UDC 369.012

**_Makarenko Yu._**
*Doctor of Economics, Professor,*
*Professor of Finance, Banking and Insurance Department,*
*Dnipro National University named after Oles Honchar, Ukraine;*
*e-mail: makarenkoyulia80@gmail.com; ORCID ID: 0000-0002-9970-7377*
**_Kuryacha N._**
*Ph. D. in Economics, Associate Professor of Finance, Banking and Insurance Department,*
*Dnipro National University named after Oles Honchar, Ukraine;*
*e-mail: nkuriacha@gmail.com; ORCID ID: 0000-0002-7105-9232*

# IMPROVEMENT OF PENSION INSURANCE PRINCIPLES

**Abstract.** The article presents basic principles of investments into pension funds, namely, the principles of safety, profitability and negotiability, and specific features of pension insurance in the world, such as administration of premium collection, features that are specific for rural areas and specific features of «ethical investing». It was proved that the countries that developed pension systems of a new type should use the experience of guaranteed pension payments. To overcome the financial crisis in pension provision system, it is necessary to develop new principles for renovation of the world pension markets. It was found out that use of the pay-as-you-go pension system is a vital issue for many countries on the back of the financial crisis and failure of citizens to make pension contributions.

Many foreign scientists, economists, politicians have researched problems of pension system development, setting the foundation of modern pension systems in the world economies. Ukrainian scientists form the modern vision of a new pension system in Ukraine. In the sphere of social insurance both in Ukraine and all over the world, it can be stated that a pension system is an important part of the social security system of economic activity.

The objective of the article is substantiation of theoretical principles and development of scientific and practical recommendations on pension insurance in terms of reforming a pension system.

The role of pensions increases along with development of market relations in the countries where social, economic and political changes take place. Based on previous researches, the scheme presenting basic principles and features of pension insurance in the world has been developed.

Based on the above, it can be stated that demography is an urgent problem for many countries of the world. It can be solved via higher retirement age, levelling of retirement age of men and women, higher state expenditures on pensions, etc., with due consideration of specific situation in every single country.

The processes of investment of funds play an important role in implementation of pension provision principles. Investing into pension insurance funds in the capital market has some specific features and principles that should be adhered for the sake of safety, profitability and negotiability of assets.

Thus, the government has to regulate and control the process of pension funds investing. Depending on the governmental policy, restrictions have to be imposed on investing into various assets. High level of inconsistency of processes in this sphere is due to internal and external factors, and it requires further research.

***Keywords*:** the pension system, pension insurance, pension provision, retirement age, social security.

**JEL Classification** G22, G23, H55, J32

Formulas: 0; fig.: 1; tabl.: 0; bibl.: 11.

**_Макаренко Ю. П._**
*доктор економічних наук, професор,*
*професор кафедри фінансів, банківської справи та страхування,*
*Дніпровський національний університет імені Олеся Гончара, Україна;*
*e-mail: makarenkoyulia80@gmail.com; ORCID ID: 0000-0002-9970-7377*


ISSN 2306-4994 (print); ISSN 2310-8770 (online)

***Куряча Н. В.***
*кандидат економічних наук,*
*доцент кафедри фінансів, банківської справи та страхування,*
*Дніпровський національний університет імені Олеся Гончара, Україна;*
*e-mail: nkuriacha@gmail.com; ORCID ID: 0000-0002-7105-9232*

## УДОСКОНАЛЕННЯ ЗАСАД ПЕНСІЙНОГО СТРАХУВАННЯ

**Анотація.** Представлено базові принципи інвестування пенсійних фондів, серед яких виділено принцип безпеки, принцип прибутковості, принцип оборотності; та особливості пенсійного страхування у світі, до яких належать особливості управління збором страхових внесків, особливості для сільської місцевості, особливості «етичного інвестування». Доведено, що досвід гарантування пенсійних виплат слід використовувати тим країнам, що розвивають пенсійні системи нового типу. Для виходу з фінансової кризи в галузі пенсійного забезпечення доцільним є розроблення нових принципів для відновлення світових ринків пенсійного забезпечення. Виявлено, що використання солідарної системи пенсійного забезпечення є зараз актуальним питанням для багатьох країн світу в умовах фінансової кризи і неможливості громадян виплачувати пенсійні внески.

