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Pension system in Cyprus and in the EU countries Sweden Belgium and United Kingdom

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PENSION SYSTEM IN CYPRUS AND IN THE EU COUNTRIES SWEDEN BELGIUM AND UNITED KINGDOM

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ABSTRACT

"Social security is a fundamental human right recognized in numerous international legal instruments, in particular the Declaration of Philadelphia (1944), which is an integral part of the Constitution of the International Labour Organization (ILO), and the Universal Declaration of Human Rights (1948) adopted by the General Assembly of the United Nations" *.sited in World Social Security Report 2010/11. Providing coverage in times of crisis and beyond. pp. 25*

The aim of the present study is to make a short description and comparison of the pension system in Cyprus and in three other European Countries, Sweden, Belgium and the United Kingdom.

There is not a "perfect" pension system but each country has a different economic, political and social system which means that it not only affects internal factors but external as well.

The first Chapter gives a short overview about the challenges and the problems that the Pension Systems in Europe and in the rest of the world are facing.

The second chapter briefly describes the main types of the pension systems that exist in Europe.

The third Chapter gives an overview of the Pension System in Cyprus, describing the General Social Insurance scheme, the Social Pension Scheme and the Occupational pension plans. It points out the qualifying conditions and refers also to the replacement rate, the different benefits and the different levels.

The fourth Chapter explains the new fully implemented in 2003 public old-age pension system in Sweden which consist of an earnings-related component based on notional accounts, a private mandatory defined contribution system and a pension-income-tested top-up. Furthermore it gives an overview of the replacement rate, the occupational pensions, and the private pensions.

The fifth Chapter describes the Belgian pension system which consists of the public pension scheme, the occupational pension scheme and the voluntary individual pension schemes.

The sixth Chapter refers to the pension system in the United Kingdom which consists of the public Basic Pension (BSP) together with the State second pension (SSP) , and of the Personal pension and Company pension.

The last chapter deals with the Pension systems reform. "Retirement age" is the most visible parameter of the pension system. As such, it sends a clear signal for people in choosing when to cease work. Increases in pension age have often proved among the more contentious elements of pension reforms, compared with other, less visible, changes to retirement-income provision.

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“μηδένα των πολιτών απορείν των επιτηδείων”

(να μη στερείται κανένας πολίτης των αναγκαίων για τη ζωή του)

Ισοκράτης, ‘Αρεοπαγιτικός’, 53

CHAPTER 1

1. Introduction

An adequate and sustainable retirement income for all the citizens now and in the future is a priority for every country in this world. Achieving these objectives in an ageing world is a major challenge. Many countries have sought to prepare for this through pension reforms.

The recent financial and economic crisis has aggravated and amplified the impact of the strong trend towards an aging population. The problems in economic development, public budgets, financial stability and employment have made more urgent the need to adjust the practices of retirement and the way people are founding rights on pensions. The recent economy crisis showed that more must be done to improve the effectiveness and safety of pension systems, so as not only to provide a means for a decent life in old age, but also to be the reward for a lifetime of work.

President José Manuel Barroso in his political guidelines of the European commission highlighted the importance of adequate and sustainable pensions for strengthening social cohesion in the European community (Green Paper, 7.7.2010) with the following words:

"Millions of Europeans are wholly dependent on pensions. The crisis has shown the importance of the European approach to pension systems. It has demonstrated the interdependence of the various pension pillars within each Member State and the importance of common EU approaches on solvency and social adequacy. It has also underlined that pension funds are an important part of the financial system. We need to ensure that pensions do the job intended of providing the maximum support to current and future pensioners, including for vulnerable groups."

No one can suggest or insist that there is a perfect or an ideal pension system design, on the other hand a stable and effective pension system should provide the ability to individuals to maintain their living standards after retiring to an acceptable level. This is crucial for the citizens of every country and an important factor for the social stability and cohesiveness.

Pension reform is now on the priority agenda of countries in the European Union and the rest of the world. While mass unemployment and sluggish economic growth have short-term consequences on the balances of the revenues and expenditures of pension systems (including social protection systems in general), long-term structural problems are also caused by the ageing process in advanced societies and the increase in life expectancy. Changes in family structures and patterns of labor force participation and organization of working time and working conditions create also new challenges. The problem of increasing life expectancy, lower fertility rates and the subsequent deterioration of the demographic ratios has been around long enough, but unfortunately it has been largely ignored by politicians and the general public until recently. Gradually it has become clear that the effects of population aging on pension systems can only be addressed in three ways: increasing contributions, reducing benefits, late retirement; this applies to both unfunded and funded systems. Individuals and policy makers are also gradually recognizing that the problem cannot be passed on to future generations, that increased contributions or reduced benefits may not be the best method, and that later retirement or working longer seems to be the best solution. However, it has also become better understood that simply increasing retirement age on its own may not be sufficient to solve the problem.

1.1 The role of Pension systems

Why do we need Pension Systems?

In order to be able to answer the above question we should first try answering the question why should we save money during our life?

There are so many reasons for doing that of course.

A major reason for example is to be able to survive during difficult (financially) times. Another reason is an important investment in the future. Saving money for the deposit for a house or a car or an exciting acquisition is very common. This type of saving is usually short term. We save money for some short period in order to use it for an important for us purchase and this is actually the purpose of the short term savings.

On the other hand someone might also save money for his/her distant future. There are many families that are trying to save money in order to be able to cover the educational expenses for their children when they will need it.

There are many people /families though, that are concerned about their financial security after leaving work (old age) and so they are trying to save money so as to boost their social pension and live a decent life depending on themselves and not on their children. This type of savings is long term savings.

Another important factor in life that we should mention is work. The most valuable good for the humans is the ability to work and produce. Work is the driving force and the mean for the human to fulfill their needs. Basic and essential asset in the course of life is to work and provide adequate income at the end of the employment action. Work is considered a key factor in economic growth, the main source of income for the majority of the population, and finally the main factor that shapes the social dynamics of groups, but also determines the manner and level of life.

So in a few words people have needs to fulfill and this is the main reason for saving money.

Here should be clarified that not all the people a) have the same needs and b) Needs are related to the age.

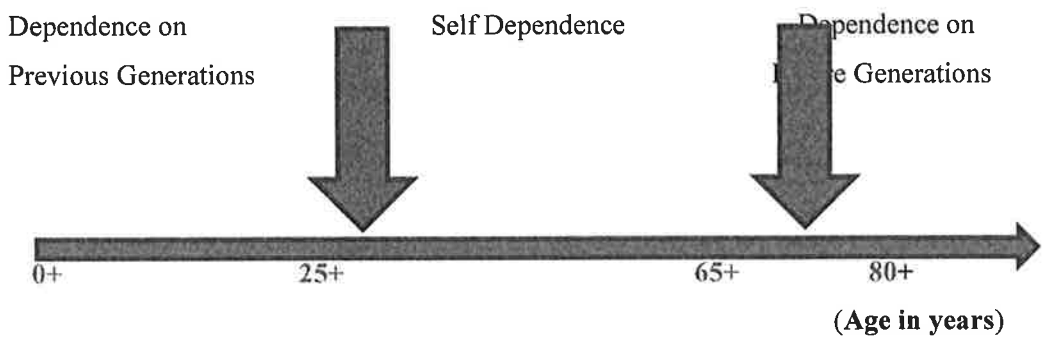
For example a small child has different needs from an adult and an old age Person has different needs from a middle aged worker.

To understand this better, let us consider how the society is structured in reality. We could consider that life is separated in three stages.

I. From birth until appro.25 years (or until we are financially independent)
II. From the 25^{th+} and until pension age
III. From pension age until the end of life cycle

When we are small and young we depend on our parents and grandparents and generally always the young generation depends on the previous generations to cover its needs. When we are old enough and have our jobs and we are financially independent then we are self-dependent and able to cover our personal and family needs. Finally when we reach the pension stage (old age) we expect and we depend on the future generations

Figure 1: Life Stages



All the stages in the previous graph are critical, but the most critical is the last stage. People who had work hard during their productive life and offered so many to their country, to their children, to their nation; they do deserve to enjoy a decent and peaceful life as a reward to what they have offered in the previous years. So how can these people secure a decent and peaceful life after retiring? The answer is the pension system

The institution of the Pension is one of the key area actions of social welfare state. We need Pension Systems because these systems give to everyone who enters the productive labor expectations for a better tomorrow, so that when he stops working to have a respectable amount of pension and absolutely a "decent" standard of living. The state / government is obliged to do all the necessary actions in order to attain the object of social security to all of its citizens, because the Pension is one of the most remarkable social human rights.

The Pension Systems work as a long term saving account, because People are working in the productive age and contribute to different pension systems and expect to be able to have a financially secured pension life when they retire. In a few words we can save money "today" through the Pension Systems when we are young and productive, either by the public insurance or/and by the private insurance and this will give us the right to disburse the money "tomorrow" during our pensionable age. More specifically, one worker saves part of his salary (personal savings + contributions system of insurance) so as to make the level of consumption after retiring equivalent or at least equivalent to that was before his retirement. That is why the pension either from public pension system or from private pension system is basically a long-term savings plan. Your regular contributions are invested so that they grow throughout your career and then provide you with an income in retirement.

The argument is that older persons have the unconditional right to income security. Pensions through the pensions systems are supposed to provide an income floor and therefore avoiding or at least reducing poverty among the elderly population.

So by summarizing we could mention that Pension systems provide security and protection in the cases of:

I. Lack of work-related income which caused by sickness, disability, maternity, employment injury, unemployment, old age, or death
II. Lack of access to health care
III. Lack of family support, particularly for children and adult dependents
IV. General poverty and social exclusion.

Now a days as explained later on, pension systems are facing many and difficult challenges. World is aging fast. Developed nations increasingly face difficulties to support their older population. In most developing countries, the elderly live at the bottom of the socio-economic levels. Older women, in particular, confront harsh conditions. Women usually take care of their children and family, an activity that puts them in a disadvantaged position when older. Many people in the developing world hold informal jobs or work without wages in rural areas. These older persons enjoy no proper pension system have scarce retirement savings, if any. Most poor countries have no pension system. By providing cash transfers to older persons, governments can meet their obligation to protect the most vulnerable sector in their society. Recent examples of several poor countries that have implemented a social pension system show that they are neither complicated nor very costly. In fact, financial projections show that social pensions take less than 3% of a national budget.

1.2 Challenges

1.2.1 Demographic changes and trends.

The Generally accepted demographic determinants are:

I. The fertility rate
II. The mortality rate
III. The level of net migration.

The fertility rate

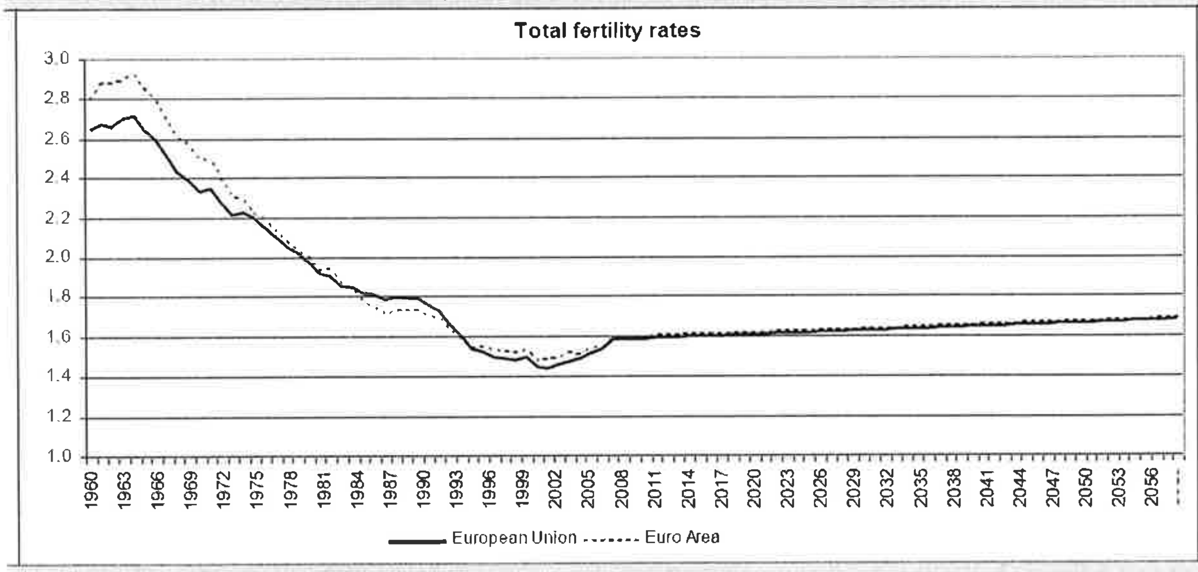
Total fertility rate is defined by the United Nations Organization as the average number of live births a woman would have by age 50 if she were subject, throughout her life, to the age-specific fertility rates observed in a given year. Its calculation assumes that there is no mortality.

The whole west world and especially Europe are facing an enormous demographic challenge. Although the fertility rate is expected to increase for the period 2012-2060 in the EU climbing from 1.59 in 2010 to 1.64 by 2030 and further to 1.71 by 2060 and in the euro area from 1.57 in 2010 to 1.68 in 2060 this is still below the natural replacement rate of 2.1. **(See Graph 1)**

For the United States the total fertility rate for 2012 is 2.06 and is expected to increase.

The variations in birth rates across European nations which are quite similar, and the fact that American fertility rates are higher, experts believe that this is a proof that basically the low fertility rate problem in Europe can actually be solved and is less intractable than it has been assumed. They believe that fertility in Europe is down partly because the workplace in most European countries still functions with regulations that exist since the 1950s time-warp, where the assumption is still that a primary bread-winner will work full- time for 30 or forty years and then retire to a life of doing nothing. Flexible arrangements that allow husbands and wives to combine paid work with childcare would be preferable and could help towards solving the above problem.

Graph 1 - Total fertility rates



Source: Commission services, Eurostat, EUROPOP2010.

