be dissappeared in 2050 when second pension pilar will grow enough with what the burden of the financing of the pensions mainly will be delivered to the second pension pillar and that directly will influence the decreasing of the pension expenses in the first pension pillar.

The appearance of the transitional deficit will depend on the number of the insured people which will be joined in the second pension pillar and their expenditure ammounts.These are new employed people who compulsorily will be joined into the second pension pillar and people who voluntarily will decide to make transfer into the new pension system.While the projections has been made, a lot of analyses for the possible number and structure of insured people has been done.It depends on lot of factors , as gender, age,year of probationary period, the expectation rate of contribution into second pension pillar,etc.Because of the impossibility for assessment of the exact number of insured people there are have been made three groups of assumptions of making transfers which are giving the possible range for making transfer into second pension pillar.

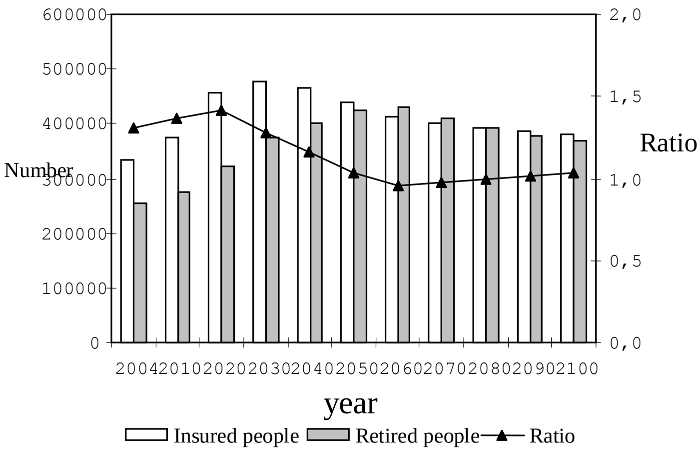
Pension system projections

A good functioning of the pension system in a country is of general concern because it may help or confine the economical development of the country. The retired people are important part of the entire population, and therefore the ageing of population is a problem of crucial importance. The longer duration of life means changing of the population structure and increasing the number of older people in entire population, and with that also the number of retired people in the system is changed and their time of duration of using of pension benefits too.

From the other side, the disadvantages of the economical changes and directions of its development has direct influence to the decreasing of population activity rate and to the structure of working force, and with that to the number of insured people for long term period as well. A system with current financing (PAYG), as our system is, is very complicated concerning the ratio between insured people and retired people, because there is a possibility for danger of lack of payment of promised retirement benefits due to insufficient means by current insured people.

The future movement of the number of insured people and retired people according to the basic scenario, and also their ratio, has been shown on the next figure.

Figure 4: Movement of the number of insured and retired people



From the figure, it can be noticed that in the beginning period of projections, the number of insured people has been growing as a result of decreasing of unemployment rate and increased economical growth.[13] But, after 2030, the number of insured people will start to decrease due to demographical movement and stabilizing of the economical growth. The number of retired people will be continuously growing in the next 60 years, and then decreasing. The proportion between insured people and retired people, from current level of 1.3 insured people to 1 retired person will be decreased in long term to a level of 1 insured person to 1 retired person.(Jovan Pejkovski 2009).

This trend of ratio means that there will be smaller and smaller number of insured people and they will pay for more and more retired people.

For a comparison, these results are shown in the next figure together with the results from the optimistic and pessimistic scenario.

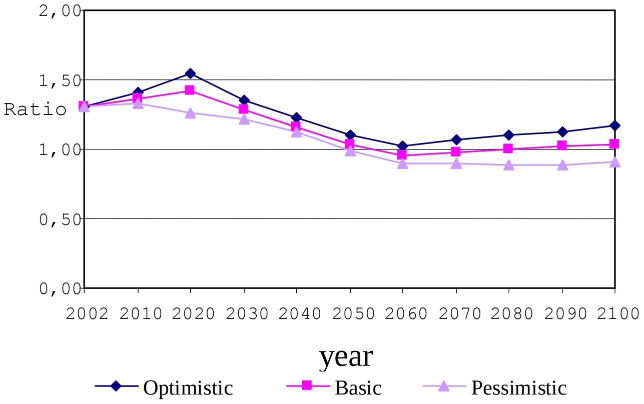
Table 2:*Ratio between Employees and Pensioners from 2004-2007 in R.Macedonia*

Year	Employees	Pensioners	employees/ pensioners
2004	348.212	260.075	1,3
2005	348.500	265.152	1,3
2006	377.763	269.681	1,4
2007	424.338	272.386	1,6

[13] The ratio between the employees and the pensioners in 2007 is : 1,6.
This improvement is result of: improvement of the contribution collection in the Pension and Disability Insurance Fund and decrease of unemployment rate