Проблематику розвитку системи пенсійного забезпечення досліджено багатьма зарубіжними науковцями, економістами, політичними діячами, які заклали фундамент у формування сучасних пенсійних систем в економіках світу. Вітчизняні вчені формують сьогоднішнє бачення становлення нової пенсійної системи в Україні. У сфері соціального забезпечення як в Україні, так і у світі можна констатувати, що система пенсійного забезпечення є важливою складовою системи соціального забезпечення підприємницької діяльності.

Мета статті полягає в обгрунтуванні теоретичних положень і розробленні науково-практичних рекомендацій щодо пенсійного страхування в умовах реформування пенсійної системи.

Роль пенсій зростає з розвитком ринкових відносин у країнах, де відбуваються соціально-економічні та політичні зміни. На основі попередніх досліджень розроблено схему, в якій представлено базові принципи та особливості пенсійного страхування у світі.

Демографічна проблема є нагальною для багатьох країн світу, і вирішуватися вона може підвищенням пенсійного віку, зрівнюванням пенсійного віку чоловіків і жінок, зростанням державних видатків на пенсію тощо, але з обов'язковим урахуванням конкретної ситуації, що склалася в кожній окремо взятій країні.

Велике значення у здійсненні засад пенсійного забезпечення відіграють процеси інвестування коштів. Інвестування пенсійних страхових фондів на ринку капіталу має свої особливості і певні принципи, яким необхідно слідувати для безпеки, прибутковості й оборотності коштів.

Таким чином держава повинна здійснювати регулювання і контроль процесу інвестування коштів пенсійних фондів. Залежно від політики держави повинно встановлюватися обмеження щодо інвестування в різні засоби. Високий рівень мінливості процесів у цій сфері, пов'язаний як із внутрішніми, так і зовнішніми факторами, потребує подальшого дослідження.

***Ключові слова*:** пенсійна система, пенсійне страхування, пенсійне забезпечення, пенсійний вік, соціальне забезпечення.

Формул: 0; рис.: 1; табл.: 0; бібл.: 11.

**Introduction.** Current stage of economic development brings numerous problems related to reduction of people's possibilities, inflation, adverse demographic situation, aggravating social insecurity, decrease in budgetary allotments, a rise in expenses, due to liberalization of prices and curtailment of social programmes. It is extremely important to have a balanced system of pension insurance that can level the adverse consequences of disproportional economic development. Each person has to be informed about the projects his/her pension funds are invested into and purposes the funds are spent on. The mechanism of attracting investment funds has to be transparent [1].

**Analysis of researches and objective setting.** Many foreign scientists, economists, politicians have researched problems of pension system development, setting the foundation of modern pension systems in the world economies. Some of them are G. Bodner [2], D. Lindeman [3], D. Sandler [6; 7], A. Shueller [8]. Ukrainian scientists form the modern vision of a new pension system in Ukraine. Based on researches made by Ukrainian scientists, namely O.A. Dzhusov [6], I. L. Sazonets [6], V. A. Krykliy [7], M. I. Malyovany [8] in the sphere of social insurance both in Ukraine and all over the world, it can be stated that a pension system is an important part of the social security system of economic activity.

**Results of the research.** The objective of the article is substantiation of theoretical principles and development of scientific and practical recommendations on pension insurance in terms of reforming a pension system.

It is necessary to allocate extra funds to the SEC to enable identification of frauds similar to the Madoff fraudulent scheme. The SEC will be obliged to search for new forms of financial risks monitoring. Besides, the SEC plans to raise control over credit rating agencies, such as Moody's, Standard & Poor's and Fitch Ratings. The ratings define demand and prices for securities in the stock market. The rating is often set subjectively. It is necessary to control the companies that manage assets of pension funds and use corruption schemes to enter the sector of pension insurance control and regulation [1].

Some countries attempt to improve the situation for retirees. According to Bloomberg, the German government plans the biggest rise in governmental pensions of recent 15 years. Thus, 20 million of retired people will have their buying capacity increased. This step has become possible, due to functioning of developed pay-as-you-go system of social security in Germany. The obligatory pension payments in Germany are financed from the state budget and the salary. Thus, usage of the pay-as-you-go system of pension insurance is an urgent issue for many countries on the back of the financial crisis and failure of citizens to make pension contributions.