The mortality rate

Life expectancy has been increased in most developed countries leading to a declining mortality rate. For the European Union since 1960, there have been significant increases in life expectancy at birth in all Member States. This is mainly due to vaccination and public health measures as well as improved personal hygiene and significant improvements made in reduction of infant and child mortality and in survival rates of young adults.

The Level of Net Migration

Net migration flows in Europe mainly started at the end of the Second World War, because of the high demand of human labour needs in the industry, due to workforce shortage. Migration flow was very high also in countries like England, Spain, and France because of their colonies. What is important though, especially for the European Union, is that net migration is necessary in order to keep the ratios of working-age population to total population at a constant level. It is expected that the EU as a whole would need significant net immigration which would amount to over 11 million additional inflows over the period 2010 to 2020, which would bring the total immigration flows, including the inflows which are already incorporated in the population projection, to nearly 25 million or 5% of the population in 2010 (**Table 1**). This illustrates the magnitude of the migration inflows that would be necessary as a supply of labor, in absence of other changes, such as increases in the labour force participation rates.

It is estimated that Europe's working-age population is set to start shrinking from 2012 onwards. Over the past 50 years, life expectancy has increased by about five years in the European Union. The most recent demographic projections show that the further increase of about seven years could be implemented by 2060. In combination with low fertility rates, this will lead to a dramatic change in the age composition of the population (**Figure 1**).

As a result, the elderly dependency ratio will change also dramatically. Now there are four people of working age for every person over 65 years, by 2060 it is estimated that this ratio will shift and there will be only two people of working age for every person over 65.

In the European commission's "*Ageing Report for 2012*" report, an Economic and budgetary projection for the 27 EU Member States for the years 2010-2060, it is estimated that the population in the European union of the 27 states will increase by the year 2040 but then suddenly will start to decline dramatically undergoing also, a significant change in its age structure. Regarding the age structure it is estimated that the proportion of young people (aged 0-14) is projected to remain fairly constant by 2060 in the EU27 and the euro area (around 14%), while those aged 15-64 will become a substantially smaller share, declining from 67% to 56%. Those aged 65 and over will become a much larger share (rising from 17% to 30% of the population), and those aged 80 and over (rising from 5% to 12%) will almost become as numerous as the young population in 2060.

These demographic developments have a major impact on labour market as well. In the same report (*Ageing Report for 2012)*, it is estimated for Europe, that for the period until 2012 the demographic changes will still support growth. That means that both working- age population and the number of persons employed are projected to increase. However, this growth starts suffering due to the effects of the ageing population, even without considering the negative impact of the current financial and economic crisis. In the following years until 2021 it is expected that there will be a decline in the working –age population which it will be balanced from the expected reduction in unemployment rates and the expected increase in the women and older workers employment rates. Finally from the 2022 and after the female and older workers employment rates will reach a constant state and in the absence of any further reforms the ageing effect is expected to dominate and as a result both working –age population and the actively persons employed will enter a declining orbit.

Table 1 : Estimation of net migration needs by 2020

In order to keep the ratio Labor force to population in 2020 at 2010 level

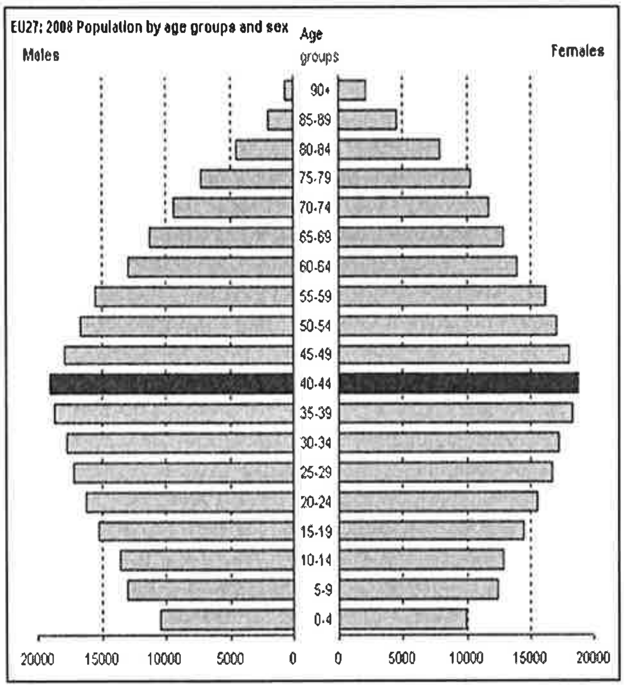
WAP: working-age population (20-64)

	WAP 2020	of which: cumulated migration since 2010		WAP as % 2010 POP	WAP needed	onal migrants needed		Total migrants	
	000s	000s	in % WAP		000s	000s	as% 2010POP	000s	as% 2010POP
BE	6729	591	8.8	60	6967	239	2.2	830	7.6
BG	4215	-129	-3.1	63	4496	282	3.7	153	2.0
CZ	6484	347	5.4	65	6996	512	4.9	859	8.2
DK	3279	130	4.0	59	3385	105	1.9	235	4.2
DE	47678	918	1.9	61	48646	969	1.2	1886	2.3
EE	775	-7	-0.8	62	818	43	3.2	37	2.7
IE	2735	0	0.0	61	2947	212	4.7	212	4.7
EL	6847	348	5.1	62	7094	248	2.2	596	5.3
ES	29252	1892	6.5	63	30382	1130	2.5	3022	6.6
FR	37790	928	2.5	59	39888	2098	3.2	3027	4.7
IT	37344	3877	10.4	61	38293	948	1.6	4826	8.0
CY	544	45	8.3	63	561	17	2.1	62	7.6
LV	1308	-19	-1.4	63	1340	32	1.4	13	0.6
LT	1948	-99	-5.1	62	1963	15	0.5	-84	-2.5
LU	357	55	15.4	62	360	2	0.4	57	11.3
HU	6005	283	4.7	63	6202	197	2.0	480	4.8
MT	247	-3	-1.4	63	261	14	3.4	11	2.6
NL	10005	244	2.4	61	10510	504	3.0	748	4.5
AT	5270	298	5.7	62	5306	36	0.4	334	4.0
PL	23636	196	0.8	65	24896	1260	3.3	1457	3.8
PT	6476	302	4.7	62	6605	130	1.2	432	4.1
RO	13119	64	0.5	64	13468	349	1.6	413	1.9
SI	1295	95	7.3	64	1380	85	4.1	180	8.8
SK	3533	116	3.3	66	3670	137	2.5	253	4.6
FI	3103	151	4.9	60	3350	246	4.6	397	7.4
SE	5661	484	8.6	58	5901	241	2.6	725	7.7
UK	38340	2150	5.6	60	39737	1397	2.2	3547	5.7
NO	3129	299	9.5	60	3219	89	1.8	388	7.9
EU27	303976	13259	4.4	61	315571	11596	2.3	24854	5.0
EA17	199980	9850	4.9	61	207051	7070	2.1	16921	5.1

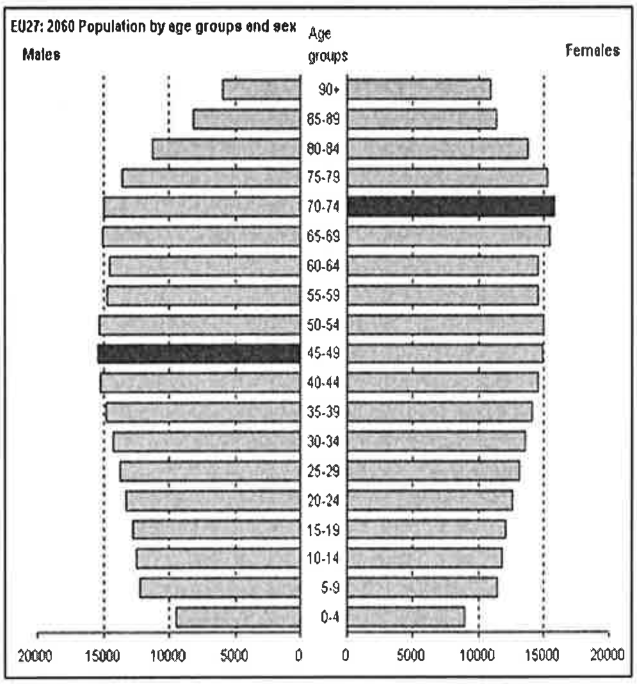
Source: Commission services, Eurostat, EUROPOP2010.

Figure 2 : Demographic structure of the population in 2008 and 2060 in the EU (2008-2060)

2008



2060



Source: Commission services. http://europa.eu/epc/publications/index_en.htm.

Note: the red (dark) bar indicates the most numerous cohorts

1.2.2 The Impact of the financial (economic) crisis

Unfortunately the current financial crisis that started in 2008 had an additive negative impact on the underlying ageing problem. Problems such as increased unemployment, lower growth, higher national debt and financial market volatility have made it harder for all systems to meet their pension promises. Private schemes can be proven a useful help and offer a considerable relieve to the pressure on public pension provision. On the other hand, high dependency on private schemes has financial costs, and furthermore, if private schemes cannot deliver their promises, there will unavoidably be pressures on the public system to share the costs.

Although In most countries Current pensioners receiving pensions secured by public pension systems have so far not been affected by the crisis due to the fact that public pensions are able to automatically adjust to the current situation, it is expected that the financial crisis and the estimated lower growth prospects will have negative effects on all types of pension systems, including those public pensions secured.

Estimates suggest that the crisis will put further pressure on public pension spending over the long-term because economic growth is set to be considerably lower and there is great uncertainty as to the timing of the full recovery. In some countries where the governments have diverted some of their social security contributions to new mandatory funded pensions programs, because of the crisis they had to either halt or lower the citizens' contributions to private pensions in order to improve their public pension fiscal indexes.

Variations in the capacity of the various insurance schemes to accommodate in the new financial and economic crisis environment showed that differences in the design, regulation and investment strategy play an important role. The extent of damage is also associated with the selected investment practices and the ability to absorb the resulted shocks from the financial crisis also depends on how well the weight is shared among participating providers and recipients. Unfortunately, in countries where solvency requirements were lower and loss of assets, particularly large, also tend to have poorer protection of accrued rights and the least flexible mechanisms for burden sharing. As a result, the rights can be lost and providers tend to disrupt systems, since they cannot afford to bring back the system to creditworthiness.

CHAPTER 2

2. A General Description of the pension systems in European Union

2.1 Old –age Public pension schemes

This is the main pension system that exists in the majority of the European countries, but with variations among the countries.

In most European countries, public pension systems provide both earnings-related pension and a guaranteed minimum pension. However, the accumulation of earnings-related pensions can vary considerably from country to country due to factors such as the annual accrual rate of pension rights and the requirement of years of service required for full pension. Another important factor is the definition of reference wages and exploitation of previous earnings which also play a significant role in estimating the Public initial pension.

The main differences of the Public schemes between the European member states ranged in the type of benefit provided by the earnings-related public pensions, the level of generosity of these public schemes and the various provisions associated with them as well.

Most of the countries they provide defined - benefit pensions, where the retirement benefits are determined by the salary and years of service. However, some countries like Sweden, for example, apply a notional defined-contribution principle, whereby the notional accumulation of the contributions is converted into an annuity at the time of retirement. As for the level of generosity of the public pension schemes, this is mainly related to whether there are provisions for any other pension alternatives. Some countries as a part of their pension system reforming as mentioned earlier, have introduced statutory private schemes, where a part of the public security pension is shifted to this type of arrangement. Another relatively recent innovative arrangement that has been applied in some countries is the occupational pension plans.

Furthermore, pension provisions may also differ within a country between groups of people due to sectoral pension schemes. For example some countries like Cyprus, the United Kingdom and Belgium have different Public pension schemes, for the private employees and different pension system for the Public employee. This often cause an inequality between the two types of employees and in particular, the tax-financing of the public sector employees' pension scheme in Cyprus and the United Kingdom and the pension benefit rules, which provides earnings-related pensions to public sector employees, make the provisions more favorable than those to private sector employees.

Many countries however, through recent reforming efforts are trying to align the pension provisions between the various sectors in order to resolve this problem of inequality.

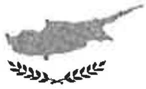
2.1.2 Public early and deferred retirement system

Early retirement provisions and conditions are different between countries and over coming years. While the differences between the various countries may have a significant impact on the overall level of spending on pensions and its future development, changes over time can have important implications for future pension assimilation

The majority of the European countries have special provision for early retirement which is arranged within the old age pension system. In some countries though, like Cyprus, Ireland and the United Kingdom, early retirement provision doesn't exist at all.

One of the major aims during the pension system reforming in many countries is to shift from early retirement provision at deferring retirement and prolonging working live. For example the Netherlands is switching its early retirement scheme into a voluntary funded flexible working arrangement scheme. Many other countries have undertaken parametric reforms which increase the eligibility age to early retirement, which require more contribution years to the eligibility and which have introduced more or less actuarial reductions in the benefit formula.

Each country for the projection of its pension expenditures develops and manages its pension model according to each country's purposes and priorities. Cyprus for example uses the PROST model (pension reform options simulation toolkit), which was developed by the World Bank. The PROST, models pension contributions, entitlements, system revenues and system expenditures over a long timeframe into the future. The model is designed to promote evidence-based policy-making, bridging the gap between quantitative and qualitative analysis of pension regimes. It is a flexible, computer-based toolkit; easily adapted to a wide range of countries' circumstances. Other countries are using other projection models, for example the Semi-aggregated simulation model. The philosophy behind this method is that the data are partially aggregated; usually the lowest level of aggregation is done for a group of pensioners (or active people) that have the same characteristics such as age, gender, income group, pension type and pension act/fund. Usually, models separate existing pensioners and new pensioners, thus allowing the average initial pension for new pensioners differ from that for existing pensioners.



CYPRUS

CHAPTER 3

3. The pension system in Cyprus

3.1 Description

The primary purpose of the pension system in Cyprus is to provide access for all persons to appropriate pension arrangements, public and / or private, allowing them to earn pension rights, and enabling them having an adequate standard of living after retirement.

