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Viability of pension benefit guarantee schemes in the post crisis period

Lapishko Zoryana,
Ph.D. in Economy, Associate Professor,
Associate Professor of the Department
of Finances and Financial-Economic Safety
Lviv Institute of BU;
e-mail: ziana202001@ukr.net

Abstract. Many countries have established mandatory guarantee funds for such financial sector as banking, capital markets and insurance. But there are only few developed countries that provided some guarantees to those retired with pension benefits plans. The main feature of defined benefits schemes is that their participants know the size of the future pensions beforehand. However, provision of this level of pension demands constant correction of the size of contributions paid to the schemes that most often depend on a situation at the financial market and assets' market value. But, nowadays plan sponsors (employers who pay contributions to the pension fund) become bankrupt more often than ten-fifteen years ago. Thus defined benefits pension schemes of their employees are underfunded.

Developed countries apply different security mechanisms to protect defined pension benefits: solvency requirements, pension guarantee schemes (funds), and sponsor support. However, the most efficient are Pension benefit guarantee schemes in which the funding risks are born by the specially created pension guarantee funds. One of the oldest Pension benefit guarantee funds is the federal government's Pension Benefit Guaranty Corporation (PBGC) of the USA established in 1974 under the Enactment of the Employee Retirement Income Security Act (ERISA). Ontario is the only jurisdiction in Canada with benefit guarantee insurance, the Pension Benefit Guarantee Fund, introduced in 1980, around the time when there had been a chain of plant closures at heavy industry. In some European countries (UK, Germany, Sweden and Switzerland) and Japan there are also national pension guarantee systems established to protect a pension fund and its beneficiaries against default risk of its sponsor.

Many retirement benefits protection schemes were put in place as a result of political reactions to adverse events leading to loss of benefits for workers. The conducted in this paper analysis of mentioned schemes showed that there is no single approach in the creation and operation of guarantee schemes in pension benefit sector. Countries have there own economic and even more political reasons to establish such institutions. Also, there is growing concern about the funding status of defined benefit pension plans because of the increase in bankruptcy rates among plans' sponsors.

Therefore there are some arguments for and against Pension benefit guarantee schemes and possible governmental involvement in guarantee schemes. Arguments put forward in their favour is that they can provide some defence against the poor and incomplete design of the pension contract and the lack of diversification associated with defined benefit schemes. Arguments against – are risks that can arise as a consequence of their introduction. These risks include adverse selection, moral hazard, systematic risk and political risk.

Keywords: guarantee fund, guarantee scheme, guarantees, financial services market, financial stability.
Formulas: 0; fig.; 0, tabl.: 1; bibl.: 10.

Життєздатність пенсійних гарантійних схем щодо пенсій із визначеними виплатами в посткризовий період

Лапішко Зоряна Ярославівна,
доцент, кандидат економічних наук,
доцент кафедри фінансів та фінансово-економічної безпеки
Львівського інституту
ДВНЗ «Університет банківської справи»;
e-mail: ziana202001@ukr.net

Анотація. Вивчено досвід окремих розвинених країн, де створені пенсійні гарантійні механізми щодо пенсій із визначеними виплатами. Здійснено характеристику основних параметрів таких фондів і проаналізовано наявні переваги і недоліки функціонування пенсійних гарантійних механізмів у сучасних умовах посткризового періоду.

Ключові слова: пенсійний гарантійний фонд, гарантійні схеми, пенсійні фонди з визначеними виплатами, гарантії, виплати.
Формул: 0; рис.: 0; табл.: 1; бібл.: 10.

Жизнеспособность пенсионных гарантийных схем по пенсиям с установленными выплатами в посткризисный период

Лапишко Зоряна Ярославовна,
доцент, кандидат экономических наук,
доцент кафедры финансов и финансово-экономической безопасности
Львовского института УБД;
e-mail: ziana202001@ukr.net

Аннотация. Изучен опыт отдельных развитых стран, где созданы пенсионные гарантийные механизмы по пенсиям с установленными выплатами. Осуществлено характеристику основных параметров данных фондов и проанализированы имеющиеся преимущества и недостатки функционирования пенсионных гарантийных механизмов в современных условиях посткризисного периода.

