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# **ANALYSIS OF THE DEVELOPMENT OF GLOBAL MODELS OF CORPORATE PENSION FUNDS IN THE CONTEXT OF ENTREPRENEURSHIP**

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## **ABSTRACT**

*The world models (Anglo-Saxon, Scandinavian, continental, and private-corporate) of the pension system were analyzed, and shortcomings and advantages of their introduction were found. The typological classification of pension systems has been improved, taking into account trends in their development, which provides an opportunity to create a theoretical basis for institutional and structural transformations in the social sphere of the country. The decisive role of the system of non-state pension support as a method of social stimulation of the company's staff is proved. The methodology of forming a pension plan in a non-state corporate pension fund in the entrepreneurship has been considered, and the following corrective assumptions were distinguished: demographic, social-professional, and financial.*

**Keywords:** Pension Support, Pension System in the Entrepreneurship, Non-State Corporate Pension Fund, Actuarial Method, Employee Pension Plan.

**JEL Classifications:** I2, F6

## **INTRODUCTION**

The pension support is an integral part of the state social policy in each country, which largely characterizes the state's implementation of its social purpose and largely determines the level of stability in society. Pension systems of all countries of the world are in a state of constant reformation due to the need to solve problems arising as a result of a number of contradictions in the theory and practice of social protection of the population, imbalance of development of major institutions and resource sectors of society, and changes in the socio-demographic structure of the population.

## **REVIEW OF PREVIOUS STUDIES**

Investigating the formation and development of pension systems (Rekha, 2017), two conceptual approaches to the formation and development of the pension system are determined.

The first approach is based on the duties of the citizen of the state to participate in collective insurance, based on the principles of solidarity, in the case of such risks as old age, disability, illness, etc. According to the second approach, each person shall be responsible for forming the conditions of its life, including at the retirement age. These approaches coincide with the concepts of the institutional matrix of the state.

In the world practice of pension support it is accepted to consider several basic models of the pension system. All of them are based on the distributive or cumulative principles, with specific features that are taken into account when developing national pension insurance models. The developed classification of pension system models was based on the following characteristics: concept of creation, level of centralization of financial resources, level of economic development, goals, method of financing, type of institution of social protection, sources of funding, strategy, etc.

The existing pension models are classified according to resources, centralization, structure, country specifics, strategy, level of economic development, model of the World Bank, type of reform, etc.

The distributive and accumulative systems are multipolar in the diversity of pension systems, but there is no irresistible barrier between them. They can act in parallel, independently or complementing each other. The main types of pensions can be guaranteed within the framework of both systems, but each of them has its advantages and disadvantages.

Based on sources of financing, two main models of pension systems are distinguished: budgetary (non-fund) and insurance (fund). The budgetary pension systems accumulate funds and distribute them for current pension payments. The insurance model is characterized by systematic long-term accumulation of funds.

The number of basic regimes of pension support may vary significantly depending on the particularities of a certain occupational group and national characteristics. There are 4 basic regimes in Germany, over 50 in Italy, more than 100 in France (currently only 26 are effective) (Blank, 2017; Pająk et al., 2017). This model is based, as a rule, on the basic regime financed by contributions from working citizens, which are proportionally distributed among those entitled to a pension. Within this model, there are supplementary pension schemes based on a cumulative principle, but they are not very well developed.

## METHODOLOGY

The study uses a set of special, specific-scientific, general-science and general methods, which contributed to ensuring the conceptual unity of the study. The substantiation of the theoretical provisions of state pension insurance is based on semantic analysis, methods of induction and deduction, formalization and a logical approach to the study of the corresponding processes. The analysis of the formation and use of the budget was carried out using empirical knowledge, grouping, comparison, analysis, synthesis, and observation. The outline of the areas of improvement of state pension insurance in the conditions of reformation of the pension system shall be carried out on the basis of generalization methods, transition from abstract to concrete things and from concrete to abstract things, and formal logical methods.

O. Bismarck's model is used by Austria, Belgium, France, Italy, Germany, Greece, and others. It is characterized by the following factors: the share of wages in GDP is 45-50%; the share of funds for pension insurance is 10-15% of GDP; the share of additional contractual (non-state) corporate pension insurance is 2-3% of GDP (Davis & Lastra, 2018).

The average pension is about 70% of the average wage. The middle class of these countries is characterized by high accumulation of retirement assets before the retirement age (Davis & Lastra, 2018).

Specialists, in particular (Tetiana et al., 2018a:2018b), note a number of negative features inherent in this model. It is emphasized that there is an equalizing element in it, social dependence, a decrease in interest in savings, as well as a monopoly of the state, which manipulates the conditions for granting pension rights and the size of pensions. Developed countries try to solve this problem by developing corporate programs and voluntary pension plans.

## RESULTS AND DISCUSSION

Features of the continental model are: professional and labour social solidarity; contract of wages with the purpose of further replacement of lost earnings, parity of payment of insurance premiums by the employer and employee; a combination of a universal and differentiated system of accrual of insurance premiums.