The Cyprus pension system consists of:

- **The General Social Insurance Scheme**, which is a compulsory earnings-related scheme that covers every person gainfully employed in Cyprus. This scheme covers all the people in the public or private sector, and also the self-employed. It covers from the one part short-term benefits including sickness benefit, the maternity benefit, a marriage grant, unemployment benefits, and an employment injury benefit. From the other part it covers long term benefits including pensions for old age, invalidity and survivors.
- **The Social Pension Scheme**, an income-tested scheme, which covers residents of Cyprus with no or low pension income and
- **Occupational pension plans**, which provide supplementary pensionable benefits to their members:
  - I. The Government Employees Pension Scheme.
  - II. Semi-government Sector Employees Pension Schemes, and
  - III. The Voluntary Provident Funds and other similar collective arrangements.

3.1.1 The General Social Insurance Scheme (GSIS)

The General Social Insurance Scheme was introduced in 1957 and it covered compulsorily the employed people, with the exception of agricultural workers. The scheme gives the opportunity to the self-employed people and those workers accepted from compulsory insurance, the right to be insured voluntarily. The benefits of the 1957 Scheme were: marriage, maternity and funeral grants, sickness and unemployment benefits, old age and widow's pensions and orphan's benefit. Both, contributions and benefits, were "flat-rate" irrespective of the insured person's earnings. The Scheme was financed by three equal contributions i.e. from the employed people, the employers and the State. In 1964 the scheme reformed and extended compulsory insurance to every person gainfully employed in Cyprus, including all categories of self-employed, while the material scope expanded to include maternity allowance and benefits for industrial accidents and occupational diseases. A major reform for the General Social Insurance Scheme in 1980 introduced an earnings-related insurance scheme, replacing the previous scheme of flat-rate contributions and benefits. The General Social Insurance Scheme, in its current form, consists of two tiers: **the basic** and **supplementary part**. It provides comprehensive benefits, which include:

- Unemployment benefit,
- Other short-term benefits, such as sickness benefit and maternity allowance,
- Employment injury benefits, and
- Long-term benefits, i.e., old age, invalidity and survivors′ pension benefits.

Insurable earnings

Insurable earnings, on which contributions are paid, are the gross earnings up to a maximum of six times the basic insurable earnings. In 2010, basic insurable earnings were fixed at €8,687 per year. The maximum insurable earnings for contribution purposes in 2010 were €50,596.

The total annual insurable earnings of every insured person are converted into **insurance points**. The conversion of insurable earnings into insurance points is done by dividing the earnings of a given year by the annual basic insurable earnings of the following year (in 2010, one point is credited for every €8,687 of earnings). The first insurance point represents ***basic*** insurance and insurance points in excess of one represent ***supplementary*** insurance.

For example the cross salary (insurable earnings) of an employee in the public sector in 2010 was €2,600 x 13 = € 33,000 divided by the annual basic insurable earnings in 2010 €8,687 the **insurance points** will be **3,89087**.

Qualifying conditions

Old-age pensions under the General Social Insurance Scheme represent the main source of income for retirees. **As a general rule, the old-age pension is payable at the statutory**

pensionable age of 65 for both men and women, provided that the following insurance conditions are met:

I. The person has been insured for at least 260 weeks and has basic insurance up to the date of old-age pension entitlement at least 5 insurance points, earned from paid contributions, and

II. The total number of insurance points in the basic insurance, earned from paid or credited contributions, is equal to at least 30 % of the number of years over the period between 5 October, 1964 (or the first day of the year of attainment of age 16, if later) and the week before the week of old-age pension entitlement.

From 3.1.2011 the 1st condition was **364 weeks of insurance** and **7 insurance points**, while on 2.1.2012, became **520 weeks of insurance** and **10 insurance points**.

Old-age pension could be paid at age 63 (without any actuarial reduction), for both men and women, if the insured person satisfies the above insurance condition 1. and the total number of insurance points in the basic insurance, earned from paid or credited contributions, is equal to at least 70 per cent of the number of years over the period between 5 October, 1964 (or the first day of the year of attainment of age 16, if later) and the week before the week of old-age pension entitlement.

An insured person in receipt of the **invalidity pension** immediately before reaching the age of 63 is eligible to the old-age pension.

An invalidity pension is payable to a person who has been incapable of work for at least 156 days and who is expected to remain permanently incapable for work, i.e., unable to earn from work more the $^{1}/_{3}$ of the sum usually earned by a healthy person of the same occupation or category and education in the same area. For the payment of an invalidity pension the following insurance conditions should be satisfied:

I. The person has been insured for at least 156 weeks and has basic insurance up to the date of invalidity at least 3 insurance points, earned from paid contributions,

II. The total number of insurance points in the basic insurance, earned from paid or credited contributions, is equal to at least 25 % of the number of years over the period between 5 October, 1964 (or the first day of the year of attainment of age 16, if later) and the week of invalidation, and

III. The person has paid or been credited with contributions which provided him/her with at least 0.39 of insurance point within the relevant contributions year. This condition is also satisfied if the average number of insurance points earned from paid or credited contributions over the last two years is equal to at least 0.39 of insurance point.

How to calculate the Old Age Pension General Social Insurance Scheme Formulas:

Equation 1: Calculation of the basic annual old-age pension:

(60% x (Basic Insurance Points x Annual Basic Insurable Earnings in the retirement year)) / (Insurance Period up to the 63rd or 65th birthday)

The 60 percent coefficient in the formula is increased to 80% for a beneficiary with one dependent, to 90% for a beneficiary with two dependents, and to 100% for a beneficiary with three dependents.

Equation 2: Calculation of the supplementary annual pension:

1.5% x (Supplementary Insurance Points x Annual Basic Insurable Earnings in the year of retirement)

The total pension is the sum of the basic and the supplementary pensions. The total pension cannot fall below a minimum of 85% of the basic pension that would be paid to the beneficiary if he had full insurance in the basic part of the plan (i.e. if he had contributed during a full working career with a salary equivalent to the basic insurable earnings).

To illustrate the calculation, consider the case of an insured person aged 63 that requests a pension in 2011 and meets the criteria for early retirement and the following information is given:

- The insured has paid contributions as of his 24th birthday.
- The insured has earned or been credited with 47 basic insurance points (39 from paid contributions and 8 from credited contributions) and 76 supplementary insurance points (approximately 2 for each year of work).
- This latter fact means that his salary was approximately 3 times the basic insurable earnings during his career.
- The level of annual basic insurable earnings is equal to € 8,435.
- He has no dependents.

Then, the total annual pension is calculated as follows:

Annual Basic Pension = 60% * 47 * 8,435 / 47 = € 5,060

Annual Supplementary Pension = 1.5% * 76 * 8,435 = € 9,616

Total Annual Pension = € 5,060 + € 9,616 = € 14,676 (€ 1,129 per month)

Note that the number 47 in the denominator corresponds to the period of insurance which is calculated as the difference between 5/10/64 and the 63rd year of age.

The main objective is to ensure an adequate retirement income for all and access to pensions which allow people to maintain, in a reasonable degree, their living standard after retirement, in a spirit of solidarity and fairness between and within generations.

Replacement Rate

The cross pension replacement rate shows the level of pensions in retirement, in relation to earnings when working. Theoretical replacement rates are calculated for a hypothetical worker, with given earnings and career profile .It gives the percentage of pension that takes the salary of the national average, always with a full career.

The gross replacement rates also depend on the way in which pension contributions are shared between employers and employees. The gross replacement rate is defined as gross pension entitlement divided by gross pre-retirement earning. For a given total labour cost, a higher share of contributions paid by the employer implies lower gross earnings of the employee and hence a higher gross replacement rate. The replacement rates rely on specific assumptions, on the economic and demographic parameters which are dealing with future earnings calculations and all the benefits. In Cyprus, the calculation of the replacement rate is based on statutory scheme. The rate in the current period is 48% with the estimations in the future to be increased to 60%.

The survivors' benefits include widow/widower's pension and orphan's benefit. The widow's pension is payable to the widow (or widower under certain conditions of dependence) of a person who, at the time of death:

I. Had not reached the pensionable age and satisfied the insurance conditions (1) and (2) for the invalidity pension; or
II. Was in receipt of old-age pension.

The orphan's benefit is payable for a minor in the following cases:

I. When both parents are dead and at least one of the parents was an insured person, **or**

II. When the parent who was taking care of the minor died in case where the parents were separated provided that the parent who died was an insured person, **or**

III. When one of the parents died and the surviving parent is not entitled to a widow's pension provided that the deceased parent fulfils the insurance conditions for a widow's pension, **or**

IV. When the widowed mother, who was in receipt of widow's pension, remarried.

Benefit level

The level of old-age pensions under the General Social Insurance Scheme depends **on the length of the contribution period** and **the level of insurable earnings**. The annual old-age pension consists of:

- **The Basic pension**, which, for a single person, is equal to 60% of insurance points earned in the basic insurance, times the amount of basic insurable earnings, divided by the total number of years in the insurance period, i.e., the period between 5 October, 1964 (or the first day of the year of attainment of age 16, if later) and the week before the week of old-age pension entitlement.

  The 60% becomes 80%, 90% and 100% for a person with one, two and three or more dependents respectively.
- **The Supplementary pension**, which is equal to 1.5 % of insurance points earned in the supplementary insurance, times the amount of basic insurable earnings.

The amount of the invalidity pension is equal to the old-age pension in case of full invalidity (100%). When the loss of earnings is partial, the following percentages are payable:

Table 2: Supplementary Pension

Loss of earning capacity	Percentage of the full pension
up to 66 $^2/_3$ %	**60 %**
66 $^2/_3$ % to 75 %	**75 %**
75 % to 99 %	**85 %**

Furthermore the widow's pension consists of the:

- **basic pension**, which is equal to:
  - ✓ if the husband was not in receipt of an old-age pension, 100% of the basic invalidity pension to which the deceased would have been entitled on his death, or
  - ✓ if the husband was in receipt of an old-age pension, 100 % of the basic old-age pension which was payable, and
- **supplementary pension**, which is equal to:
  - ✓ if the husband was not in receipt of an old-age pension, 60 % of the supplementary invalidity pension to which the deceased would have been entitled on his death; or
  - ✓ if the husband was in receipt of an old-age or invalidity pension, 60 % of the supplementary old-age or invalidity pension which was payable.

The amount of the orphan's benefit for cases (1) and (2) above consists of :

- **The Basic benefit**, which is equal to 40 % of the basic insurable earnings for each orphan; and
- **The Supplementary benefit**, which is equal to 50% of the supplementary widow's pension which was or would have been payable for each orphan (calculated for a maximum of two orphans).

The amount of the orphan's benefit for cases (3) and (4) is equal to 20 per cent of the basic insurable earnings for each orphan, and is payable for up to three orphans. The orphan's benefit is payable until the orphan attains age 15, or age 23 for a female in full-time education and 25 for male in full time education or in military service.

Benefits are adjusted in January and July each year .In Cyprus a system of pay indexation (PI) operates, the COLA (Cost of Living Allowance) which is used as a basis for pay increases while collective bargaining and pay setting are framed by economic development and the labor productivity development .The CPI(consumer price index) basically is calculated by the Statistical Service of Cyprus, on the basis of a basket of specific goods. According with the current system for calculating the COLA, every six months (on 1 January & 1 July) the wages of all employees covered by collective agreements are readjusted on the basis of the percentage change in the CPI over the preceding six month period. Theoretically it applies to the outcomes of collective bargaining between the three parts, employers, the unions and the government but practically wage indexation covers all employees even they are members of a trade union or not.

Pension indexation

The basic pension is reviewed at the beginning of each year, in accordance with the percentage change of average earnings. The supplementary pension is indexed to the consumer price index.

Minimum pension

A minimum pension is paid to insured people who are eligible for a pension and their total basic and supplementary pension is less than that amount of minimum pension. The minimum pension is equal to 85 % of the full basic pension. The monthly amount of minimum pension for 2010 was €330.93 (pensioner with no dependents). The minimum pension is paid **13 times a year** and is adjusted every year in the same way as the basic pension.

Financing

The current contribution rates for employed persons are 13.6 % of insurable earnings, shared equally between the employer (6.8%) and the employee (6.8%) and 12.6 % of insurable notional income for the self-employed. The central government contributes the equivalent of 4.3 % of insurable earnings of employed and self-employed persons. Out of the total 17.9 % contribution rate, 15.6 percentage points are allocated to the long-term benefits branch of the General Social Insurance Scheme.

3.1.2 The Social Pension Scheme (SPS)

The Social Pension Scheme closes the gap in accessibility to pensions by providing income-tested pensions to those residents, of 65 years or more who, for any reason did not participate enough in the labour market and as a consequence have no or low old-age pension income. For the purposes of the test, the total individual pension income coming from the General Social Insurance Scheme or any other source is taken into account. The Social Pension Scheme ensures universality in pension provision.

Social Pension Scheme is financed by the Consolidated Fund. The beneficiaries are mostly women (about 97%), especially of older generations with relatively low labour force participation rates. The rate of the Social Pension is equivalent to 81% of the full basic pension under the General Social Insurance Scheme, and as a consequence, is automatically indexed to earnings. Persons legally residing in Cyprus whose means are not sufficient to meet their basic and special needs have the right to the provision of financial assistance and / or social services from Social Welfare Services. **The monthly**

amount of social pension for 2010 was €315.36. The social pension is paid 13 times a year.

The last reform of the GSIS was in 2009 and focused on improving long-term financial sustainability. The main measure taken was a gradual increase in the contribution rate for employees and employers by 1 percentage point every five years raising it from 12.6 percent at end 2008 to 19.6 percent in January 2039, starting in January 2009 (**Table 2**). Other measures tightened the eligibility conditions including increasing the minimum qualifying period to be eligible for pension and restricting the crediting of contributions for full time education.