Ключевые слова: пенсионный гарантийный фонд, гарантийные схемы, пенсионные фонды с установленными выплатами, гарантии, выплаты.
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Introduction. In today's troubled economic climate, security has become a watchword for many investors. Many countries have established protection funds for every part of the financial sector, including banking, capital markets and insurance but there are few that provided some guarantees to the retirement benefits sector.

The international practice distinguishes two kinds of pension schemes: schemes with defined benefits and schemes with defined contributions (DC). Ukraine in its pension reform went by introduction of scheme with defined contributions, according to which future pension payments depend on the general size of the accumulated contributions. The main feature of defined benefits schemes is that their participants know the size of the future pensions beforehand. However, provision of this level of pension demands constant correction of the size of contributions paid to the schemes that most often depend on a situation at the financial market and assets' market value.

Pension benefit security is one of the issues that is becoming more and more acute due to the fact that nowadays plan sponsors (employers who pay contributions to the pension fund) becoming bankrupt and leaving underfunded defined benefits pension schemes more often than ten-fifteen years ago.

The review of theoretical literature on benefit guarantee insurance schemes shows that the problem of the establishing and functioning of the guarantee mechanism is well studied theoretically but there is still rather small body of empirical research on the subject.

The main objective of this paper is to examine the experience of benefit protection funds in foreign countries and to analyze the arguments for and against benefit protection funds for retirement benefits.

The results of the research. Developed countries apply different security mechanisms to protect defined pension benefits: solvency requirements, pension guarantee schemes (funds), and sponsor support. The main idea of the solvency requirements is to set up strong funding rules as the request to hold additional assets over the marked-to-market value of pension benefits.

The additional assets over the liabilities can be used to absorb losses from adverse events on the financial markets or in the development of the liabilities. Typical adverse events include a sharp decline in interest rates, a steep fall in stock prices and an increase in longevity estimations. The calculation of the amount of regulatory own funds can, for instance, be based on a Value-at-Risk (VaR) risk measure for a specific time horizon and confidence level [1].

The sponsor (usually employer) support means that the funding risks may also be shared between a pension fund and the shareholders of the corporation. It is especially important to have such guarantees from the employer if the shareholders have access to the surplus assets in the pension fund.

However in this paper we consider the main security mechanisms to allocate the risks of future pensioners – Pension benefit guarantee schemes in which the funding risks are born by the specially created pension guarantee fund.

Historically, different countries developed divergent pension systems and consequently diverse regulatory regimes. One of the oldest Pension benefit guarantee funds is the federal government's Pension Benefit Guaranty Corporation (PBGC) of the USA established in 1974 under the Enactment of the Employee Retirement Income Security Act (ERISA).

PBGC provides a minimum level of pension benefits to participants in a qualified defined-benefit pension plan in the event that the plan cannot pay benefits. PBGC shares regulatory and enforcement responsibilities over private-sector pension plans with the Internal Revenue Service in the Treasury Department (concerning participation, vesting, and funding standards) and the Department of Labor (concerning fiduciary standards and reporting and disclosure requirements). If a plan's sponsor does not meet its obligations to pay premiums to PBGC or fails to meet the minimum funding standards contained in ERISA, PBGC has the power to place a lien on the sponsor's assets [2].

Nevertheless, because of the increase in bankruptcy rates among plans' sponsors and many other economic reasons in PBGC experienced its first cash deficit. In 2014 [3] the PBGC has total assets of $90 billion but total liabilities of $152 billion. So its assets are a mere 59% of its liabilities. Put another way, its capital-to-asset ratio is negative 69%. The main problem of PBGC, according to the experts [3] is high level of risk in PBGD financial commitments. The Corporation exists to encourage pension plans and

current tendency is to undercharge for the risk, even if the risk can be identified. Such risk includes future increases in the longevity of pensioners, or of low interest rates, or both. This undercharging is inevitable since the insurance premiums are set by Congress and reflect political rather than economic imperatives.