The role of pensions increases along with development of market relations in the countries where social, economic and political changes take place. Based on previous researches, the scheme presenting basic principles and features of pension insurance in the world has been developed (*Fig.*).

Pension insurance in Asian countries is in critical state now. This sector needs to be reformed as soon as possible. After analyzing the state of pension insurance systems in 18 Asian countries, the OECD concluded that Asian countries needed to reform their pension systems to provide stable and sufficient pensions to current employees and to prepare for the rapid ageing of population forecast to occur over the next two decades. The analysis showed that mere 7.5% of employees in Southern Asia were eligible for pensions, as compared to 18% in Eastern Asia and 70% in the OECD countries. Few countries of the Asia/Pacific region provide social pensions that equal the minimum living standard to persons not participating in official pension schemes. Social pension insurance in India covers as much as 10—15% of all retirees [9]. Thus, Asian countries need to modify their regulations on social security to cover bigger share of population.

It is a problem now to determine the fund that meets requirements of an investor into pension systems. Due to the financial crisis, each pension fund competes hard for investors now. As a result, investors have an opportunity to choose pension institutions and reduce their expenses, including remuneration for pension insurance services. If expenses are reasonable and services are not overpriced, participants of pension systems join the funds. Thus, payers of pension contributions can choose among various pension funds. Due to competition in the market of pension insurance services, pension funds have to reduce their service charges. Besides, the asset management companies compete to manage money of the pension funds. Therefore, law violations and corruption scandals take place; they can be solved only by legal methods based on developed legal framework.


ISSN 2306-4994 (print); ISSN 2310-8770 (online)