Table 3 : ***Current and Future Contribution rates based on Legislation***

(Percent)

	2009-13	2014-18	2019-23	2024-28	2029-33	2034-38	2039 +
Basic and supplementary	15.6	16.9	18.2	19.5	20.8	22.1	23.4
Other	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Total	17.9	19.2	20.5	21.8	23.1	24.4	25.7
Employee	6.8	7.3	7.8	8.3	8.8	9.3	9.8
Employer	6.8	7.3	7.8	8.3	8.8	9.3	9.8
Government	4.3	4.6	4.9	5.2	5.5	5.8	6.1
Total	17.9	19.2	20.5	21.8	23.1	24.4	25.7

Sources: Ministry of Finance.

3.1.3 Occupational Pension Plans

Currently, around 45% of employed persons are covered by an occupational employer-sponsored pension plan, a supplementary provision to the General Social Insurance Scheme.

Government Employees Pension Scheme

The Government Employees Pension Scheme (GEPS) provides retirement and survivors pensions to civil servants, members of the educational service, the police and the armed forces. It is financed by employee contributions of 5 % of pensionable emoluments and the remaining by general taxation on a pay-as-you-go basis. In October 1, 2011, the Government Employees Pension Scheme was closed to newcomers of the public sector.

Government Employees Pension Scheme compulsory retirement age is 63 years, with early retirement allowed from the age of 58 without any actuarial reduction of benefits. Pensions are calculated on the final salary at an accrual rate of 1.5% per annum that produces a retirement pension equal to 50 per cent of that salary after 33 $^{1}/_{3}$ years of service. Government Employees Pension is integrated to that provided under the General Social Insurance Scheme. In particular, the Government Employees Pension Scheme, pension is reduced by the amount of supplementary in the General Social Insurance Scheme pension, from the time the retiree is awarded such pension.

Semi-government Sector Employees Pension Schemes

There are other occupational pension schemes which operate on a funded basis and provide cover to permanent employees of semi-state utility organizations, local governments and of other public law authorities under the same terms and conditions as for civil servants. It is estimated that currently the total size of the assets is around €1.8 billion or 10% of Gross Domestic Product. These pension schemes, which operate under special laws, are financed by employee contributions of 5 % of pensionable emoluments and by employer on a balanced cost basis. The benefits and the entitlement conditions are the same as for central government employees.
Comparing the benefits provided by the GSIS for the private employees and those provided by the (GEPS/OPPS) for the public/semi-Public employees, someone can easily realize that the latter is more generous than the former and this unfortunately as mentioned earlier in the introduction, leads to an inequality between the private and public/semi-public sectors.
The main differences/advantages for the GEPS/OPPS compare to the GSIS are (**See also table 3**):

I. For the GEPS/OPPS the effective retirement age is about 6 and one half years lower than the GSIS. This is because early retirement is allowed from age 45 but the pension is frozen and will only be paid at the age of 55 (58 for government employees who joined the employer on or after 1 July, 2005) without any actuarial reduction of benefits. Also the retirement ages for civil servants are: 63 for the civil service, 60 for teachers, between 60 and 61 for police, and for the military it ranges between 52 and 60 depending on the position and rank.

II. The pension is calculated on the final salary at an accrual rate that produces a retirement benefit equivalent to 50 percent of that salary after 33 1/3 years of service.

III. A large lump sum amount is paid immediately when an employee retires and is a multiple of the annual pension. The size of the multiple depends on the retirement age and varies from 4.7 for retirement at 60 years of age up to 5.2for retirement at 63 years of age.

IV. The pension is adjusted for general salary increases in the central government and for inflation.

Voluntary Provident Funds

Accessibility to voluntary provident funds and other similar collective arrangements in the private sector is encouraged through tax incentives by exemption of contributions (up to certain limits), investment income (partially) and lump-sum benefits.

Provident Funds are arrangements that are agreed within the framework of the system of free collective bargaining either on a single-employer basis or industry-wide basis. They primarily provide defined contribution lump-sum benefits. They are financed by contributions from employers and employees. The average joint contribution is currently 13.6% of earnings, equally shared between employees and employer. The total size of the assets is around €2.5 billion or 14% of Gross domestic product *(*GDP*)*.

In Cyprus the all Provident Funds are registered in the Register of the Provident Fund and obtain legal status under the Provident Fund Law 44 of 1981-2005 and Regulations issued thereunder. By decision of the Minister of Labour and Social Insurance, Provident Fund Commissioner appointed the Director of Social Insurance Services. All private Provident Funds are required to register to the Provident Fund Register.The Provident Fund must submit an application to the Provident Fund Commissioner in order to issue the Registration certificate and from this point the Provident Fund gains legal personality. The law provides for a Management Committee composed of not less than 3 persons .The committee manages the Fund and represents it legally to court.

The management committee is responsible for:

I. The registration of the fund in the Register.
II. Submitting any amendments of the Rules /Regulation for registration.
III. Notifying the Registrar for any member changes of the management committee
IV. Keeping a minute- book and recording fully and clear and precisely all the decisions related to every transaction or action relating to the management and operation of the Fund, and also the decisions related to the amendment of the

Rules/Regulations of association and generally any other subject which was conducted at the meeting,

V. Keeping proper accounting books which will give precise picture of the actions and transactions and evidence of collections and payments of the Fund.

In addition to the above, regarding the submission of the accounts for every year the Provident Fund Law provides that, the Management committee should submit to the Registrar the following:

I. a copy of the Fund's Income and Expenditure Account for that year,
II. a copy of the Fund's Balance Sheet at the end of the year
III. a copy of the Auditor's Report
IV. a statement showing the number of new members during the year, the number of members who ceased to be members, the total number of members at the end of the year, the number of members from whom contributions were collected and the number of members to whom benefits were paid during the year.

The Provident Fund Law does not specify the rate of contribution that should be paid to the Provident Fund. The percentage of contribution will be based on the cross salary, are agreed upon by the Management Committee. The percentages can vary from one provident fund to another. The Provident Fund can only be paid to any member of such fund in case of retirement, death, permanent disability, termination of employment (depends on the working years) and dissolution of the fund.

The reserve funds are invested by the Management Committee in accordance with the principles and general instructions issued from time to time by the Minister of Finance following consultations with the Labour Advisory Board.

- **Investment policy**

The determination of investment policy is governed by the law and is based on:

I. According to the nature and duration of the liabilities of the fund
II. The investment policy must be review every 3 years or earlier if any significant change happens

- **Investment Rules**

I. The dispersion of the financial elements (assets) is of a paramount importance
    - ✓ Between the various type of investments
    - ✓ Within the same type of investment

II. Maximum limit of investment in a financing enterprise is 5%, or 10% in the case of a group in which the financing enterprise belongs

III. Government bonds are excluded from the above limitations

IV. Borrowing capital is allowed only for a short period and only to cover liquidity failure and definitely not for investment.

V. Maximum Investment limit:

- ✓ Up to 70% of the assets of the Funds in shares, negotiable eligible bills treated as shares and corporate bonds
- ✓ Up to the 30% of the assets of the Funds in investments of foreigner currencies - otherwise from those in which are observed their obligations

The law doesn't allow to invest any money belonging to a Provident Fund in a business of the employer or to deposit such money in a current account or a fixed deposit account of the employer. No loan under any form shall be granted from a Provident Fund, to any auditor or employer contributing to the Fund.

The Regulations of association of a Provident Fund may provide for the granting of a loan to a member under the following terms and conditions:

I. The purpose of the loan is for the erection or improvement of the house of a member or his child, for the education of the member or his child or for the medical expenses in case of a serious illness of the member or of a member of his family.

II. The amount of the loan shall be determined after taking into consideration the age of the member and his ability to repay the loan.

III. The Management Committee will have satisfactory guarantees.

IV. The loan shall be payable within a period not exceeding twenty years

V. The interest rate shall not be lower than the interest rate paid by Banks for fixed deposit accounts.

Supervisory Authority

- Main Competence
  - I. Control and supervision of the implementation of the legislation N. 146 (1) /2006
- Principal activities
  - I. Timely registration of the fund to the national Registry

II. Approval of changes of the operational rules

III. Collection of annual fees

IV. Review and approval of suitability qualifications of the members of the management committee

The Provident Fund Commissioner may carry out investigations concerning the affairs of any Provident Fund.

The investigation can be carried out by any inspector appointed according to the Social Insurance Legislation or by any other officer of the Ministry of Labour and Social Insurance authorized for this purpose by the Provident Fund Commissioner.

An existing problem with the voluntary provident funds is that their effectiveness as retirement income source is controversial. This is mainly because the employees after leaving a job moving to a new employer usually they withdraw their entitlements at the time of changing their employer and instead of investing it again in any form of saving, usually they use that entitlement for temporary personal or family needs and so nothing is left for them to receive when they retire. This has a negative impact within the pension system as a whole and widens the inequality between private and public sections even more.

Another major issue for the voluntary provident funds is the existing provisions, where an employee can borrow money and pay back by installments. This practice also creates problems because many employees borrow money to cover their everyday needs (consumables) and at the end when they retire there is nothing left for their retirement.

The lack of supervision of the Pension and Provident Funds

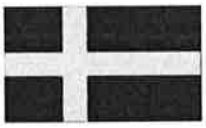
The disastrous financial results of almost all the provident funds, due to the recent economic crisis have revealed another problem related to the management of all the private provident funds. Unfortunately the situation regarding the above issue (management of the funds) is out of control. The legislation is there but not applied from government authorities. The result of this situation is that nobody knows the actual financial situation of all the private funds. This means that the existing employees who contribute in any private fund for their pension are not sure whether the provident fund will be able to cover their annual pension when they retire. The problem here is the total absence of supervision by the government authorities although the legislation as we mentioned earlier provides for the existence of such supervisory authority.

The total amount managed by private funds it is estimated to reach around **5 billion euro** and because of the total absence of any supervision for all the managing committees in these funds, it is now questionable whether the management of the provident funds is done by qualified and expert professionals with proven experience , whether the investment of this capital is based on realistic and not opportunistic decisions and whether the law regarding the investments of this money is applied as it should by the management committees. Unfortunately the reality is that for the majority of the provident funds the management committee consists of persons with no economic/financial background and no experience in investing this type of money. Usually their consultants are their bankers who from their side are trying to sell their investing plans which have been proven catastrophic for almost the majority of the Provident Funds in the island during the last decade. This is an important issue of course for the government and the rest political parties who participate in the parliament because we are talking about the pensions of all the private employees and self-employed in the island and they should act immediately applying or if necessary modifying the laws 146(I)/2006 and 44/1981 which determine exactly as explained earlier the management and supervision of the Private provident funds.

Table 4: GSIS and Public Sector Employee Schemes Compared

	GSIS	Public Employee Schemes
Contribution requirements:		
Percent of covered payroll employee pays: Private Sector Employees	6.8	Not Applicable
Self Employed	12.6	Not Applicable
Public Sector Employees	3.45	0.8% Up to August 2011/ 5.1% after August 2011
Percent of covered payroll employer pays: Private Sector Employees	6.8	Not Applicable
Public Sector Employees 1/	10.15	32.7% Before August 2011/ 28.5% after August 2011
Total Contributions as percent of covered payroll:		
Private Sector Employees	13.6	Not Applicable
Self Employed	12.6	Not Applicable
Public Sector Employees	13.6	0.8% up to August 2011/ 5.1% after August 2011
Wage Ceiling:		
Covered annual wage ceiling 2010 (in euros):	50592	Not Applicable
Covered wage ceiling indexation:	Growth of basic annual insurable earnings.	Not Applicable
Covered wage definition:	Regular salary and all other overtime and allowances with exception of the 13th salary.	Not Applicable
Old Age Pension Benefits (No dependents)		
Eligibility requirements: Minimum vesting period (in years)	10 years of paid contributions/15 years of paid +credited contributions	5 years
Normal Retirement Age	65	63 (for the public servants) but lower for other groups such as police and teachers.
Early Retirement Age	63. There is no penalty for early retirement.	Possible after 45 years of age and 5 Years of service. Pensions are not paid until age 58 or 55 depending on the date of entry in the public sector. There is no penalty for early retirement. The lump sum gratuity (see below) is paid immediately when retirement happens.
Benefit formula: Definition of pensionable earnings:	Lifetime career earnings.	Last Salary
Indexation of past earnings (i. valorization on):	Growth of basic annual insurable earnings	none because only the last salary counts
Accrual rate per year of contributions:	1.5	2.4 (Including gratuity)
Number service years after which no accruals earned	Not applicable	33 and 1/3 years
Minimum replacement rate:	18 percent in 2010	
Replacement rate for a 40 years career.	60	50 (excluding gratuity impact)
Minimum annual pension:	85 percent of a basic full pension	
Maximum annual pension:	Not applicable	50 percent of the final salary (excluding gratuity impact)
Other benefits beyond pension	None	Lump sum gratuity (4.7 to 5.2 times the annual pension).
Indexation of benefits:	Basic pension is indexed by the growth of insurable earnings. The supplementary pension is CPI indexed	General government salary increases and CPI.

Source: Muhanna Report 2012



SWEDEN

CHAPTER 4

4. The pension system in Sweden

4.1 Description

The Swedish public old-age pension system consists of:

- **an earnings-related component based on notional accounts,**
- **a private mandatory defined contribution system** and
- **a pension-income-tested top-up**, the guarantee pension.

Most employees are covered by occupational pension plans. It is also possible to make tax-deductions for private pension savings.

4.1.1 The Swedish public pension system

The new Swedish public old-age pension system was fully implemented in 2003. The new earnings-related old-age pension system consists of **a notionally defined contribution** (NDC) pay-as-you-go component and a **fully funded, defined contribution pension system.** Both are based on lifetime earnings and individual accounts. In addition, there is a pension-income-tested top up, the guarantee pension, which is financed with general taxes from the central government budget. The same rules apply to all persons regardless of occupational sector and for employees and self-employed alike. The former Swedish pension system consisted of a flat-rate pension provided in full to everyone with at least 40 years of residence in Sweden between the ages of 16 and 65. Further, it included an earnings-related pay-as-you-go component providing a benefit based on 60 per cent of an average of the contributors best 15 years of earnings, with 30 years required to receive a full benefit.