There is growing concern about the funding status of defined benefit pension plans both in Canada. Ontario is the only jurisdiction with benefit guarantee insurance, the Pension Benefit Guarantee Fund, introduced in 1980, around the time when there had been a chain of plant closures at heavy industry. The pension plan regulator in Ontario, the Financial Services Commission of Ontario (FSCO 2007), reports that for the filing period ending June 30, 2005, median solvency ratios were 87%, also that the same report shows that more than 50% of DB pension plans in Ontario had some degree of underfunding, in some cases quite severe. Of the 855 filings for that year more than 38% of plans had solvency ratios of less than 80% [4]. As at March 2009 the PBGF had assets of CAN$ 146 million and a deficit of CAN$ 47 million. Projections are that the fund will be depleted in a few years unless drastic reforms are undertaken either in the funding or benefit structures [5]. As the result on December 21, 2011 21, 2011, the Ontario government announced changes to the Pension Benefits Guarantee Fund («PBGF»). Under the Securing Pension Benefits Now and for the Future Act, 2010, and are enacted pursuant to Regulation 466/11 under the Pension Benefits Act were raise the base fee per plan member from $1 to $5; were increased the maximum fee per plan member in underfunded plans from $100 to $300; was extend the initial waiting period for PBGF coverage of new plans and benefit improvements from three to five years.

In some European countries (UK, Germany, Sweden and Switzerland) and Japan there are also national pension guarantee systems established to protect a pension fund and its beneficiaries against default risk of its sponsor.

In the United Kingdom, the Pension Protection Fund operating since 2005 pays compensation to members of defined-benefit occupational plans and the defined-benefit elements of hybrid pension plans [6].

Many retirement benefits protection schemes were put in place as a result of political reactions to adverse events leading to loss of benefits for workers. In the USA and Germany, the putting place of the schemes is often related to collapses of major auto manufactures in these countries namely the Studebaker Company in the USA and the Borgward Company in Germany. In the UK, the creation of the Pension Protection fund is often traced as far back as to the Maxwell scandal. In the Maxwell case the pension scheme of the company had diverted a significant portion of its assets into investments in the sponsor and these funds were lost when the parent company went under. As a result, thousands of workers not only lost their jobs but most of their pension benefits. High profile company closures since then coupled with the «mis-selling» and other scandals are said to have put pressure on the UK Government to put in place a protection fund [5].

In the *table* below we studied practical experiences of Pension guarantee schemes functioning.

Everywhere except Switzerland intervention is triggered by the default of the sponsor. In addition, intervention is escalated if the pension plan is underfunded or has insuficient resources to pay the pension guarantee fund's contribution. Only in Switzerland is intervention activated if the pension fund itself becomes insolvent. Three possible intervention procedures are distinguished: the assets and liabilities under the pension plan are taken over, annuities are bought or a payment is made to cover the pension fund's deficit. With respect to contribution policy, it appears that the investment policy does not play a role in any country, while the actual sponsor's default risk is only considered in the U.K. The degree of underfunding is key in all countries except Germany [1]. Therefore we can see that there is no single approach in the creation and operation of guarantee schemes in pension benefit sector. Countries have there own economic and even more political reasons to establish such institutions.

Table

Characteristic of the largest Pension benefit guarantee programs

Country (programme)	Who is covered	Coverage amount	Premiums / Cost Structure	Trigger for Intervention	Intervention procedure
USA (Pension Benefit Guarantee Corporation)	Participants in private DB plans	Vested benefits up to a $60,136 maximum	Charge based on number of participants and underfunded amount	Sponsor default Plan underfunded	Assets and liabilities taken over
Canada – Ontario (Pension Benefit Guarantee Fund)	Participants in private DB plans	Vested benefits up to CAD 12,000 (US $10,000) annual maximum	Charge based on number of participants and underfunded amount	Sponsor default Plan underfunded	Payment made to underfunded pension fund
UK (Pension Protection Fund)	Participants in eligible DB plans (this will include some public sector schemes that do not have a full crown guarantee)	Pensioners, survivor and ill health pension at 100% (subject to a review of the rules of the scheme), with increases in accordance with PPF rules. Under pensionable age, 90% capped (estimated GBP 25,000 US ($46,000) – again increases subject to PPF rules	Administration and fraud compensation flat based levies. To fund compensation payments: an initial levy (in year 1) and then a scheme based and a risk based levy. Ultimately the risk based levy must collect at least 80% of the total	Inability to pay PPF levy	Assets and liabilities taken over
Sweden (Forsakringsbolaget Pensionsgaranti)	Contractual coverage of white collar employees	Full benefits	Charge is % of liabilities; collateral required if insolvency risk deemed high	Sponsor default	Annuities are bought