Source: Ministry of Labor and Social policy,Republic of Macedonia

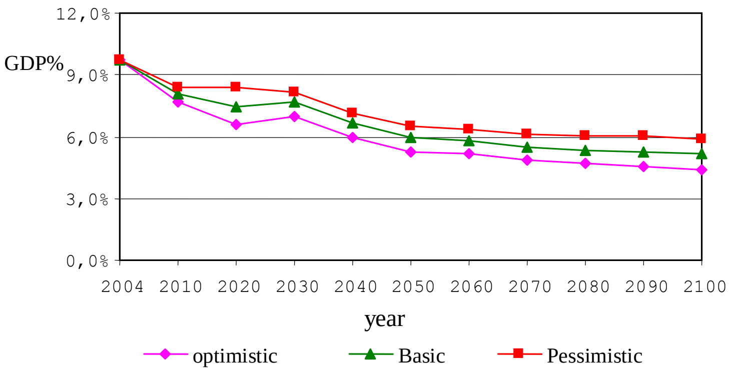
Figure 5: Ratio- insured people/retired people in all three scenarios



The figure shows that in all three scenarios there are a significant decreasing of the proportion:insured people vice versa retired people.In the pessimistic scenario that ratio has been decreasing to a level of 0.91, and then even in the optimistic scenario that ratio is not very good, and it is decreasing to a level of 1.17.(Jovan Pejkovski,2009).This kind of proportion point out to a conclusion that a system which has been designed only to an current financing will have problems with its working, because the proportion insured vice versa retired people is an indicator byself for an instability of the system.

Pension expenses expressed through a percentage of GDP are an indicator for that how much expensive is the pension system in a country.On the next figure are shown projections for pension expenses(pensions, minimal agricultural pensions,military pensions, differences about 8%, differences for army and police servants,early pension benefitiars from 2000 and public administration pensions from 2001)in proportion with GDP for a pessimistic, basic and optimistic scenario. For comparison, on the next figure are shown the results from all scenarios: the basic, optimistic and pessimistic scenario.

Figure 6:Pension expenses in ratio with GDP

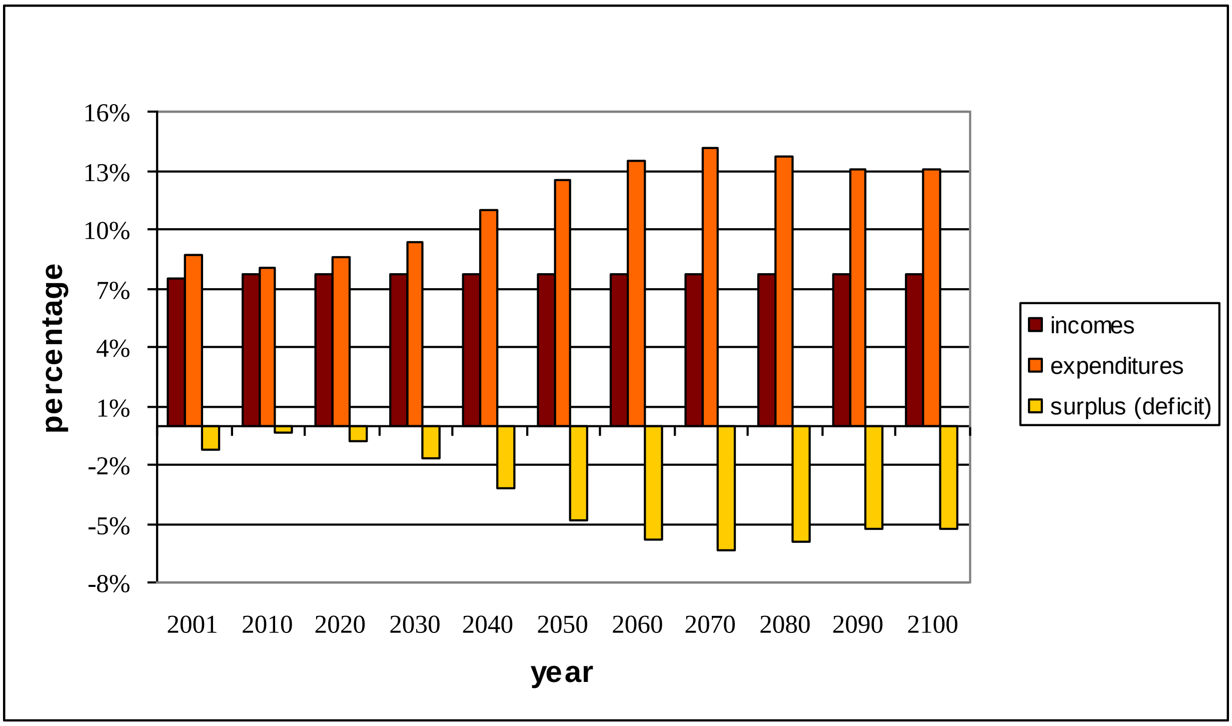


In 2004 pension expenses were 9.7% from GDP.The expenses during the projected period have been decreasing gradually.This is due of two factors:First, decreasing of the obligations of the Fund for Pension Insurance of R.Macedonia because of the ongoing parametric reforms, i.e step by step decreasing of the substitute rate of the pensions from

80% to 72% for the insured people who will stay in the first pension pillar and second, decreasing of the range of pensions for the insured people who will make transfer into the second pension pillar because the replacement rate from the first pension pillar is only 30%, and these insured people will be receiving their leftover of the pension pay-offs from the second pillar.(Jovan Pejkovski,2009).