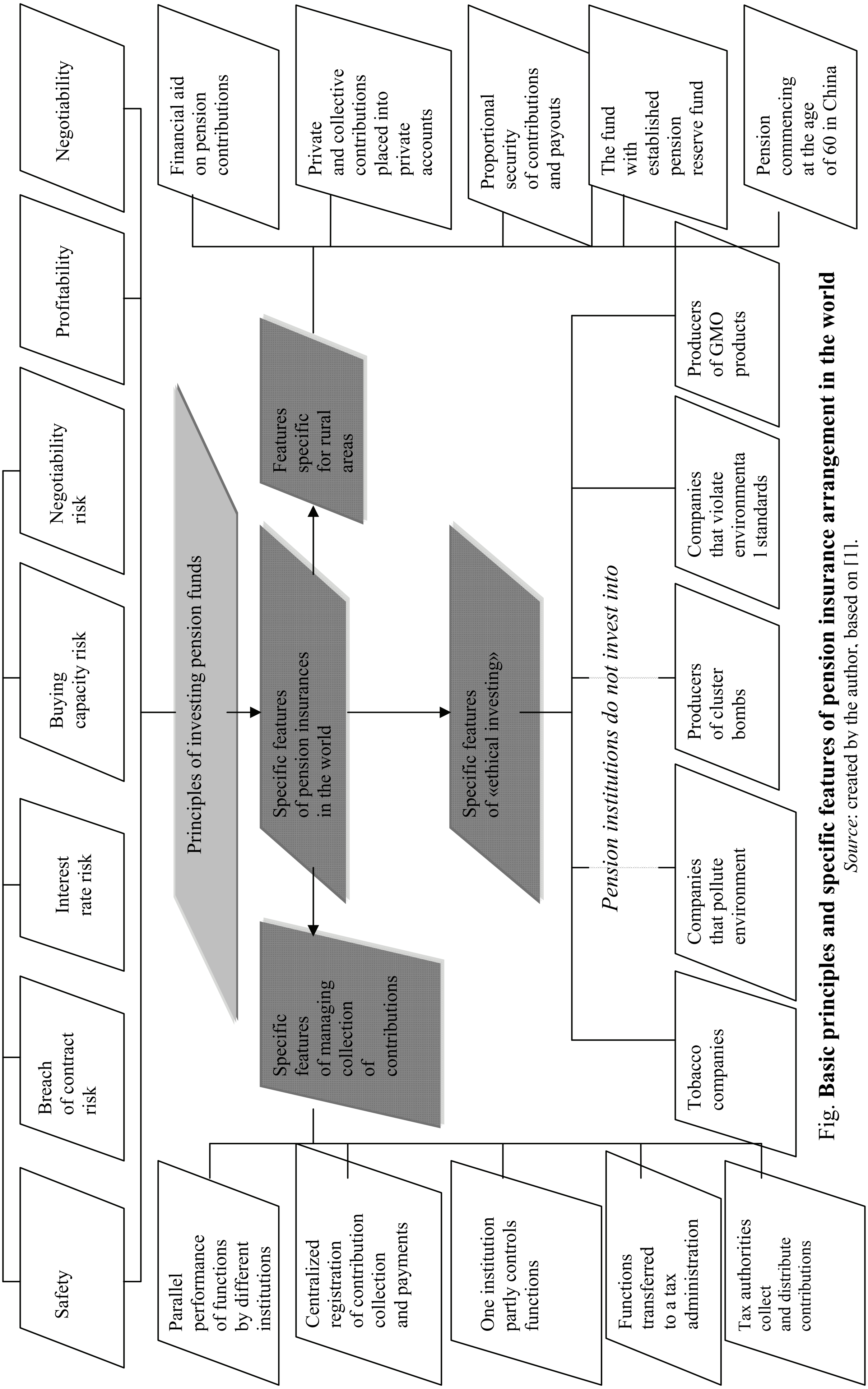


Fig. **Basic principles and specific features of pension insurance arrangement in the world**

*Source:* created by the author, based on [1].

Based on the above, it can be stated that demography is an urgent problem for many countries of the world. It can be solved via higher retirement age, levelling of retirement age of men and women, higher state expenditures on pensions, etc., with due consideration of specific situation in every single country.

To overcome the financial crisis in the sphere of pension insurance, it is necessary to develop new principles for recovery of world markets for pensions. These principles can include transparency of information on pension schemes, higher role of shareholders in the market of pension fund capital, definition of possible risks and implementation of measures aimed at fighting these risks, possibility of establishing an independent suprastate institutions entitled to receive information on pension insurance companies, to take preventive steps to avoid crises and ensure free choice of investment objects by institutional investors.

The processes of investment of funds play an important role in implementation of pension provision principles. Investing into pension insurance funds in the capital market has some specific features and principles that should be adhered for the sake of safety, profitability and negotiability of assets. The main principles are as follows:

1. Safety. The principle of safety means that it is necessary to avoid risks when investing funds, to ensure repayment of the invested capital. Safety of investments is the key requirement, because there is no use discussing profitability and negotiability of investments if it is impossible to receive the initially invested amount. To ensure safety of investments, it necessary to avoid the following investment risks: the contract breach risk, the interest rate risk, the buying capacity risk, the negotiability risk.
2. Profitability. Profit earning is the key principle of investing.
3. Negotiability. Negotiability means quick return of capital without losses. Buying a financial instrument that has some value as a security, the investor can return its capital with interest.

Let us analyze the principles of investing capital into pension insurance assets. Both in social and private pension insurance, it is necessary to adhere to all the above principles when investing insurance funds. However, safety is the most significant factor in investments of pension insurance funds. If investments of pension insurance funds made losses, retirees will lose their opportunity to receive their pension income. Social pension planning does not usually draws much attention to the profitability principles, because profitability always involves certain risks, which cannot be afforded by social pension insurance.

Compared to safety and profitability, negotiability of invested pension insurance capital is not a critical factor, because the maturity terms of pension insurance are usually rather long, and investment income can meet requirements of pension aid payments. Besides, the amount of pension insurance payment can be forecast, so it is not necessary to purchase the most profitable shares or securities in the stock market.

To make investments in the chosen form, pension insurance funds have to choose the respective investment instrument, based on their objectives. The investment course of pension insurance funds has to respond to the character of arranged passive investing so that pension payments match pension insurance premiums and investment income. Apart from the indebted company, the investment course of pension insurance has to take into account other factors, for instance, the factors of investment risk, the scope of pension insurance financing, degree of responsibility of an investment committee or an attorney for risks, restrictions on investing pension funds imposed by the government, etc.