Completion table

Country (programme)	Who is covered	Coverage amount	Premiums / Cost Structure	Trigger for Intervention	Intervention procedure
Germany (Pensions-Sicherungs-Verein)	Participants in book reserve, support fund or pensions funds financed plans	Statutory vested benefits up to €86,700 (US $112,000) annual maximum	Charge is a % of liabilities, and reflects experience in prior year	Sponsor default Plan are underfunded	Annuities are bought
Switzerland (sicherheitsfonds BVG)	Participants in DB and Swiss-styleDC schemes	100% of Government mandated minimum benefits; Additional benefits are subject to salary cap	Charged based on liabilities	Pension fund default	Annuities are bought
Japan (Pension Guarantee Programme)	Members of EPF	0.3x substitutional component and half of any benefits in excess of this amount	Premiums related to size of company, size of benefit and risk adjusted for level of underfunding	Sponsor default Inability to pay PBG levy	Assets and liabilities taken over

Sources: [1; 5; 6].

The European Commission (2010) recently issued a «green paper» on adequate, sustainable and safe pension systems. A related question of this paper is whether, reflecting developments in banking, insurance and investment, there is a need for promoting pension benefit guarantee systems in the Member States, possibly coordinated or facilitated at EU level. Such systems can not only address failures in sponsor-backed DB schemes or book reserve schemes, but could also compensate for excessive losses in DC schemes [7; 8]. But, regardless to the fact that insurance guarantee schemes, that are quite similar to the pension benefit guarantee systems, received resounding support from the European Commission, Commission is not recommending such guarantee funds be introduced for pension benefits.

One of the reasons can be that most European countries operate Defined Contributions pension funds and the need for the Pension benefit guarantee schemes is less clear cut. The other one obviously is the question of the viability of the existing benefit guarantee schemes that nowadays face underfunding problems and are usually supported by the governments of the countries.

Therefore in this paper we tried to examine the arguments for and against Pension benefit guarantee schemes and possible governmental involvement in these schemes.

Pension benefit guarantee schemes are insurance type arrangements – with premiums paid by pension funds – which take on outstanding obligations which cannot be met by the insolvent plan sponsors.

Argument in favour of benefit guarantee schemes are:

– *Pension benefit guarantee schemes provide an extra layer of security for beneficiaries* against a sponsor's bankruptcy and therefore compensate for any asymmetric information situation and correct for any market failure [9]. Because of the problem of asymmetric information between workers and employers, workers not always have all the information necessary to make decisions about how much of current wages they are prepared to give up in order to receive a pension income in retirement. In a perfectly competitive market with full information workers in poorly funded plans with a near- bankrupt employer will grant few or no wage concessions as they do not believe that their pension will ever be paid. However markets are far from being perfectly competitive, thus pension guarantee schemes can bridge this gap of trust between workers and employers and promote further defined-benefit occupational plans development.

– *On a macro level with the help of Pension benefit guarantee schemes the sponsor's default risk can be diversified away* [1]. By pooling dissimilar firms pension fund lowers the aggregate costs of protecting against corporate default risks according to the law of economy of scale. At the same time, workers knowing that they have additional protection from Pension guarantee fund will agree to accept higher default risk on their pension benefits in order to increase their expected cash wages.

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– *Pension benefit guarantee schemes help to remain confidence in the financial system* during the financial crises. Pension funds are important institutional investors and their investment behaviour can affect financial stability. If pension fund faces difficulties because of the sponsor default or underfunded plans it, as the result, worsens the financial situation of the fund. Consequently, if such cases are becoming massive, it can affect the stability of the financial market in general.

