

# TYPES OF CAPITALIZED PENSIONS WITH LARGE PARTICIPATION

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**Keywords:** Defined Benefit (DB), Pension Plans, Defined Contribution (DC) Pension Plans, Methods of Financing.

**Abstract:** The main purpose of any pension system is that of helping the citizens to realize an equal allocation of financial resources in certain steps, to assure their consume and needs for their whole lifetime. This is realized by transferring resources from their active life for their pension time, time characterized preponderantly by consume and not by obtaining income. The pensions may come from another source than from the state. They may represent a mechanism of redistribution for transferring resources from the rich social segments to the poor, which aren't able to make economies to create necessary savings. Although redistribution is not a pension system request, they make the pension scheme different from the “social assurance” scheme. Generally, the schemes based on redistribution foresee or should foresee a minimum pension level. The pension systems may be classified depending on many criterions. If we take into consideration the promised benefits and the way in which promises are financed, we could talk about two types of plans: defined benefit (DB) and defined contribution (DC).

## 1. General characterization

The main purpose of any pension system is that of helping the citizens to realize an equal allocation of financial resources in certain steps, to assure their consume and needs for their whole lifetime.

This is realized by transferring resources from their active life for their pension time, time characterized preponderantly by consume and not by obtaining income.

From the tendencies manifested now in most of the countries now, determined, generally, by the lack of sustainability of the systems of pay-as-you-go type (PAYG), we can mention:

- passing the responsibility from the state to the employer and employee, which implicates the administration transfer from the state to the private sector;
- passing from unfunded systems to funded systems in the case of the pension funds constituted by the employers and even by the state;
- passing from the pension plans type “defined benefit” (DB) to those of type “defined contribution” (DC), once with the transfer investment risk from the pension fond to the investor, respectively the pension beneficiary;
- strict regulation, prudence and transparency concerning the pension funds activity.

Social assurance and redistribution are characteristic for the public pension systems. This is equivalent with the states obligation to assure that all the citizens especially the older ones, hold in the pensioning time the necessary resources to cover their life needs, at least at a minimum level.

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represent a mechanism of redistribution for transferring resources from the rich social segments to the poor, which aren't able to make economies to create necessary savings. Although redistribution is not a pension system request, they make the pension scheme different from the "social assurance" scheme. Generally, the schemes based on redistribution foresee or should foresee a minimum pension level.

For constructing a robust pension system it is very important encouraging economies. The economic theory demonstrates that every country needs economy for creating a capital; the population needs economy for the time in which it can no longer obtain incomes. This stimulation may be done by legislative encouraging measures, like fiscal facilities, rules concerning obligatory contributions, encouraging the population for creating the savings rate etc. which, finally, will determinate benefits for long term for the population but also for the whole economy.

For realizing this desiderate it is necessary to modify the individuals behavior for obtaining the purposed results, respectively educating for saving during an active life, which will have as objective using the savings while in the retirement time. The pension scheme permits the individuals to adopt a consume model based on the life cycle, protecting this way the unsophisticated individuals. At a corporatist level, the pensions may be considered rightly a delayed payment of a salary part. Along with this, with the politics promoted, the companies may influence and modify the employees' behavior, contributing with certain sums which are invested to make sure that the employees won't have financial problems during the pension time. When they are not obligatory, the corporatist pension schemes may be an attraction element for a company, of retention for the personal etc.

On the other hand, some researchers suggest the fact that social assurance systems should encourage working by defavorizing early pensioning, idea took over by many governments as a solution for preventing a the pension system crisis passed on the PAYG model.

The financing methods, described generally as PAYG are financed and are based on fund redistribution, so they don't purpose long time investments. Growing the pensioning age is very much taken into consideration in many countries, it is even stipulated step by step passing to pensioning, respectively a period of a few years of "part-time working".

Unlike this, the base principle of financial pension schemes is to constitute funds which are invested likely for sustaining the future consume even in the case of early pensioning (anticipated).

The pension systems may be classified depending on many criterions. If we take into consideration the promised benefits and the way in which promises are financed, we could talk about two types of plans: defined benefit (DB) and defined contribution (DC).