There is a necessity in governmental control over funds of private pension insurance institutions. Private pension funds belong to intermediary financial institutions. If they get misleading information on the quality of provided financial services when buying financial services, they can harm the clients' interests substantially. This misleading information can lead to illegal, irresponsible or even fraudulent actions of these financial structures against their clients. This problem is also acute for users of retail services offered by financial structures (pension fund included), because a client transfers a very substantial part of his/her capital under responsibility of


ISSN 2306-4994 (print); ISSN 2310-8770 (online)

intermediary financial structures. Having been signed once, the agreement is accepted from time to time. A consumer of these financial services cannot find the best economic way to evaluate danger and risks to which the pension fund is exposed. Being well informed and having long-term commercial relations, the wholesale customers of financial services do not face the problem of misleading information. A client of these financial structures can get full guarantees only in case when a financial intermediary institution cares about its reputation.

The phenomenon of market monopoly disappears from the market of financial structures. A pension fund has some problems in this regard, because pension insurance is obligatory. In this situation, it is very important to care about interests of participants of pension insurance. With no special control over the management, an employer becomes a monopolist that can set pensions to employees in his/her own interests. For example, the employer can set much higher pensions and subsidies to managers of the company than to other employees of this company, etc. On the other hand, the owner can be guided only by his/her own considerations and wishes when arranging the reserve pension fund. Besides, owners often use the pension insurance fund established for employees to suit their own purposes, not thinking about risks pension insurance is exposed to. As far as young employees, women and people that often change jobs are concerned, an owner thinks about their pension needs still less.

On the other hand, ordinary pension insurance can be eligible to governmental tax benefits. To prevent tax benefit abuse, to guarantee payment of equal pension income to employees, to ensure safety and to improve conditions in the pension market, the government has to control management of private pension insurance to some extent. Besides, it is also necessary for the government to control management of pension insurance planning with regard to economic efficiency. For example, control over the management can curtail the adverse impact of labour migration on pension insurance. As long as private pension insurance can be eligible to governmental tax benefits, it becomes harder to differentiate governmental social pension insurance and private pension insurance in some countries where some share of income is replaced with a social pension. Thus, the need in governmental control over management of private pension insurance becomes evident.

The so-called quantitative control over activity of institutions arranging capital of a pension fund is a common practice in some countries. This control aims at protecting interests of pension recipients or a beneficiary. On the other hand, some countries that use quantitative control over institutions arranging capital of pension funds take into account the experience of stable demand for government guaranteed bonds. This is the reason why 50% of pension capital is kept in government bonds in France. Many countries impose restrictions on keeping pension capital in profitable yet insecure assets (property), for example, in shares, real estate or property abroad with quite high average profit coefficient upon long-term investment.

The European Union does not have a unified system for private pension capital investing. The regulation on obligatory investment of 15—60% of the pension capital into government bonds is effective in some countries. Many EU economists suppose that legal restrictions of the pension fund investing can lead to reasonable distribution of capital resources.

The USA, England, Germany and other countries restrict independent investment activity of pension funds mainly aiming at protecting the pension funds from influence of a property sponsor upon pension insurance. Certainly, severe limitation of the number of institutions eligible to investing, refinement and limitation of choice with regard to risks and profits can result in investments into relatively safe but low-profit assets. Besides, it can hinder development of a pension capital in the capital market and cause respective loss of profit. It is especially true for governmental compulsion, when a government forces private pension funds to buy government bonds. As long as government bonds are repaid with tax proceeds only, the function of capital accumulation incurs losses, and the form of capital turns into insurance of the «receive first, pay later» type of insurance. However, not all the countries have quantitative restrictions applied to arrangement of funds. For example, in the USA, there is a regulation obliging a pension fund «to do everything for a person to get profits». Due to this, property of a pension fund cannot be split in some ways. However, apart from 10% that can be invested by a pension fund individually, there are no other specific restrictions on arrangement of a pension fund property in America. In Poland, individual investment activity of private pension funds is limited to 5%. Besides, there are many other investment restrictions. Some countries used to restrict the property arrangement but switched to the «everything for a person to get profits» principle later. Investments into a private pension fund were limited before 1987 when the «everything for a person» principle was introduced. Now, this is the only principle used for investments of pension funds.