Argument against pension benefit guarantee schemes:

– *Moral hazard*. Plan sponsor knows that upon bankruptcy their pension fund liabilities will be covered, even if sufficient assets are not available to back these promise, they may be incentivized to indulge in irresponsible behaviour, leaving others to cover the costs of the pension promises they have made. Such behaviour may include raising benefits to unsupportable levels, cutting their own contribution rates, or pursuing a risky investment strategy. Moral hazard can be avoided to some extent, for example by not covering increases in benefits awarded in a period leading up to bankruptcy (as is the case with in PSVaG in Germany). However, if premiums paid to the guarantee fund do not fully reflect the risk presented by the insured it is impossible to eliminate moral hazard completely [9].

Moral hazard may come in many other forms also. Other examples of irresponsible behaviour, and difficult to protect against once an insurance scheme is put in place, are as follows. The guarantee provides an incentive for financially weak companies to increase pension benefits rather than wage increases, since the latter have to be paid immediately, while the former might eventually be paid by the government, assuming insolvency occurs. This game might be pursued in the run up to bankruptcy where the firm has knowledge of the upcoming closure, unlike the administrator of the insurance scheme who has to cover the pension benefits. Further, firms can play other games such as how they deal with subsidiaries and their associated pension obligations. Subsidiaries can be thought of as being similar to off balance sheet items so firms can either remove them from being mandatorily required on a scheme or add them to a scheme if they are underfunded [10].

– *Systemic risk in guaranteeing pension benefits.* Pension benefits can be insured for non-systematic events (such as poor corporate management, fraud etc.). They cannot, however, provide cover for systematic ones, such as macroeconomic weakness, which increases the bankruptcy risk of all companies, or sharp equity market and interest rate declines (which are systematic problems given the similar liability structure of occupational pension schemes and their tendency to follow the same asset allocation patterns). To make matters worse, bankruptcy risk is highly correlated with underfunding, as plan sponsors tend to stop making contributions to their pension funds when they get into financial difficulty. In addition, guarantee schemes which actually take over the assets of failed pension plans (such as the PBGC in the US and the future PPF in the UK) may face an extra layer of correlation if they invest the assets which they have taken over in the same manner as the pension funds which they are guaranteeing. If their investment returns turn negative at the same time as their clients, their own financial position worsens [9].

Systematic risks are potentially so large that it would not be able to operate based on the premiums that would be changed by private sector insurance companies. In many ways this argument is about how well functioning the market economy is. If insurance firms operate in markets that are able to develop financial products allowing for sufficient hedging of the risks associated with the pension schemes, there is very little need for government intervention. However, if the market is not functioning sufficiently with related financial products, government has to step in. This does not answer the question of whether government can and would provide insurance at reasonable rates, and if it can, are taxpayers willing to fund this. But without the government intervention defined benefit schemes will not be able to function in the face of systematic risk [10].

– *Fiscal burden of guarantee schemes that falls on tax payers.* If systematic problems arise on the market governments are expected to act as final protectors of retirement income. In this case pension guarantee schemes are backed by the government, which act as a lender of last resorts to the pension guarantee funds using money of tax payers. At the same time tax payers (who are seeing their state pensions being reduced) realise that their money are used to compensate pension insurance costs to those who tend to be relatively well paid. The situation is quite unfair and can lead to some political crises in the country.

Conclusion. Pension guarantees were often introduced in reaction to political pressure following sponsors failures and their necessity is seen as differing according to the specific situation in countries. Yet, despite the fact that Pension benefit guarantee schemes provide a high level of protection to the workers they do not come without their difficulties (moral hazard, cross subsidy and systematic risk problems). Moreover, because most European countries operate DC pension and such guarantee schemes are required only in a few countries Pension benefits guarantee funds do not receive support of European Commission as insurance guarantee systems get. But still if guarantee schemes are to be introduced they must be carefully designed in order to avoid their inherent weaknesses and for sure they should be managed in truly economically efficient manner, with properly market priced premiums and without government subsidies.

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