The new system covers individuals born 1938 and later, with transition rules for persons born 1938-1953. Given the actual pension pattern, the last cohorts with pension rights in the old system will retire around 2020. As a result, it will take a couple of decades until all beneficiaries have all of their benefits calculated according to the new rules. Pension rights are credited to the individual accounts for 18.5% of the annual pensionable income up to the pension ceiling amounting to 8.07 income base amounts. 16 percentage points are paid to the notionally defined contribution pay-as-you-go system and 2.5 percentage points to the funded (DC) system. The insured pay a pension contribution amounting to 7 % of the gross pensionable income, and the employer 10.21 per cent. Contributions over the pension ceiling is transferred to the central government budget as general tax and has no connection to the income-based pension system. Contributions are also paid by the central government to cover pension entitlements credited for income replacement social insurances, e.g. for unemployment, sickness, disability or parental leave.

The retirement age as it show in **Table 5** is flexible and individuals can claim benefits from the age of 61 without any upper limit. Under the Employment Protection Act, an employee is entitled to stay in employment until his/her 67th birthday

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Table 5 : Statutory retirement age, earliest retirement age and penalties for early retirement

Men and women		2010	2020	2030	2040	2050	2060
- with 20 contribution years	statutory retirement age	No limit					
	earliest retirement age (Guarantee pension)	61 (65)	61 (65)	61 (65)	61 (65)	61 (65)	61 (65)
	penalty in case of earliest retirement age	Actuarial adjustment					
- with 40 contribution years	statutory retirement age	No limit					
	earliest retirement age (Guarantee pension)	61 (65)	61 (65)	61 (65)	61 (65)	61 (65)	61 (65)
	penalty in case of earliest retirement age	Actuarial adjustment					

Note: Transitional rules apply for individual born before 1953.

Source: Ministry of Finance

4.1.2 The Social Pension Scheme (Pay-as-you-go system)

The notionally defined contribution **pay-as-you-go** pension system works on an actuarial basis. At the time of retirement an annuity is calculated by dividing the individual's account value by a divisor reflecting unisex life expectancy at the specific date of retirement. The individual can counteract the negative effect on the annuity, caused by increasing life expectancy and by postponing the date of retirement, thus giving strong incentives to prolong the working career. If an individual born in 1946 delays the retirement from 65 to 67 the annuity divisor decreases from 16.31 to 15.16 and the notionally defined contribution pension consequently increases with 7.6 %.

The PAYG-pensions in payment is on average indexed by wages, but is front-loaded in the sense that and the pensioners receive a share of the real economic growth in advance. The notionally defined contribution savings is as a primary rule indexed by the average rate of growth of earnings per contributor. In case of financial sustainability problems though, the automatic balancing mechanism is activated and the indexation reduced until the stability is restored. This secures that the system will be able to finance its obligations with a fixed contribution rate and fixed rules regardless of the demographic or economic development. The balancing indexation was activated for the first time in 2010 because of the financial crisis in 2008.

Non-earnings-related minimum pensions and basic security

The pension-income-tested top-up, the **Guarantee pension**, is financed by general tax revenues. The benefit is proportionally reduced if the number of residence years in Sweden falls short of 40. The guarantee pension together with the means-tested housing supplement for pensioners is higher than the minimum income standard in the system for social assistance. All forms of basic security benefits for the elderly can be received from the age of 65, not earlier. The guarantee pension is price indexed and fully taxed.

The guarantee pension is means-tested against public pension income and survivor benefits, but not against work income etc. For low incomes the benefit is reduced gradually, and for higher incomes the benefit is reduced by 48 per cent. The annual benefit amounts to maximum 2.13 price base amounts (PBA) (EUR 9 600 year 2011) for single households and 1.90 PBA's per person (EUR 8 500 year 2011) for cohabitants. The guarantee pension is fully phased out when the income pension reaches 3.07 PBAs for single households and 2.72 PBAs for cohabitants.

Formally outside the old-age pension system, but de facto closely interlinked, there is the tax-free means tested Housing supplement for pensioners (BTP). There is also a Special housing supplement (SBTP) for pensioners with low income and high housing costs. Finally there is a tax-free means-tested program, Maintenance support for the elderly (AFS), which ensures that pensioners with very low income, usually immigrants with few years of residence in

Sweden, won't become dependent on social assistance. The size depends on household income and housing costs, but is by design always higher than the social assistance benefit.

Financing

The current contribution rates for employed persons are 17.21 % of insurable earnings, shared between the employer (10.21%) and the employee (7%) .For self-employed the contribution is 7%.

Replacement Rate

The old-age pension replacement rate, measures how effectively a pension system provides a retirement income, to replace earnings which are the main source of income before retirement. The gross replacement rate is defined as gross pension entitlement divided by gross pre-retirement earning. In Sweden the rate is 48% .

Early retirement, disability and survivor's pension

It is possible to retire at the age of 61 in the new pension system, but the loss is twofold for the individual. First, the benefit is based upon lifetime contributions, which implies that all years with earnings are important. Second, the level of the benefit is calculated in proportion to cohort-specific life expectancy from the date of retirement. Leaving early implies a lower (notional) pension capital and a longer period for payments and therefore the benefit will be lower per annum compared with a later retirement age. Regardless of the flexibility in the new pension system there is a strong tendency in the society to claim public pension at age 65 that was the norm in the old system. However, to claim pension is not the same as leaving the labour market. In year 2010 the average age for withdrawal from the labour market was estimated to age 63.

The reformed pension system is individual-based. The previous widow's pension has been replaced by a new, temporary and gender-neutral, so-called adjustment allowance. However, due to the long transition period, widow's pensions will continue to be paid out for several decades. In the new system, a survivor will receive adjustment allowance for 12 months as a standard, but the payments continue as long as the survivor has children younger than 12 years. The size of the adjustment allowance as well as the widow's pension is based upon the deceased's earnings.

Disability benefits, which are equivalent to disability pensions in most European countries, are formally a part of the sickness insurance scheme. Also individuals with disability benefits accumulate pension entitlements in the public pension system. Contributions are paid by the central government budget. Public old-age pension benefits for disabled persons, as for everyone else, are based on lifetime earnings. So benefits are adjusted annually according to changes in wages.

4.1.3 Occupational pensions

The main part of all employees, both in the public and the private sector, are covered by occupational pension plans based on collective agreements between the unions and the employers' confederations. Membership in the schemes is semi-mandatory for all employers and employees working in an industry covered by such an agreement. The collective agreements include occupational pension schemes financed through employers' contributions, which provide pension as supplement to the public system, but also pension compensation for incomes above the public system pension ceiling. Thus, these schemes are most important for high-income earners. There are four major occupational plans: blue-collar workers in the private sector, white-collar workers in the private sector, central government employees and local government employees.

4.1.4 Private pensions

Mandatory private premium pension

The public system also consists of a private mandatory fully funded defined-contribution part, the Premium pension. The system is administered by the state and financed by a contribution rate of 2.5% of pensionable earnings, following the same transition rules as the PAYG system. Individuals choose from a large number of mutual funds, how to invest their contributions. The individual mutual funds earn a market rate of return. At retirement, at any age from 61 years, individuals can choose a fixed or variable annuity, in part or in full.

Voluntary private pensions

It is also possible to make tax-deductions for private pension saving, something that is especially important for self-employed who not are covered by any occupational pension plans. Since 2008 the maximum yearly deduction allowed is SEK (Swedish krona) 12 000 (€ 1 260). For self-employed not eligible to occupational saving plans higher deductions apply. In 2009 approximately 39 per cent of the population 20-64 years made tax-deductions for private pension savings, in average SEK 5 400 (€ 570) an in total SEK 10 700 billion (€ 1 120 billion).

BELGIUM

CHAPTER 5

5. The pension system in Belgium

5.1 Description

The Belgian pension system consist from three schemes,

- **The public pension scheme,**
- **The Occupational pension schemes and**
- **The voluntary individual pension schemes.**

5.1.1 The Belgian Public Pension Scheme

The first scheme has the greatest importance (11.0% of GDP in 2010). It is a statutory public pension scheme with defined benefits (DB) for 99% of the expenses (only the assistance scheme is means-tested) and based on the pay-as-you-go financing (PAYG). Since 1996, the financing of all social expenses is realized for the general scheme for wage earners and self-employed through the so-called "global management" system (contributions and some tax revenues), which implies that there is only a global contribution rate for all social security schemes and no longer a contribution rate by scheme. Most social benefits for civil servants, notably pensions, are financed through the general budget of the federal government. The first pillar includes three main pension schemes:

I. **The scheme for wage earners** (47% of total pension expenditure),
II. **The scheme for the self-employed** (7% of the total)
III. **The scheme for civil servants** (almost 32% of the total).

Besides those three schemes, in Belgium the pension expenditures covered in the Working Group of Aging (AWG) results, also comprise the assistance scheme named the guaranteed income for the elderly (nearly 1% of the total pension expense), the so-called "pre-pensions" (4% of the total) and the disability benefits (9% of the total).

The general pension scheme for wage earners

It is very clear the diversification between old age pensions and the survivors' pension is very clear. Not only the survivor's pension but also the old age pension is adjusted clearly to the price index, with some adjustments. Collective bargaining and wage indexation in

Belgium play a central role in wage setting. The government plays the major role in monitoring wage growth. There are three levels of wage bargaining in the country, the central cross-sectoral level covering the entire economy, the intermediates levels covering specific industrial sectors and the company level. The wage bargaining takes place every two years and results in national cross-sectoral agreements scheduling pay increase for the following two years. The wage bargaining is considered highly centralized in Belgium because also a lower level agreement should respect what has been reached in the higher level agreement and can only improve what has been agreed between them.

The old age pension

In Belgium the retirement age for wage earners for men and women is 65 with at least 45 years of coverage. Additionally the retirement age remains flexible from the age of 60 for men and women if a 35-year career condition is satisfied.

How to calculate the Pension, for "n" year career for example:

Equation 3: Calculating Old Pension for wage earners in Belgium

$$P = 75\% \text{ or } 60\% \sum_{t=1}^{n} \frac{1}{45} \times \text{wage in t up to the wage ceiling} \times \frac{\text{price index n}}{\text{Price index t}}$$

The pension as it mentions above is calculated on the basis of the wage earned during the whole career up to a wage ceiling and the wage is adjusted to current prices according to the Consumer Price Index (CPI) . The sum of the revalued wages over the career, is weighted by 1/45th, (the theoretical career is supposed to be 45 years), defines the reference wage.

The periods of disability, early retirement, sickness, and unemployment are calculated at the last earned wage. The pension is calculated as 75% of the reference wage for the head of a household with a dependent spouse and 60% for a single person. For a full career or a career which at least equals to 2/3 of a full career in the wage earner scheme, a guaranteed minimum amount has been set. Benefits are adjusted periodically according to changes in the retail price index (PI).

Financing

In Belgium the current contribution rates for employed persons are 16.36 % of insurable earnings, shared between the employer (8.86%) and the employee (7.5%) (Pensioners and pre-pensioners contribute from 0.5% to 2.0% of the pension or pre-pension).

Replacement Rate

The pension replacement rate in Belgium calculated also on the basis of earnings during the entire career and takes into consideration also the wages and family situation .For each year the career counts for 1/45 in the calculation and the pensions are calculated on the basis of the full career provide 60% for a single person or 75% for head of family of the revenues earned in the whole career up to certain wage ceiling. The percentage calculated at 42,6%.It means that the more the percentage the better is the replacement pension for the insurance.

The pension scheme for the self-employed

The general pension scheme in Belgium for self-employed workers makes a diversification between the retirement or old age pension and the survivor's pension. Not only the survivor's pension but also the old age pension is adjusted clearly to the price index, with some adjustments to living standards

Old age pension

For the self-employed the legal retirement age in the pension scheme is 65 for men. For the other side the retirement age for women at the moment is 63 but after transition period they have to wait until the age of 65. There is a clear point that anyone who retires before the age of 65 loses 5% per year of early retirement.

Pension is calculated as follows:

<u>**Equation 4: Calculating Old Pension for Self-Employed**</u>

$$\mathbf{P= 75\% \text{ or } 60\ \% \times \frac{\text{career Length}}{45} \times \text{Income} \times \text{Correction coefficient}}$$

The working years before 1984 are valued at a fixed income in order to calculate the average pension of the self-employed. After 1984 the professional activity was exercised for a self-employed and the pension is calculated on the basis of the business income used to compute the social security contributions and income tax. It is calculated at 75% of the reference wage for the head of a household with a dependent spouse and at 60% for a single person. If a self-employed has a full career then the retirement pension should be more than the certain annual minimum amount which is granted in proportion to the career fraction and for at least 2/3 of a full career as self-employed.

The pension scheme for civil servants

The old age pension, the survivor's pension and the disability pension in Belgium are included in the old pension scheme. The pension for the civil servants is automatically adjusted to the CPI and the real wage increases of the working civil servants.

Old age pension

From the point of view the legal retirement age for civil servants is 65 for men and women but it is possible to retire as from the age of 60. To benefit from a civil servants' pension, a career length of at least 5 years is required, but only after a career of 20 years is one entitled to a minimum pension, which varies according to the family situation.

The pension is calculated as follows:

Equation 5: Calculating Old Pension for Civil servants

$$P = \text{reference wage x } \frac{\text{Considered service Years}}{\text{60 (tantième)}}$$

In order to calculate the retirement pension it takes a proportion to the reference wage, for example the average wage of the last five years, on the basis of the wage brackets. The basic denominator is 60 but some have a preferential denominator (55 in teaching and 30 years for magistrates and academic services). With a maximum career length of 45 years, the tantième of 60 leads to a maximum replacement rate of 75% of the reference wage.