The plan sponsors are under the pressure of innovating some new likely pension plans for the employees which, on one hand, to assure them certain incomes and, on the other hand, to share in a fair way the investment risk for the pension sponsor/fund and the beneficiaries.

At the present, the DB type plans are under pressure, because of legislative changes, of defavorable environment, the income level from investments in the last few years and getting aware of their costs in an environment with reduced mortgage. As a following to this, the attention is targeted more and more on the DC type plans.

## **2. “Defined Benefit” (DB) Pension Plans**

The essence of the DB plans consists of the fact that these purpose a “defined benefit” – respectively a predefined, specific sum, either under the form of a sum of money expressed in some circulating medium, either as a final salary percentage of from the salary averages from a certain number of years before pensioning. The pension level can be so expressed in absolute terms – as a fix sum, or in relative terms – as a percentage.

In the DB type pension plans, the participants and/or the sponsors contribute with certain sums during years. The percentage that expresses as from the last salary or from the monthly average of the last salaries on a certain number of years represents the pension level of the DB type and is named replacement rate.

Most of the times, the participants to this kind of plans don’t know the level of the benefits that will be obtained and neither the calculation module. More and more it is seen that the calculation method changes even at small time intervals, creating major disproportions between the individuals. The system administrators and the financial experts know that there are budgetary constraints that connect the contributions, at the beneficiary level etc. to a certain replacement rate.

Traditionally, the pension plans constituted by the DB type companies define the rent levels based on the number of years spent working in a formula creates an nonlinear growth.

Still, some theoreticians sustain that the exclusively DB plans expose the employees to the risk of low salaries, before pensioning, on which is based the financial calculation of the pension, which obviously affects the pension levels.

## **3. “Defined Contribution” (DC) Pension Plans**

In the DC type scheme, the participants and/or sponsors contribute with certain sums, predefined in the pension-expression plan in absolute sums or as a salary percentage. These contributions may be partially or totally voluntary. The participants invest their contributions in diverse types of activity, without the existence of any guarantee of the investments efficiency, the whole investment risk being the work of the investor. This is why, the pension level is uncertain even before pensioning, because it depends integrally of the investments performance from the accumulated contributions. This way, it is very possible that two persons that have contributed with the same sum, but have choose differently the allocation of those sums in active types, they can have very different sums while being pensioned.

In a similar way, two people with a contribution identical history may have different pensions, in different periods of time. The contribution level may change in time, for reasons like, for example, modifications of the fiscal legislation, or maybe for any of the obligatory or optional schemes, in the case in which the investment efficiency of the contributions determinates a rate of replacement insufficient or excessive.

And so, there is an essential distinction between the two types of plans. The main characteristic of the DB plan is the fact that the income for the pensioning time is defined – a replacement rate determined will be paid to the participants, while a DC type plan supposes variable and uncertain incomes while the pensioning time, which can be higher and lower, depending on the performance of the investments in which the contributions have been allocated.

By multiplying the contribution rate of the nominal salary the nominal contribution will be obtained. In the case of the DC type plans, the investment performances are

volatile. If the volatility is eliminated, either by an investment strategy or by guaranteed products with a present value of annuity on the pension period, than the incomes are depending on the salary growth. In other words, if the rate is guaranteed, the replacement rate – which represents a percentage of the salary (on an average over years or the last month etc.) it can be guaranteed, because of the salary growth. This aspect characterizes the DB type plans.

#### **4. Methods of Financing**

There are many methods to finance the DB or DC plans. At the present the social security systems are mostly PAYG, and the sums obtained from the contribution are returned to the pensioners from that moment. In our days, the occupational DB type pensions from that moment. And so, in a pure PAYG system, we are not talking about an accumulation of funds, but about a quick redistribution of these by paying the pensions in DB type schemes. In our days, the occupational DB or DC. Financing these funds purposes an accumulation of funds in the active period from which the pensions will be paid. The funds may be invested in commercial and noncommercial actives.