Thus, the government has to regulate and control the process of pension funds investing. Depending on the governmental policy, restrictions have to be imposed on investing into various assets.

**Conclusion.** Based on experience of the leading industrial countries, five main methods of managing collection of insurance contributions can be singled out:

1. Parallel performance of functions by different social security institutions. Administration of the system is completely decentralized and separate from a tax system. This type of administration is used in Denmark, Luxemburg, Austria and Ukraine.

2. Functions of registration of payers and insured persons, collection of contributions, accounting and reporting are centralized and performed by one institution. Insurance payouts, maintenance of respective databases and accounting of insured persons are performed by every social security fund separately. This administration scheme is used in Belgium, Spain, Italy, Macedonia and Bulgaria. This type of administration is also used in Germany, where all social contributions are collected by a medical insurance institution, and Poland, where these functions are performed by an administrator of a «pay-as-you-go» system.

3. The institution that collects insurance contributions is also responsible for payments, accounting of insured persons and keeping the necessary records. This type of administration is used in the Czech Republic, Greece, Lithuania, Malta, Portugal, Switzerland and Slovakia.

4. The functions of collection, control, enforcement and administration of money flows are performed by a tax administration. With some diversities in bodies responsible for registration and accounting of the insured persons, this model of administration is used in Estonia, Hungary, the Netherlands, Slovenia, Russia, Serbia, Croatia, Montenegro, Albania, Romania, and Bosnia and Herzegovina.

5. One institution performs all the functions not related to collection of contributions, while collection and distribution of contributions are made by tax authorities. The highest integration of this model can be found in Great Britain, Finland, Sweden, Norway and Iceland. Ireland and Latvia have similar models, but some administrative functions of medical insurance institutions have stayed decentralized.

Efficiency of the reformed administration system also relates to the amount of collected social security contributions. Finding this dependence by correlating the wage fund contributions have been paid from and the actual wage fund in countries under research, we can state that higher level of a system integration secures an increase in its profits. In particular, the first, second and third types of administration models have the ratios of 84.5%, 86.8% and 88.4%, respectively. The most integrated fifth type has the average index of contributions' collection of 100%. However, the fourth type with consolidated function of collection by tax administration and decentralized rest of functions has a low result of 73.5%.

The practice of setting several rates for social security contributions also has an undoubted impact on efficiency of the whole system, because it determines its complexity for a payer and makes it impossible to compare amounts of contributions and their accounting bases in various funds in order to control completeness of payments. Nine out of thirty-four countries under research have implemented a unified social contribution, enabling us to analyze the influence of simplified accounting procedures and social contributions on results of a system functioning. The results of the analyses demonstrate that when a unified social contribution is set, the average administrative expenses are by 14.5% lower and collection of contributions is by 7.8% higher as compared to a differentiated system. High level of inconsistency of processes in this sphere is due to internal and external factors, and it requires further research.


ISSN 2306-4994 (print); ISSN 2310-8770 (online)

**Література**


1. Тализін А. В. Аналіз пенсійної реформи в Україні. *Україна Bussines*. 2004. № 6. С. 18—23.
2. Боднер Г. Д. Мировая практика налогообложения в системе негосударственного пенсионного обеспечения. *Культура народов Причерноморья*. 2005. № 64. С. 32—34.
3. Ліндеман Д., Рутковський М., Случинський О. Еволюція пенсійних систем у Східній Європі та Середній Азії: можливості, обмеження, дилеми та нові підходи. Київ : ПАДКО Інтернешнл, 2001.
4. Сандлер Д. М. Огляд сучасних систем пенсійного забезпечення. *Економіка та держава*. 2007. № 12 : Спецвип. С. 92—95.
5. Шюллер А., Крюссельберг Х.-Г. Анализ экономических систем: основные понятия теории хозяйственного порядка и политической экономики. Москва : Экономика, 2006. 338 с.
6. Сазонець І. Л., Джусов О. А. Інвестиційна система пенсійного забезпечення: Україна та іноземний досвід. *Держава та регіони. Економіка та підприємництво*. 2003. № 1. С. 98—104.
7. Криклій В. А. Зарубіжний досвід функціонування недержавних пенсійних фондів та можливості його застосування в Україні. *Економічний часопис-XXI*. 2013. № 1—2 (2). URL : http://nbuv.gov.ua/UJRN/ecchado_2013_1-2(2)__13.
8. Мальований М. І. Стан та тенденції бюджетного фінансування соціального забезпечення в Україні. *Економічний часопис-XXI*. 2013. № 5—6 (2). С. 27—31.
9. Pensions at a Glance. Special edition: Asia/Pacific / OECD. 2009. January. URL : http://www.oecd.org/dataoecd/33/53/41966940.pdf.
10. The social dimension of the Europe 2020 strategy. A report of the Social Protection Committee. Luxembourg : Publications Office of the European Union, 2011. June 20. 60 p. URL : http://ec.europa.eu/social.
11. Guide to Best's financial strength ratings. 2019. URL : http://www.ambest.com/ratings/guide.pdf.