5.1.2 Occupational Pension Schemes

Occupational pension schemes (second scheme) are of minor importance: pension spending only amounts to 1.4% of GDP in 2009 for wage earners' pensioners dependent on collective contracts entered into insurance companies or institutions for occupational retirement provision (no data available for total spending). Concerning those pensions, a new law was voted in 2003, i.e. the Law on supplementary pensions of 28 April 2003, centred on sectoral pension schemes and aimed at stepping up the development of these pensions by improving their access and by giving more guarantees to workers. For the time being, there are not enough data available to model the second pillar and to make relevant pension expenditure projections.

- The voluntary individual pension schemes constitute the third pillar, but no estimate for pension expenditure is available at this stage.

Table 6 illustrates the relative weight of the various pension schemes both in terms of spending and in terms of the number of beneficiaries. In Belgium the number of beneficiaries is a hybrid concept combining the number of pensions and the number of pensioners. Double counting of pensioners receiving benefits from both the wage earners' and the self-employed scheme is avoided (when pensioners receive a pension from both schemes, it is classified either in the wage earners' scheme or in the self-employed scheme, taking into account the total spending in both schemes for "mixed" pensions). However, double counting between pensioners of the civil servants' scheme and pensioners of the general scheme for wage earners and the self-employed could not be avoided.

Table 6: Weight of the various pension schemes in 2010 (unless otherwise stated)

	Pension spending (in % of GDP)	Number of beneficiaries (in thousands)
Public pension schemes (first scheme)	**11.0**	
- Wage earners's cheme	5.2	1522.0
% of beneficiaries entitled to the guaranteed minimum pension		14%
- self-employed scheme	0.8	285.9
% of beneficiaries entitled to the guaranteed minimum pension		60%
- civil servants' scheme	3.5	383.6
- assistance scheme (guaranteed income for elderly persons)	0.1	92.8
- « pre-pension » (early retirement scheme embedded in the unemployment scheme)	0.4	120.3
% of beneficiaries reaching the ceiling		96%
- Disability	1.0	261.0
% of beneficiaries entitled to the minimum allowance in the wage earners' scheme		61%
Occupational scheme (second scheme) – only wage earners	**1.4 (2009)**	na
of which sectoral schemes instated by the Law of 2003 (only wage earners)	0.03 (2009)	na
Non-mandatory private scheme (third scheme)	**na**	na

In the Table 7 we can see the summarized information on the retirement age in the public pension schemes:

Table 7: Public pension schemes: statutory retirement age, earliest retirement age and penalties for early retirement

		2010	2020	2030	2040	2050	2060
Wage earners (men and women)	Statutory retirement age	65	65	65	65	65	65
	Earliest retirement age with 35 career years	60	60	60	60	60	60
	Penalties for early retirement	-	-	-	-	-	-
Self-employed (men and women)	Statutory retirement age	65	65	65	65	65	65
	Earliest retirement age with 35 career years	60	60	60	60	60	60
	Penalties for early retirement (with a career of less than 43 years)	25% at 60;18% at 61;12% at 62; 7% at 63; 3% at 64					
Civil servants (men and women)	Statutory retirement age	65	65	65	65	65	65
	Earliest retirement age with 5 career years	60	60	60	60	60	60
	Penalties for early retirement	-	-	-	-	-	-
Guaranteed income for elderly persons (men and women)	Statutory retirement age	65	65	65	65	65	65
	Earliest retirement age	-	-	-	-	-	-
Pre-pension (only for wage earners)	Statutory retirement age with	60	60	60	60	60	60
	- career years: men	30	35	35	35	35	35
	- career years: women	26	32	35	35	35	35
	Earliest retirement age for heavy jobs, night work	58	58	58	58	58	58
Disability (men and women)	No statutory age	-	-	-	-	-	-

The statutory retirement age in the three main public pension schemes in Belgium (wage earners, self-employed and civil servants) is 65 years for both men and women. In the wage earners' and the self-employed schemes, early retirement is allowed from the age of 60 with 35 career years. Early retirement is also allowed in the civil servants' scheme from the age of 60 without practically any career length condition (In fact, a minimum of 5 years of services is required to qualify for a civil servants' pension). Forty-five career years are required for a full pension.

In the self-employed scheme, early retirement between 60 and 64 years is subject to penalties: the self-employed worker will lose 25% when retiring at the age of 60, 18% at 61, 12% at 62, 7% at 63 and 3% at 64. Workers with a career of at least 43 years are not penalized.

Finally the financial stimuli to keep working after the age of 60 were introduced in the pension calculation: the bonus pension for the wage earners' and the self-employed schemes and the age supplement for the civil servants' scheme. Since 2000, an age pension supplement is granted to civil servants retiring from the age of 60. This age supplement amounts to 0.125% of the annual pension rate for each worked month between the age of 60 and 62 year (1.5% per worked year), and to 0.167% from the age of 62 (2% per worked year). The pension of a civil servant who retires at 65 years will increase by 9% through this age supplement. Since 2007, in the wage earners' and the self-employed schemes, a pension bonus of 2.2 euro per working day (this amount is indexed to price) is granted from the age of 62 or to those who begin a 44th year of career. This pension bonus will amount to 689 euro per year for one year full-time occupation from the age of 62, or 2067 euro per year if retiring at 65 years.

5.1.3 The main characteristics of the public pension schemes

Scheme for wage earners: a low replacement rate

I. A full career is 45 years.

II. Normal accrual rate: 1.33% (60%/45) applied to the wages over the career and only adjusted to current prices (CPI); 1.67% (75%/45) for the head of a household with a dependent spouse.

III. Increased accrual rate for low wages: minimum pension for a full career or at least 2/3 of a full career in the wage earners' scheme (1066.3 euro per month in September 2011 for a full career; 1332.5 euro per month for the head of a household with a dependent spouse); minimum claim per working year (1777 euro per month in 2011).

IV. Decreased accrual rate for high wages: maximum pension for a full career due to wage ceiling (1987.7 euro per month in May 2011 for a full career, 2484.7 euro per month for the head of a household with a dependent spouse).

V. Pension bonus for each working day after the age of 62 or for those who are starting a 44th year of career.

VI. Pension automatically adjusted to price index and partially adjusted to living standards.

Scheme for the self-employed

I. Very similar to the wage earners' scheme.

II. However, the reference income takes into account the much lower contribution rate. As a result, 60% of the beneficiaries are entitled to the minimum pension (1007 euro per month in September 2011 for a full career; 1310 euro per month for the head of a household with a dependent spouse).

III. Pension automatically adjusted to price index and partially adjusted to living standards.

Scheme for civil servants: a high replacement rate

I. A full career is 45 years.

II. Normal "nominal" accrual rate of 1.67% (1/60) applied to the average wage over the last 5 years of work (the "effective" accrual rate is in fact much higher if expressed in terms of the average wage of the whole career).

III. Age complement for those retiring after the age of 60.

Pension automatically adjusted to the nominal wage increases of the working civil servants
The **Table 8** presents the rules for indexation and living standards adjustment. All pensions are automatically adjusted to the price index. Besides the indexation to prices, the pensions can also benefit from living standards adjustment in real terms.
As far as civil servants' pensions are concerned, they are automatically adjusted to the real wage increase of the working civil servants.
For the other pension schemes, the "Generation Pact" of December 2005 establishes the principle of an adaptation to living standards of the replacement benefits (not only pensions). From 2008 onwards, the government must provide for a budget covering an annual growth of 1.25% for the wage ceilings and the minimum claim per working year, an adjustment to living standards of 0.5% for the non-lump sum allowances and a real growth of 1% for the lump-sum allowances. Once this budget is calculated, concrete measures for the adaptation to living standards are proposed by the social partners. These measures have to respect, in each scheme (wage earners', self-employed, social assistance), the above-mentioned global

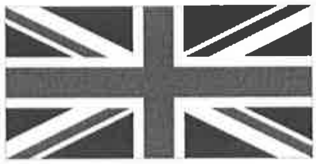
financial constraint. However, in each scheme they can be aimed at specific sectors, categories of beneficiaries or types of allowances. At last, the government decides on the final measures.

For the years 2011 and 2012, the projection takes into account all the measures decided by the government regarding adaptations to living standards. From 2013 onwards, social allowances are adapted according to the parameters used for computing the budget devoted to the adaptation to living standards as stated in the Generation Pact (annual growth of 1.25% for the wage ceilings and the minimum claim, 1% for lump-sum benefits, 0.5% for non lump-sum benefits).

Table 8: Indexation and living standards adjustment

	Living standards adjustment (1)		Indexation to prices
	Till 2012	From 2013	
Wage earners Self-employed Guaranteed income for elderly persons Pre-pension Disability	All the measures decided by the government	Partially adjusted to living standards following the "Generation Pact": annual growth of 1.25% for the wage ceilings and the minimum claim; 1% for the lump-sum benefit; 0.5% for the non lump-sum benefit	Automatically adjusted to price index (CPI)
Civil servants	Automatically adjusted to the real wage increases of the working civil servants		

(1) in addition to price indexation



United Kingdom

CHAPTER 6

6. The pension system in UK

6.1 Description

The United Kingdom was one of the first countries in the world which develop pension arrangements. The Pension System in UK consists of three schemes:

- **the public scheme which consist of the Basic State Pension (BSP)** (a flat-rate basic pension),
- **a State Second Pension (SSP) scheme** (an earnings related additional pension) and
- **Personal pension and Company pension scheme**

The first two schemes are compulsory, unfunded public schemes payable to all people of pensionable age who meet the contribution condition. It covers all employed persons between age 16 and 65 (men) or aged 16 to 60 (women). The system is financed on a Pay-as-you-go system (PAYG) basis by National Insurance contributions. The third consists of private savings, Personal pension and Company pension scheme which are voluntary but incentivized through tax breaks.

6.1.1 The United Kingdom public pension system

The **basic state pension** (BSP), is a flat rate, unfunded and compulsory, introduced in 1948 and from then the general set up has not changed so much. The basic state pension is payable in a weekly basis if an individual have made a certain minimum number of National Insurance contributions (NI) .Credits are given in respect of people such as careers, the unemployed or disabled. The number of years needed for an individual to receive a BSP at full rate depends to the number of qualifying years out of working life.

How to calculate the basic state pension:

Equation 6: Calculation of Basic Pension in UK

$$YBSP = Rate \times \min (Q / R)$$

Rate= the full weekly rate of the basic state pension (BSP)

Q= number of qualifying years. Each qualifying year counts towards the State Pension Age (SPA).

You can get qualifying years (**Q**= number of qualifying years) if you are

- in paid full-time or part-time work
- self-employed
- caring for someone for over 20 hours a week
- getting Child Benefit
- receiving certain benefits
- in full-time training

R= the requisite number of qualifying years.

So in order to find the amount for the Basic State Pension you have to multiple the full weekly rate of the basic state pension by the minimum of the percentage of the number of qualifying years with the requisite number of qualifying years.

The **State Pension Age** (SPA) is the earliest age for an individual to take a State Pension. The state Pension Age (SPA) is defined by the date of birth. For example:

- Men born before 6 December 1953 retain their state Pension Age of 65
- Women born before 6 April 1950 retain their state Pension Age of 60
- Women born on or after 6 April 1950 but before 6 December 1953 will have a state Pension Age between 60 and 65
- Men and women born on or after 6 December 1953 but before 6 October 1954 will have a state Pension Age between 65 and 66
- Men and women born on or after 6 October 1954 but before 6 April 1968 will have a state Pension Age of 66.
- Increases from 66 to 67 and then to 68 will affect men and women born on or after 6 April 1968.

For example for men born at 10/10/1952 he will reach the State Pension Age on Tuesday 10 October 2017 and he will be 65 years old. For women born at 10/10/1949 she had reached the State Pension Age on Saturday 10 October 2009 and she was 60 years old.

So it depends to everyone to get a qualifying year either by paying National Insurance contributions or get credited with National Insurance contributions by the government. In order to have a full Basic State Pension (BSP), you need to have approximately 30 qualifying years. If you're missing any qualifying years, you can buy National Insurance contributions.

The number of qualifying years you need for a full basic State Pension depends on your age and whether you're a man or a woman:

- Men born before 6 April 1945 usually need 44 qualifying years.
- Women born before 6 April 1950 usually need 39 qualifying years.
- Men born on or after 6 April 1945 need 30 qualifying years.
- Women born on or after 6 April 1950 need 30 qualifying years.

When you reach State Pension age, the government looks at your National Insurance contributions record to work out how much State Pension you can get. The fewer of the 30 qualifying years the less of full amount of basic State Pension you can get.

On 29 November 2011, it announced that the State Pension age will now increase to 67 between 2026 and 2028, in order to manage the cost of State Pensions because of the provision of increasing life expectancy.