A comparison between the pension funds

##### *a) Universal Pension Funds with Defined Contribution*

*Advantages:*

- a redistribution between the young and the old less burdening;
- it has positive influence over the work market. Saving for longer periods of time, the employees will be encouraged to work a longer time, if the income in the pensioning period depend more and more by the economies in the personal accounts, then the most actual motivations for anticipated pensioning will disappear. Reducing the pressure over the public system by anticipated pensioning will create premises for growing the pension quantum or for lowering the contributions;
- supplementary economies lead to a fast investment growth, which, at its time, will contribute to the PIB growth and for creating new work places;
- introducing the pension fund capitalization will take to promoting the more effective using of the capital and will encourage the management to concentrate over the shareholder value;
- the pension system that has a PYAG type component and a component based on capitalization is less risky;
- offers the working generation alternative ways to make savings for their pension when the PAYG pension system is overwhelmed;
- only private incomes may generate a real right of property realized by a capitalized fund system, based on defined contributions;
- makes the people responsible for taking the decision to retire, depending on the financial support they have personally assured;
- gives motivation for the employees to have a higher mobility on the work market, by their possibility. In a society in transaction, when the economy's reconstruction is not yet finished, these pension funds administrated by the independent pension societies of economic activity represent an unique solution, at least for the employees working for big unstable societies or the state;
- offers a high degree of universal cover for the younger employees;
- the emergent markets (like in Romania's case) present big investment opportunities, making possible high profits of the invested capital;
- it limits the tendencies of evasion of the informal sector, the individual will for

saving being preponderant for the employees;

*Disadvantages:*

- produces costs in the transition time, if supplementary contributions are not requested, and those collected are deduced from the contribution for the public system. The system is hard to graft on a public unbalanced deficit system;

- avoiding the transition costs depending on the public system purposes a fiscal growth by fixing some supplementary obligatory contributions;

- on longer periods (decades), as the population ages, the rate of profit over the invested capital follows to address to an older population, the capital will become more plentiful and work will become insufficient.

*b) The Occupational Schemes with Definite Capitalization and Contribution (DC)*

The occupational pension schemes (with capitalization) are schemes organized by the employers for their employees, to which these join individually, facultative or by collective option. They are based on the existence of individual accounts in which the contributions made by the employees, and, mostly, by the employers, cumulate; to which is added the profit rate resulted from investing the contribution sums. These types of occupational schemes respect the principle of individual propriety over the existent sums in the individual accounts.

*Advantages:*

- a real property right is generated, the pension can be legally left legacy;

- every worker will decide for himself the moment of pensioning, depending on the financial support which he has accumulated in its individual account;

- the growing of the pensioning age is benefic for the public system also, in parallel;

- the accounts with defined contributions are easily transferable;

- administrating the pension funds with defined contributions is generally cheaper than the one of funds with defined benefits, which needs actuarial hard and difficult calculations.

*Disadvantages:*

- not all the employees are comprised in pension plans, the measure has a low impact, the public system is not unloaded at all, and the governmental duty's implication is bigger and bigger;

- these pension plans can be made only by the employers, which business is profitable;

- the employee is not stimulated to invest, especially when the initial deficit of the public system cannot be evaluated;

- an optional contribution from the employers would mean a supplementary contribution against the public system, which would make the employees and the employers even more busy;

- into a renovating society, which needs on the market as many economic agents as possible, the obligation of the future employees to offer plans of pensions it may determinate them to renounce their activity.

*c) The Occupational Schemes with Definite Capitalization and Benefite (DB)*

*Advantages:*

- offers to the worker the possibility to make his own calculation of the pension he will obtain, by the minimum rent rate assured by administration;

- the pensions supplied by these plans mostly depend on the final plan, helping the employees that get hierarchically step by step higher for which the salaries grow higher

and higher until their last working years;

- the employers contribute generously to these schemes, being a guarantee of the society for the employees.