*Статтю рекомендовано до друку 02.12.2020.* 

**References**


1. Talyzin, A. V. (2004). Analiz pensiinoi reformy v Ukraini [Analysis of a pension reform in Ukraine]. *Ukraina Bussines — Ukraine Business, 6*, 18—23 [in Ukrainian].
2. Bodner, G. D. (2005). Mirovaya praktika nalogooblozheniya v sisteme negosudarstvennogo pensionnogo obespecheniya [World practice of taxation in the system of non-state pension provision]. *Kul'tura narodov Prichernomor'ya — Culture of the peoples of the Black Sea region, 64,* 32—34 [in Russian].
3. Lindeman, D., Rutkovskyi, M., & Sluchynskyi, O. (2001). *Evoliutsiia pensiinykh system u Skhidnii Yevropi ta Serednii Azii: mozhlyvosti, obmezhennia, dylemy ta novi pidkhody [The evolution of pension systems in Eastern Europe and Central Asia: opportunities, limitations, dilemmas and new approaches]*. Kyiv: PADKO Interneshnl [in Ukrainian].
4. Sandler, D. M. (2007). Ohliad suchasnykh system pensiinoho zabezpechennia [Review of modern pension systems]. *Ekonomika ta derzhava — Economy and State, 12*, 92—95 [in Ukrainian].
5. Shueller, A., & Kruesselberg, H.-G. (2006). *Analiz ekonomicheskih sistem: osnovnye ponyatiya teorii hozyajstvennogo poryadka i politicheskoj ekonomiki* [*Analysis of economic systems: basic terms of theory of economic order and political economy]*. Mocsow: Economics [in Russian].
6. Sazonets, I. L., & Dzhusov, O. A. (2003). Investytsiina systema pensiinoho zabezpechennia: Ukraina ta inozemnyi dosvid [Investment pension system: Ukraine and foreign experience]. *Derzhava ta rehiony. Ekonomika ta pidpryiemnytstvo — State and Regions. Economics and Entrepreneurship, 1*, 98—104 [in Ukrainian].
7. Kryklii, V. A. (2013). Zarubizhnyi dosvid funktsionuvannia nederzhavnykh pensiinykh fondiv ta mozhlyvosti yoho zastosuvannia v Ukraini [Foreign experience of non-state pension funds and the possibility of its application in Ukraine]. *Ekonomichnyi chasopys-XXI — Economic Annals-XXI, 1—2* (2). Retrieved from http://nbuv.gov.ua/UJRN/ecchado_2013_1-2(2)__13 [in Ukrainian].
8. Malovanyi, M. I. (2013). Stan ta tendentsii biudzhetnoho finansuvannia sotsialnoho zabezpechennia v Ukraini [Status and trends of budget financing of social security in Ukraine]. *Ekonomichnyi chasopys-XXI — Economic Annals-XXI, 5—6* (2), 27—31 [in Ukrainian].
9. OECD. (2009, January). Pensions at a Glance. Special edition: Asia/Pacific. Retrieved from http://www.oecd.org/dataoecd/33/53/41966940.pdf.
10. The social dimension of the Europe 2020 strategy. A report of the Social Protection Committee (2011, June 20). Luxembourg: Publications Office of the European Union. Retrieved from http://ec.europa.eu/social.
11. Guide to Best's financial strength ratings. (2019). Retrieved from http://www.ambest.com/ratings/guide.pdf.


*The article is recommended for printing 02.12.2020.* 