An individual can increase the weekly pension income if he does not start to claim as soon as he reach the State Pension Age (SPA) .The state pension age is not the same as retirement age because you can still work after state pension age but you don’t have to carry on paying National Insurance contributions. So if you reach State Pension Age (SPA) you can stop working and get your State Pension, or to carry on working and get your State Pension or to carry on working and put off claiming your State Pension in order to be able to get extra State Pension. The retirement age is when finally you choose to retire.In 2012 – 2013 the Basic State Pension (BSP) is rate per week is £107.45 for Single man or woman, £107.45 for Married man or woman or civil partner (who qualify with their own National Insurance Contributions) and £64.40 for Married man, woman or civil partner (using his wife’s, her husband’s or their civil partner’s National Insurance contributions)

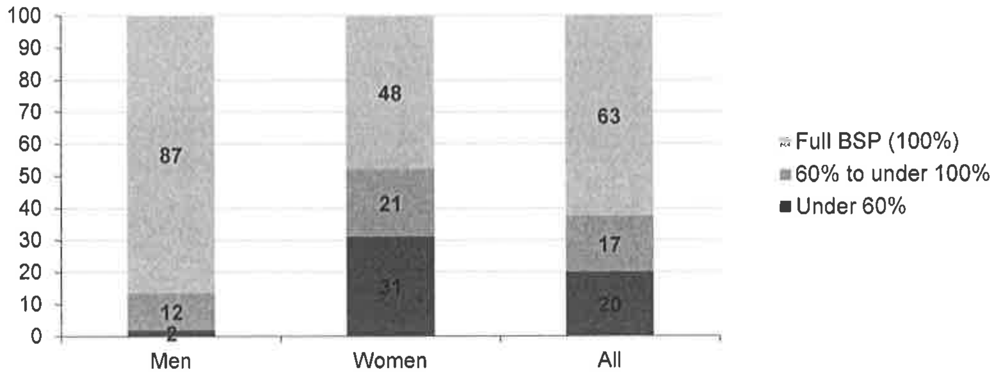
Changes to State Pension Age

Under current legislation, State Pension age is planned to increase to:

- 66 between November 2018 and October 2020
- 67 between 2034 and 2036
- 68 between 2044 and 2046

In **Figure 3** we can briefly see that the percentage of the pensioners in United Kingdom who are on a different percentage of the Basic State Pension between Men and Women .As it shows for women under 60% is the 31% in comparison with the men who are only in 2% and for the percentage between 60-100% for women is 52% and for men 12%. Men in UK participating more than the women in the full Basic State Pension (BSP)

Proportion of pensioners on different percentages of Basic State Pension, September 2010



Source: Department for Work and Pensions http://www.ons.gov.uk

Figure 3: Proportion of pensioners on different percentages of Basic State Pension, September 2010

6.1.2 State Second Pension (SSP)

The State Second Pension (SSP) is paid in addition to the basic state pension (BSP).Until April 2002, it was known as State Earnings Related Pension Scheme (SERPS) and depended only on the National Insurance Contributions that an individual paid as an employee. From 6 April 2002 the State Earnings Related Pension Scheme was reformed based on earnings in order to provide a more generous for low and moderate earners, careers and people with disability.

The State Second Pension gives a top-up to the Basic State Pension (BSP) based on the actual earnings. From the one side, all employees have to contribute towards the additional pension unless they make alternative arrangements by contributing to an occupational or personal pension scheme. So people can receive credits towards the State Second Pension (SSP) if they are below State Pension Age (SPA) and they are:

- employed and earning over £5,564 (from any one job)
- looking after children under 12 years old and claiming Child Benefit
- caring for a sick or disabled person for more than 20 hours a week and claiming Career's Credit
- a registered foster career and claiming Career's Credit

- receiving certain other benefits due to illness or disability

From the other side, it can be excluded from the State Second Pension (SSP) those who are self-employed (because self-employed pay lower National Insurance contributions),or they are in full-time training or they unemployed.

Pension Credit

Pension Credit is a social security benefit which replaced the minimum income guarantee, specifically in order to support the pensioners on low income and give extra cash to those aged 65 and over with modest incomes who have made savings for their retirement. The Pension Credit has two elements, the Guarantee Credit and the Savings Credit.

Guarantee Credit

The Guarantee Credit element provides pensioners a guarantee of a minimum level of weekly income for single people (£142.70) and couples (£217.90). Before 6 April 2010, the qualifying age for the Guarantee Credit was 60 and after 6 April 2010 has started rising gradually to age 65.

As **Table 9** shows, from 6 April 2010 the Employees with 30 qualifying years and more will take the full Basic State Pension (BSP) plus the State Second Pension (SSP) through the years 2010-2040 in comparison with the self-employed (who contribute less than the employees for the pension) or the non-workers through credits with the same qualifying years. From the other part the careers with some or no HRP before 6 April 2010 the will take some/or no Basic State Pension (BSP) with the some proportions to take the State Second Pension (SSP).

The Savings Credit

The Savings Credit is a reward for those who have saved additional funds for their retirement over and above the Basic State Pension (BSP) . Savings Credit is payable either for single people (worth up to £18.54 a week) or couples (worth up to £23.73 a week) from age 65.

Table 9: Entitlement to Basic & Additional state Pension for main categories of working age individual from 6 April 2010, by year individual reaches State pension Age (SPA)

Categories of individual	2010	2020	2030	2040
Employees with 30+ qualifying years	Full BSP, and SSP	Full BSP, and SSP	Full BSP, and SSP	Full BSP, and SSP
Self-employed with 30+ qualifying years	Full BSP, no SSP	Full BSP, no SSP	Full BSP, no SSP	Full BSP, no SSP
Non-workers with 30+ qualifying years through credits	Full BSP, no SSP	Full BSP, no SSP	Full BSP, no SSP	Full BSP, no SSP
Careers with some/no HRP before April 2010	Some/no BSP, some/no SSP	Full/some BSP, some SSP	Full/some BSP, some SSP	Full BSP, and SSP

Source: Office for National Statistics analysis http://www.ons.gov.uk

6.1.3 The Private Pension

In order to save some funds for your retirement over and above the State Second Pension (SSP) and State Second Pension (SSP), in UK you can have:

- **a personal pension** available from banks, building societies and life insurance companies or
- **Stakeholder pensions** or

For the **Personal Pension** you can determine how much money you want to pay for a personal pension and taking a tax relief on these amounts. The government indirectly rewards those who are paying for a personal pension. From April 2010 the earliest age you can take your personal pension is 55. Most people choose to wait until they are 60 or 65, but you do not have to retire from work to get your pension benefits. You can also put off taking your pension until you are 75.

You are paying the tax in the qovernment and then you can claim for tax back at the basic rate of 20%. So for every £8 you pay into your pension, you end up with £10 in your pension fund.

Stakeholder pensions is another type of personal pension that have to meet certain legal standards.You can pay the amount you want in order to increase the pension fund. The value of this pension fund will be based on how well the fund's investments have performed.The better the return on investment (ROI) the higher the pension fund and the opposite.

6.1.4 Company pensions or Occupational pensions.

Workplace pensions or occupational pensions are set up by employers to provide pensions for their employees on retirement. For company pensions can be paid only from salary or by employer or both salary and employer and the government give also a tax relief on the paying amount.
In that case the employer has the obligation to inform you about your right to enroll in a workplace pension and how you can join. After that if you decide to enroll in a company pension scheme then the employer has the obligation in writing to inform you for your registration, for the pension scheme you are registered of or not. Furthermore the employer has the obligation to inform you for the date of your enrolment, the percentage of the deduction of your salary for the pension that the pension meets the government's new standards and if you want to pay more .

Your employer will enroll you into a workplace pension if you work in UK, you are not already in a pension at work, you are under State Pension Age, you are over 22 years old, earn over £5,564 a year .
This is an important part for the employee because you have also the employers contribution in your salary in order to increase your retirement pension funds.This contribution is given as a percentage of the cross (before tax) basic salary (including all the money from extra work as bonus or for overtime work). The tax relief is the government contribution for your retirement pension funds. It is your fund from the workplace that is transferring from the one employer to another, that's why is so important to enroll. So the workplace pension consists from 3 variables:

- The employee contribution (4% of the gross basic salary)
- The employer contribution (3% of the gross basic salary) and
- The government contribution (1% of the gross basic salary).

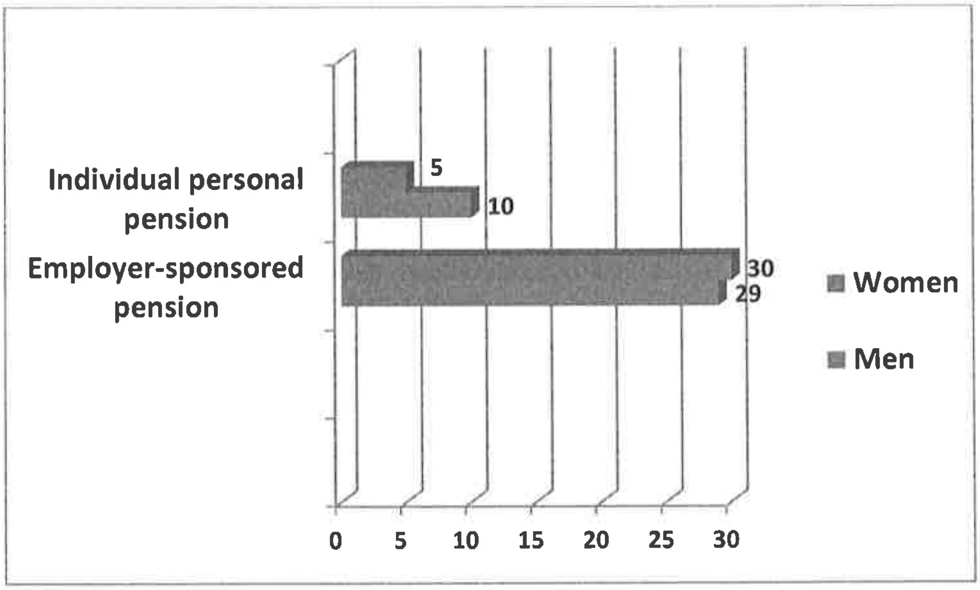
Finally, there are the two main types of workplace pension schemes the

- Defined benefit and
- Defined contribution schemes.

The **defined benefit** schemes, is more safe than the other one because the final amount you get is based on how many years you are paying for a pension and how much are your earnings all those years of you contribution. With **defined contribution** pension schemes, your pension is invested such as shares and the final pension fund depends on the stock (share) performance.

In **Table 10** present the proportion of the contribution to individual personal pension and the employer sponsored pension between of men in women in UK. The workplace pension for women in the one part is slightly higher (30%) than the men(29%) but for individual personal pensions the result are the opposite. The percentage of the individual personal pensions for men (10%) in UK are double than the women (5%)

Table 10: Proportion of men and women aged 16 to 64 contributing to private pensions: by pension type, 2010/11



Source: Family Resources Survey, Department for Work and Pensions http://www.ons.gov.uk

Financing

The current contribution rates for employed persons are shared between the employer (12,8%) and the employee (11%) .For self-employed the contribution is 7%.

Replacement Rate

The old-age pension replacement rate, measures how effectively a pension system provides a retirement income, to replace earnings which are the main source of income before retirement. The gross replacement rate is defined as gross pension entitlement divided by gross pre-retirement earning. In Uk the rate is 37% .

7. Conclusion

Finalizing the comparison of the pension systems of the four European countries,the following table **(Table 11)** provides a summary of the characteristics that exist in each one of the Pension systems. It is obvious from the table summary that the four countries have four different pension systems.

The type of scheme in Cyprus based in Social insurance for employed and self-employed persons aged 16 to 65 and social assistance system for persons aged 65 or older who are residents of Cyprus and meet the conditions for social insurance benefit. In Sweden the Social insurance system based in notional defined contribution (NDC) (guarantee pension) and individual account system (DC) (Earnings related and premium pension). The social insurance pension scheme in Belgium is based also in an insurance system, which covers employed persons and self-employed. Finally the pension schemes in United Kingdom is based also in the public scheme, which covers employed persons and self-employed by the Basic Pension (BSP) (a flat-rate basic pension), and a State second pension (SSP) scheme (an earnings related additional pension).

The source of fund for the social insurance in Cyprus distributed 6.8% for insured person, 6.8% for employer, 4.3% from Government and 12.6% for Self-employed person. In Sweden the percentages differs a lot, with more evident the lower participation from the government with a guarantee pension. Furthermore the social insurance distributed 7% for insured person, 10.21% for employer, and 7% for Self-employed person. In Belgium the contribution of the insurance person is 7.5% higher than the contribution of the insured persons in the other two countries but for the employers the contribution is higher in comparison with Cyprus with 8.86% but lower from Sweden. In Belgium the source of fund for self-employed for pension is calculated on the basis of the business income used to compute the social security contributions and income tax. In United Kingdom the contribution of the insurance person is

11% for insured persons,12,8% for the employer, for the Government is the total cost of means-tested allowances and other noncontributory benefits and for Self-employed person a flat-rate of £2.40 a week if earnings are greater than £5,075 plus 8% of declared annual earnings from £5,715 to £43,875 plus 1% of declared annual earnings greater than £43,875.

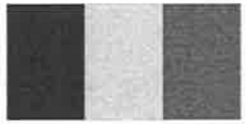
The qualifying conditions differs also .In Cyprus, the old-age pension is payable at the age of 65 for both men and women but it could have an early pension at age 63, if the insured person has been insured for at least 260 weeks , also has basic insurance up to the date of old-age pension entitlement at least 5 insurance points, earned from paid contributions and the total number of insurance points in the basic insurance, earned from paid or credited contributions, is equal to at least 70 per cent of the number of years over the period between 5 October, 1964 and the week before the week of old-age pension entitlement. So in Cyprus there is a guaranteed pension at the age of 65, for both men and women, if everyone has at least approximately 33 years of contributions. In Sweden the old-age pension is payable at the age of 65, if everyone has at least 40 years of residence in Sweden between the ages of 16 and 65. There is a guaranteed pension for resident in Sweden with at least 3 years, for both men and women at the age of 65. It is possible also in Sweden to retire at the age of 61 to 64, but the loss is twofold for the individual .In Belgium the retirement age for the old-age pension for men and women is 65 with at least 45 years of coverage and there is an early retirement age at age of 60 for men and women if a 35-year career condition is satisfied. In United Kingdom the state Pension Age (SPA) is 65 for men born before 6 December 1953 and 60 for the women born before 6 April 1950 gradually rising to 65 over period 2010 to 2020.

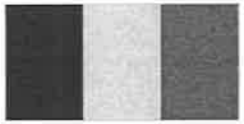
In the four countries Cyprus, Sweden, Belgium and United Kingdom the cross pension replacement rate shows the level of pensions in retirement relative to earnings when working. Theoretical replacement rates are calculated for a hypothetical worker, with a given earnings and career profile .It gives the percentage of pension in relation with the national average salary always based on full career attendance. The pensionable retirement divided with cross earnings just before retirement. In Cyprus this percentage is 48% in Sweden 53.8%,in Belgium is 42,6%, and finally in the United Kingdom is 37%. It is clear that the extent of the pension system enables workers to preserve their previous standard of livings when they are moving from the working to the retirement period.