*Disadvantages:*

- for maintaining the promised rent rate, in some contribution periods they must grow, growths that won't be for the own benefit, but, by solidarity, in the benefit of those who are than pensioning or older pensioners;

- the DB schemes encourage the anticipated pension, especially in the cases where the maximum salary was early obtained, during the career;

- the DB schemes realize a systematic reserve transfer from the employees who have retired in anticipated pension towards those who have remained for a long time in the work field;

- the structure DB occupational schemes is totally inadequate for the workers that usually change work places. They bring consequences for the work force mobilization, with distempers for the national economy, the people who await a fix sum in the pensioning moment lose their motivation proper to the qualification, the companies get overpopulated by medium aged workers, which will not leave by good will if they cannot hold on to the technique challenge.

To prevent for real the poverty of the future pensioners and to offer them better protection, it is necessary to make an obligatory capitalization (on age segments).

The public system must work forward as a decreasing component, as the capitalization systems will show positive results. The public system must be reformed continuously, either by transforming in a system of NDC type with the take over by the state's budget of the other services, or by consolidating and balancing it. At reaching the balance or obtaining some reserves in the public system a pillar type II can be introduced with a capitalization of an obligatory type on age segments or occupationally. This second pillar, in an optimistic acceptance, may be of funds of a universal pension type with fiscal facilities (deducing the contribution from the actual one), complete it with optimal occupational schemes, with supplementary contribution paid by the employer, but also by the one assured.

The DB plans disperse the investment risk over a big number of people of different ages and in different time horizons. These plans group the risks in the pooling system into a bigger population and in many populations. The plan sponsor which generally wears the investment risk of the DB plan, has a longer period and a bigger capacity to assume these risks, than the individuals.

In a DC plan, the time horizon is the individual's life, while in the DB plans, the time horizon is longer, but not infinite. That is why, in the DB plans, in average, can be more risky, but can also generate higher earnings from investments, the active allocation politics can be of terms longer than the DB may be able to benefit from reduced administration costs. On the other hand, the DC plans permit the individuals to allocate their contributions in a portfolio that they consider the best, in the active types and with the risk grade that they wish to assume, in the structure and combination considered optimal. The members participate to all the winnings and losses of the plan choused, and there are applied to them all the bigger administration costs for their actives.

The DB plans purpose stable income on the pension period depending on the salary; the DC plans purpose this kind of income while the pension period, because these depend on the performance of the investments. By their nature, the DB plans are less flexible, and the individuals have low liberty over the contributions.

The DB plans offer assurance for the longevity risk. The national schemes don't need assurance because the payer (sponsor) is the state and this, in the case of the longevity risk (or others), the taxes level grows for being able to dispose the respective sums. In the corporatist schemes, the possibility for the respective sums to deplete before the individual assured dies does practically not exist, if we take into consideration that the sponsor getting into payment incapacity and this is not assured.

For example, in the U.S.A., the assurance for the corporation's pension plans is offered by the agents like Pension Benefit Guarantee Corporation (PBGC). The people that contribute during their hole lives and die after a short time after pensioning don't have the possibility to donate the funds that remain to other beneficiaries (inheritors etc.)

The DC type plans are not assured, and buying the annuities is done at high prices.

In practice, a mix of the characteristics purposed by DB and DC would satisfy the most. In this sense, innovative plans which incorporate the characteristics of both types of products may obtain the same result.

The DC plans need a good understanding of these and a financial education for being able to realize a rate of replacement adequate as a pension. The DB plans must be supported by structures of strict leading that assure that the funds are invested so that they cover future passives. The mixture between DB and DC plans are, usually, specific for every country.

The best example for the multipillar system is represented by the well known system purposed by the World Bank (obligatory system of PAYG DB type, an obligatory system financed by the employer, employee type DC and an optional system of type DC).

In fact, when it is passed to the pension reform or even to the systems that are not exclusively based on PAYG, there exists a "fight" between the ones who offer pension plans and the ones who take benefit from these, because of the investment risk and the longevity risk.

The employee's representatives, the syndicates, wish products of the DB type, and the plan sponsors and the pension funds support in the favor of the DC type plans. That is why most of the plans refer to a mix between these two.

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