This model is based on the principles of pension insurance and professional solidarity, which involves the creation of insurance funds, which on a parity basis are managed by owners of enterprises, organizations and institutions and hired workers. The said model is implemented for low-income members of society who cannot receive insurance pension payments in the absence of insurance qualifying period, and pension support is implemented through the principle of social aid, which causes the modification of this model and increases the share of budget financing of pensions.

Beveridge's model was developed and implemented in England in 1942 as a social security system. It is based on the State Pensions Institute. Today, the Beveridge's model is used in USA, Canada, UK, Holland and other countries.

Its main features are: high proportion of wages in GDP (60-65%); the share of funds reserved for compulsory pension insurance is 12-14% of the salary, or 6-7% of GDP; additional contractual (non-state) corporate pension insurance is 3-4% of GDP (Davis & Lastra, 2018, Kvilinskyi & Kravchenko, 2016).

The average level of pension provision in these countries is 50% relative to the average wage. In addition, the middle class has a high enough personal savings for the future.

The feature of the Anglo-Saxon model is the distribution of insurance liability between the state, employer and employee. For example, a distribution (basic) pension is guaranteed by the state and corresponds to the minimum subsistence level of the pensioner, the insurance part of the pension payment is formed by the employer with the part participation of the employee within the limits of the professional insurance system and is aimed at replacing pre-retirement earnings. The voluntary insurance allows you to use the individual abilities of the employee to create an additional pension payment (Gilbert, 2017; Lakhno et al., 2018).

The Anglo-Saxon model is based on the following principles (Gilbert, 2017): of universality: distribution of the pension system for all citizens in need of social aid; uniformity and unification of social services and payments: standardization of methods for calculation of the size and conditions of the assignment of pensions; distributive justice (national rather than professional solidarity).

The Scandinavian model of social protection is private-corporate and characteristic for Sweden, Denmark, and Finland. Social protection of pensioners in these countries is interpreted as a legitimate right of a citizen. A characteristic feature of the Scandinavian model, as noted by

Blundell (2017), is a wide coverage of various life situations and insurance risks that require state support. The receipt of insurance payments is guaranteed to all citizens and is not conditional on payment of insurance premiums and employment. In general, the level of social protection offered by this model is quite high, which is achieved by an active redistributive policy aimed at equalization of profits. A prerequisite for the functioning of this model is a highly organized society, based on a commitment to the principles of a welfare society.

The pension insurance is predominantly a commercial activity of private companies in the private-corporate model. It involves cumulative personalized schemes for collection of social insurance contributions by non-state pension funds and insurance companies. In addition to the contributions of employees, the sources of social insurance are insurance contributions of employers and interest on capital and rent (Naczyk, 2018). Companies are obliged to invest insurers' funds in the national and international financial markets in order to ensure, at the expense of incomes, protection of the indicated funds against inflation and a higher rate of growth of savings. The basic principle of this model is the equivalence of insurance premiums and retirement benefits.

The non-state pension funds in their activities are guided only by the interests of investment reliability and maximizing profits. However, on the one hand, private pension insurance is becoming a strong individual motivation of wealthy people for the accumulation of sufficient funds for retirement, and, on the other hand, there is a high risk in saving the accumulated funds. This model is used in the USA, Latin America, Portugal, Belgium, the Netherlands, Finland (Hilorme et al., 2018; Karpenko et al., 2018).

Most Western European countries have developed and adopted a legal framework that protect private pension funds from abuse, which clearly specifies the rules for investment of funds, how to manage them, and protect the rights of pension recipients. The areas of pension savings investments are clearly defined in order to protect funds from bankruptcy and financial malpractice. Such additions to the legislation are made due to the fact that there were cases of abuse in the process of establishment of private pension funds. The comparative characteristics of the three levels of the pension system in different countries is given in Table 1.

<b>Country</b>	<b>Share of pension system levels, %</b>		
	<b>First level</b>	<b>Second level</b>	<b>Third level</b>
USA	45	13	42
Switzerland	42	32	26
Netherlands	50	40	10
France	51	34	15
Ukraine	99.93	-	0.07

A non-state corporate pension fund is of particular importance in the system of non-state pension support, the founder of which is a legal entity-the employer or several legal entities-employers. The members in this fund may be exclusively natural persons who are or were in labour relations with employers-founders and employers-payers.

When considering non-state pension insurance from the point of view of the employer as a payer of the corporate pension fund, it should be noted that these funds are formed primarily on the principles of voluntariness, that is, the employer itself decides whether to make additional pension contributions in favour of their employees or not. If the employer decides to participate

in such a program, then it must make deductions to the fund on a monthly basis. The additional pension support refers to programs upon termination of employment. Post-employment programs-employee benefits (other than payments at dismissal and payments using instruments of own capital) payable upon termination of employment of an employee.

The additional pension support at enterprises is carried out within the framework of collective and individual agreements between employers and employees. Therefore, the set of persons who are subject to such pension support and the amount of deductions to personal accounts of employees shall be determined at the enterprise on the basis of negotiations between employees and employers. These issues can also be defined in sectoral and regional agreements, if there are corporate pension funds.