The benefit adjustment in Cyprus is calculated between January and July each year according to changes in wages and prices (automatic wage indexation). In Sweden Benefits are adjusted annually according to changes in wages , based on industrial agreements and Belgium Benefits are adjusted periodically according to changes in the retail price index (PI).So in Cyprus and Belgium the systems of wage indexation and automatic wage adjustments covering the whole workforce are currently in operation. In United Kingdom benefits for Old-

Age are adjusted annually according to changes in the retail price index (PI) from the previous September.

Table 11: Comparison of the Pension Schemes in the four Countries

Scheme Characteristics	**Cyprus** 	**Sweden** 	**Belgium** 	**United Kingdom** 
Type of Scheme	Social insurance & Social assistance	Notional defined contribution (NDC) & mandatory individual accounts system (DC)	Social insurance system	Social insurance & Social assistance
Source of Fund	Insured person: 6.8% Employer: 6.8% Government: 4.3% Self-employed person: 12,6%	Insured person: 7% Employer: 10.21% Government: guarantee pension Self-employed person: 7%	Insured person: 7.5% Employer: 8.86% Government: Annual subsidies Self-employed person: Not applicable	Insured person: 11% Employer: 12,8% Government: The total cost of means-tested allowances and other noncontributory benefits Self-employed person: A flat-rate of £2.40 a week if earnings are greater than £5,075 plus 8% of declared annual earnings from £5,715 to £43,875 plus 1% of declared annual earnings greater than £43,875.

Scheme Characteristics (continued)	**Cyprus** 	**Sweden** 	**Belgium** 	**United Kingdom** 
Qualifying Conditions	Old –age pension 65 for men and women Early –age pension 63 for men and women	Old –age pension 65 for men and women Early –age pension from 61 for men and women	Old –age pension 65 for men and women Early –age pension 60 for men and women	Old –age pension 65 for men born on or before 6/4/1950 and 60 for women born on or before 6/4/1950 pension
Replacement Rate by earnings	48% anyone with salary of the national average with full career.	58,4%	42,6%	37,0%
Benefit Adjustment	Benefits are adjusted in January and July each year	Benefits are adjusted annually according to changes in wages	Benefits are adjusted periodically according to changes in the retail price index (PI)	Benefits are adjusted annually according to changes in the retail price index (PI) from the previous September

8. Suggestions on Pension System Reforming

The pension system reforming should be a continual procedure for every country that respects its citizens. The procedure of reforming is applied on the existing pension systems by changing, adding or removing parameters in order to keep them adequate, sustainable and adaptable.

The great challenge for the Governments is to be able to offer the elderly the ability to enjoy an economic independence and a comfortable standard of living. This can be archived only if the governments succeed in putting in place a financially sustainable pension system that will guarantee an adequate retirement income for the elderly.

World Bank in one of its background Papers in 2012 for Social Protection and Labor Strategy, emphasizes the key parameters that each county should consider while evaluating the need for reforming its pension system. These parameters , adequacy, affordability, sustainability, equity, predictability and robustness, are related to the system's ability to: (i) address and reduce to a minimum level the poverty among the elderly and other vulnerable groups of citizens, (ii) support and sustain affordability to enterprises, workers and the broader economy, (iii) provide a well-established financial viability , current and for the future (iv) equity in terms of both intra and intergenerational transfers, and (v) offer Financial security against the risks of inflation, asset returns, longevity or discretionary changes made by governments.

During the past decades many countries tried to adapt their pension systems to the changing environment and respond better to changes in labour markets and gender roles. While trying to improve their pension system, they have applied special financial tools in order to be able to adjust automatically their pension schemes in a vulnerable economic or demographic environment. This system basically works by adjusting the following parameters:

I. retirement ages and /or the pension benefits in combination with life expectancy,
II. the Valorisation of rights and / or the indexation of benefits, according to economic performance in terms of GDP growth and / or labor market performance
III. Contribution rates in combination with indexation of benefits.
IV. the valorisation of entitlements and indexation of benefits to ensure the financial balance of the pension system after external shocks

Pension reforms commenced until to date are mainly driven by the financial strength of the pension schemes and most of them will reduce the generosity of pension benefits to future generations. Reforms such as switches to notional defined-contribution principle, shifts to statutory private funded schemes and shifts towards price indexation instead of wage indexation will put the benefit ratio, an indicator of the pension generosity, on a declining trend in most European countries.

In order to be successful and sustainable the pension schemes reforms should base on the following key points:

- **More people should be encouraged working more and longer in order to obtain similar rights as before.**

This can be achieved by increasing the retirement age, giving more incentives for later retirement and penalize early retirement moving from benefits based on earnings in the best years for the right job based on career average earnings, termination or limitation of opportunities for early exit, using labor market measures to encourage older workers to remain in the labor market and promoting the best-encouraging gender equality in the labor market. Linking the pensionable age to life expectancy could then help stabilise the balance between working years and years in retirement. This is of key importance for future sustainability. Simulations in the Commission's 2009 Sustainability Report suggest that increasing the retirement age in line with future gains in life expectancy could result in budgetary savings representing more than half of the projected increase in pension expenditure over the next 50 years.

This means that by raising effective retirement and the pensionable age in such a way, this will reflect gains in future life expectancy and is expected to contribute very positively in ensuring progress towards fiscal sustainability. In some countries, like Belgium that we have seen earlier, the statutory pension system allows employees that have completed their contributory periods fully to have the right to retire before the standard pensionable age. This is another point for considering while reforming pension schemes. Pension reforms should not focus only on increasing the pensionable age, but also, to consider the length of contributory periods, which also need to reflect the increasing life expectancy.

- **The transition from a largely single to multi-level pension schemes.**

This is mainly based on the "*Three Pillars system*", a system that enables pension schemes to provide their beneficiaries more options to save for their retirements through three distinct Pillars (**see Figure 3**).

I. **Pillar I**: A mandatory, state-run system (usually pay-as-you-go and financed through *a* payroll tax).

II. **Pillar II**: Occupational pension plans funded by employers or workers. These plans are either defined benefit or defined contribution.

III. **Pillar III**: Voluntary personal savings through retirement accounts, annuities and insurance.

Many countries, but not all, have tried to reduce the share of public PAYG (Pay-as-you-go) of total pension provision (Pillar I) while giving a greater role for additional, prefunded private schemes (Pillars II & III), which are often of a defined contribution (DC) , such as Non-financial (or Notional) Defined Contribution (NDC) or Matching Defined Contribution (MDC) schemes. As these new approaches are expected to support existing pension systems towards greater coverage and sustainability, there is always the question whether this reform will be enough, provided that life expectancy increases year by year. The main problem for the supplementary pension (Pillar II) is that currently for the EU residents/workers, who move across borders may not be able to get this pension entitlement. Although the statutory social security entitlements are guaranteed by the European legislation (Regulation (EC) No 883/200412), private schemes until now are not covered by this Regulation. So for this reason is important for the European countries to adopt regulations that will cover the supplementary pension issues so as to enhance pension systems' adequacy and sustainability, increasing at the same time the economic growth as this will resolve any obstacles to professional mobility and labour market flexibility.

Finally the Geneva association which is the leading international insurance think tank for strategically important insurance and risk management issues, has since 1987 conceptualised a fourth Pillar based on continued employment, which is basically part-time post-retirement work without any barriers.

- **Concentrating and taking special measures on adequacy gaps.**

Special effort should be applied in order to expand coverage, encouraging and supporting building up rights, and ease access to pensions for vulnerable groups and increase in financial support for poorer pensioners.

- **Gender dimension. Closing the pension gap between men and women.**

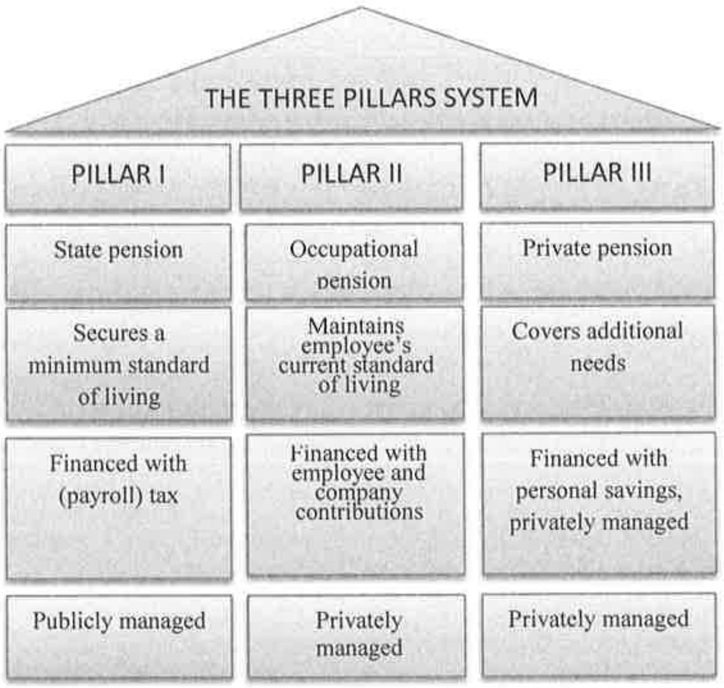
Women are usually the majority of individuals with atypical or even without contracts. Usually paid less than men and tend to leave their careers temporary (and sometimes even forever), for family-caring responsibilities, more often than men. As a result, their pensions tend to be lower and the risk of poverty tends to be higher among older women also, because they live longer. While periods of care are recognized in PAYG (Pay-as-you-go) systems, in funded pension schemes unfortunately, this is not always the case. Therefor by equalising pensionable ages for women and men can make a significant contribution to improving income for women but also raising the labour force participation of older workers.

- **Support longer working lives by providing better access to life-long learning.**

Adapting work places to a more diverse workforce, by developing employment opportunities for older workers, and supporting active and healthy ageing and developing opportunities for flexible working arrangements. This could be for example a combination of a part-time work and partial pension receipt (FOURTH PILLAR).

Another important key factor that the countries should consider is the health status of those workers that are reaching retirement age. Investing in the prevention of diseases, the promotion of healthy and active ageing will have a positive effect on the ability and the willingness of those people to continue working and as a result will have positive consequences on the labour market and on the country's economy. In a few words, more cost-effective health systems are important to maintain and maximise a healthy and productive workforce which can continue to work later in life. In turn, this will
help reduce early retirement caused by illness, contribute to increase the labour participation of people over 55 and ease some pressure on pensions.

Figure 4: The Three Pillars of Retirement Saving



Source: The Geneva association www.genevaassociation.org

- **The necessity of private defined benefit plans (PILLAR III)**

All the above suggestions are referred to actions that the government/state should take in order to achieve a successful pension system reform. What happens then now if governments and occupational pensions (**PILLARS I&II**) do not succeed in offering retirement benefits that the public need?

In this case People may supplement their retirement income with private savings and continued employment.

The problem here of course that should be noted is that if governments and sophisticated financial institutions find the post-crisis environment serious challenge, probably the same is expected to be for the ordinary people as well. In many developed economies, high unemployment, reduced wages by cost-cutting from employers and increased cost of living increases pressure on workers, who are less and less able to save for their retirement.

On the other hand, in the current economic environment, workers who still have jobs often actually increase (precautionary) their savings. Also Future income expectations have diminished and in view of that many consumers have reduced their consumption to the minimum level. But the problem here is that these individual increased savings are invested at lower rates of return, especially since individual Consumers, like businesses have been reluctant to commit to long term projects due to this global economic uncertainty. This means that they place their savings more often in a risk-free investment but with almost no gain from these investments. Furthermore the private savings will be invested with financial institutions that have suffered a major blow to their public image after the global economic crisis. Many Consumers are distrustful afraid of banks and of investing in stocks and real estate. This is, of course, a major opportunity for financial institutions that can be trusted. The role of the third Pillar (**PILLAR III**) here is very important because, specialized insurance companies have proven themselves to be in that trusted group and it is important for them to communicate this to their customers. The problem of course which still remains, is how can we build trust between the pensioner or future pensioner and an insurance company after all that happened in the economy? A traditional way of earning trust between two parts is to place limitations on the other part's actions. So, for example, private defined benefit plans can become more trustworthy when the assets of a plan are placed in a separate trust and invested exclusively for the benefit of the beneficiaries of the program. Insurance companies have traditionally been designed to be trustworthy in a similar manner. Premiums received by an insurance company cannot be considered as income and used, for example, to pay bonuses to executives.

A great example of gaining trust for the insurance companies is the example with the USA during the Great Depression (1929-1939). The public image of life insurance firms in the United States during Great Depression improved because they were perceived as more trustworthy and reliable than banks or investment companies (Ciment, 2001; Huebner and Black, 1982; and Porterfield, 1956). That perception was correct and it was earned by restraints that insurance firms placed on themselves, through conservatism of their reserves and high levels of capital held. With the existence of this trust between customers and insurance companies , definitely the life insurance companies can become the pillars of stability in an unstable financially environment and will be able to cover the public demand through specialized investment funds that can provide to the pensioners a decent pensionable life. The existence of the **PILLAR III** as a part of a pension reform is essential and realizes the important role of insurance companies in a pension system provided that there is a legislation that governs and distinguishes their limits and their obligations within this system.

As a general conclusion message it must be noted that each insured worker in any country, expects to be financially safe when he retires. He has every right to know that when he gets out of work, he will be able to get a dignified pension and to be guaranteed for a respectable standard of living with a guaranteed health insurance. We can briefly say that this is the reason which proves the high importance of the pension system as a social and economic parameter from which the majority of the population in each country is depended on.

Social Security is a political theme because it implies the partial socialization of income and the redefinition of the contours of solidarity. The principle of compulsory contribution means that the "rich" must pay for the "poor" .The principle of insurance assumes equality of risk from one individual or social group to another. The principle of equality and non-discrimination implies participation by and insurance cover to all the people living in a country. A social security system based on conventional standard lays the foundation for the principle of solidarity at the level of society.

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