How all these factors will affect the financial working of the Pension and Disability Insurance Fund of Macedonia until to 2100 , can be seen on the next figure.[14]
On the next figure has been shown the incomes and expenses of the Fund with proportion to GDP. Also, it has been shown their difference, i.e. the deficit which will have appeared in the Fund. In these results beyond the basic categories of the pension system (the incomes from the Social security contributions of retired persons and expenses for pensions) are comprised other items of incomes as well and expenses. From the income's side, that is: Incomes of the budget of the Republic, from the excise duties,stock exchanges, from dividents and other incomes,and from the expense's side: expenses for compensation of physically injury,compensation for invalids insurance, means for boarding school lodging and employment of child invalids, contributions for health insurance, administrative costs and some other expenses.

Figure 7: *Incomes and expenses of the Fund with proportion to GDP*



Source: Ministry of Labor and Social Policy. Republic of Macedonia

The projections of the reformed pension system shows us that the Fund for Pension and Invalid Insurance of Republic of Macedonia will work with deficit which will be decreasing in long run period of time in contrast from the projections of the unreformed system which shows continuous growth of the deficit and possibly an insolvency of the Fund. The deficit of the Fund of Pension and Invalid Insurance of Macedonia is consists of two components: deficit due to ebb of Social security contributions into the second pension pillar and structural deficit of the Fund which has been appeared because of imbalance of the current incomes with the expenses.

[14] Pension and Disability Insurance Fund of Macedonia**:** Administers the publicly managed social security scheme and collects contributions. http://www.piom.com.mk/

Between 2004 and 2030, because of introducing of the second pension pillar, the deficit will grow gradually because work force participation in the second pension pillar will grow gradually and with it, the ebb of the Social security contributions into the second pension pillar will become more important.

After 2030 will start an decrease of the deficit because there will be appeared the first retired persons from the two pension pillar system ,and with that it is expected to be decreased the expenses for pension pay-off , because they will receive smaller amount of pension pay-off from the first pension pillar, and a huge part of the pension pay-off will come from the second pension pillar.

In the period of 2050 there will be stagnation level of the deficit on the same level, about 10 years(without any decreasing) because of the influence of the demographic factors, especially because of the very low fertility rate in the first decades from 21 century, and that consequently leads to diminishing into the smaller number of insured people, exactly in the above mentioned period of time.

Furthermore,due to matured two pension pillar system, in a situation when all retired persons already will have received a pension pay-off from the two pension pillars, in that case, there will be decreasing of the expenses for pension pay-off in the first pension pillar and also there will be decreasing of the deficit as well.

Concluding Remarks

The results confirm that ageing will continue to characterize the near future of the European population. The basis of the age pyramid is shrinking, while the elderly population increases.

The overall picture is clear: Europe's demographic situation is characterized by low fertility, an increasing life expectancy, and overall by a projected shrinking of native populations in the decades to come. Demographic ageing is inevitable, but future changes in labor force and population at working age are not only determined by population dynamics. This gives European societies a variety of policy options including rising retirement age, higher labor force participation of women and a pro-active recruitment of migrant labor and skills.

"We would have to end early retirement". This strategy particularly applies to countries where actual retirement age is well below legal retirement age. In more than half of EU27 countries actual male retirement age has fallen to or even below age 60 whereas female retirement age already is well below age 60. Taking into account ever increasing life expectancies room for the prolongation of life working time has widened over the past years. This option, however, demands a shift in attitudes both at employees' and employers' sides. In this respect current adult education and training programs, salary schemes, and pension systems must be reformed in order to make employment of older worker more attractive. It should also be publicly questioned whether the general attitude of systematically draining the pension systems at individual level is a responsible behavior.

The objective of this paper was to analyze the issues that are important and should be taken into consideration for the Macedonian pension reform.

The reformed pension system in Macedonia is a result of an gradual step by step process with aim the population to be reduced from emergency measures all in aim to be provided an financial and social security for the current and the future generations of pensioners. As a main reason of taking the reforms in the pension system in Republic of Macedonia is ageing of the population, which has been pressured over pension system, financed only to pay-as–you–go basis. With the reforms, there is a situation of three pillar pension system.

One of the reforms of the pension systems which has been resulted with forming of the three pillar pension system, was an answer to the consequences from the global ageing. Another open question is: How can be protected the pension system from the consequences of the economic crises? The answer depends on the processes in the economic and social development which influence the pension system.

Although, it is unrealistic to be expected that the pension system will be stabilized and that incomes and expenditures will be balanced without the necessary assumptions for improving of the economic developments and the stabile decreasing of unemployment rate. Stabilizing of the economical and social developments is an slow and difficult process.

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