In general, the development of a system of non-state pension support as a method of social stimulation will lead to increased employee loyalty to the management and the enterprise as a whole, the formation of the image of a socially oriented company (care about the personnel not only during the period of labor activity, but also after entering the well-earned rest) long-term motivation. In addition to the positive social consequences, there is also the ability to manage their retirement funds.

Participation in the system of non-state pension provision increases the social attractiveness of the enterprise. This is due to the following: firstly, the company gives confidence to the employee in the future, supporting its old age through an additional pension, that is, actually increases the income of employees with economy on payment of taxes; and secondly, there are additional opportunities for attracting and securing highly skilled personnel, especially in unhealthy workplaces with harmful working conditions; and thirdly, the prevention of social conflicts-the reduction of tension in the work team between staff of different age groups.

In addition to social benefits, the enterprises, when introducing systems of non-state pension support, have economic benefits, with two important economic consequences: expansion of investment opportunities and optimization (reduction) of the tax base. An enterprise can attract up to 5% of funds from one pension fund as an investment through its securities.

The enterprise should choose from two ways of forming a system of non-state pension support: create its own non-state pension fund or become a contributor to an existing non-state pension fund. The creation of its own (corporate) non-state pension fund requires significant time and labour costs. It is necessary to assign professionally trained people who will write the charter of the fund, develop pension schemes, undergo a state registration procedure, etc.

For depositors of the corporate fund, the mandatory prerequisite is to conclude pension contracts in favour of employees, and under the same conditions of contributions. A depositor of an open-ended non-state pension fund can, first, conclude contracts only in favour of a certain part of employees (for example, except for those temporary, seasonal, etc.). Secondly, it can divide its staff into groups and form for each group their conditions of pension contributions (for example, for employees in areas with a higher turnover of staff contributions can be higher and dependent on the length of service in order to motivate the staff).

The enterprise will be reasonable to request the administrator to provide documents governing the interaction with the formation of the list of participants and their interaction, collection of necessary supporting documents, a list of information about each participant of the non-state pension fund.

To develop a retirement plan for enterprises, actuarial calculations shall cover three areas: demographic, social-professional, and financial. The demographic assumptions about the future

characteristics of current employees and their dependants eligible for benefits include the following indicators: mortality-during and after the work; proportional share of program participants who have dependants with the right to receive payments; health status-the number of applications for a health care program.

Socio-professional indicators related to the social and professional status of workers include the following ones: indicators of staff turnover, disability and premature retirement; indicators of length of service in the enterprise and in general.

Financial indicators are related to the feature of actuarial calculations, and include the following indicators: future levels of wages and benefits, discount rates, expected rate of return on program assets, future wage levels and payments.

So, based on all actuarial assumptions, and even more so for financial ones, the assumptions about the discount rate are of greatest importance. It reflects the value of money in time, market trends in the financial market, which makes it possible to more accurately calculate it for future periods.

The stages of the sequence of determination of the amount of profit (loss) under retirement plans: The assessment of the amount of retirement benefits payable to employees for the current and the previous period; determination of the discounted value of liabilities under pension plans; determination of the real value of the plan assets; determination of the total amount of actuarial gains (losses) and the amount that should be recognized in the reporting period; calculation of the final cost of the previous services when the pension plan is put into effect and the formation of the profit (loss) under the pension plans.

In the method of the predicted conditional unit (the method of accumulated remuneration, proportional to the period of work of the employee), each period of work of the employee is considered as the basis for the supplementary pension rights, and each conditional unit of pension is assessed separately in order to form liabilities at the end of the period.

At domestic enterprises, the introduction of pension programs and formation of corporate non-state pension support is not widespread, but the search for new incentives for employers for the system of material incentives for workers, the need to improve the mechanism of staff incentives, strengthening global and integration processes, prompts managers to implement pension plans in the field of non-state pension insurance. The results of our study are confirmed by the following studies. Based on sources of financing (Hilorme & Shachanina, 2017; Kwilinski, 2017:2018a:2018b:2018c:2018d), two main models of pension systems are distinguished: budgetary (non-fund) and insurance (fund). The budgetary pension systems accumulate funds and distribute them for current pension payments. The insurance model is characterized by systematic long-term accumulation of funds.

## CONCLUSION

A retrospective analysis of the development of pension systems has made it possible to identify the diversity of approaches used by different states in implementing changes to the pension policy. The first approach is based on the duties of the citizen of the state to participate in collective insurance, based on the principles of solidarity, in the case of such risks as old age, disability, illness, etc. The second level consists in the fact that each person is responsible for forming the conditions of his life that is, it carries out insurance of risks on its own.

These trends are implemented through the diversification of sources of pension payments and the gradual increase in the accumulation component of pension programs.

## RECOMMENDATIONS

In order to solve the issues of the development of the pension system, it is recommended: to work out the normative legal principles of the activity of non-state pension funds as an important component of the pension system, introduce foreign experience in establishment of the relevant functions of the pension system, and create the proper institutional support of the pension system in order to ensure reliable and complete compensation of social risks.

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