UDK: 330.30:111.1:330.30:336.35:368.O30:351.712.2.045:347.447.163:331.24
DOI: 10.5937/TokOsig2104057J

***Professor Slobodan Jovanović, PhD*[1]**

NEGATIVE INTEREST RATE AND THE POSSIBILITY OF TERMINATING LIFE INSURANCE CONTRACT DUE TO CHANGED CIRCUMSTANCES

REVIEW ARTICLE

Abstract

Although low interest rates, after the global financial crisis, were supposed to have positive effects on economic activity, such policy also had certain disadvantages that adversely affected the financial system. In this paper, the author discusses life insurance where the insured's share in the insurer's profit is contracted, the insurer's contractual protection against unfavourable interest rate trends, the possibility of terminating or amending a life insurance contract due to changed circumstances based on legal provisions and legal theory, and partly aspects of the legal nature of life insurance contracts.

The author concludes that life insurance contracts have characteristics that classify them as bilateral contracts, but also because of that they do not meet the requirements to be onerous contracts (it is a legal, not economic-financial characteristic of life insurance contracts). The main obstacle for implementation of the institute of changed circumstances to life insurance contracts is their aleatory legal nature and general principles of contract law that do not take into account economic effects of that insurance line. The institutional framework, indifference of legal theory and case law regarding implementation of the institute of changed circumstances to life insurance contracts due to negative interest rates will continue to burden insurers.

Key words: *interest rate, life insurance, profit share, changed circumstances*

[1] The Faculty of Business Economics and Entrepreneurship, Belgrade; President of the Association for Insurance Law of Serbia, Belgrade.
E-mail: nsjovanovic@sbb.rs.
Paper received on: 19 July 2021
Paper accepted on: 23 October 2021

I. Introduction

To secure one's own future and family has always been the aspiration of every person aware of the risks and events that can happen in life. Although there were numerous examples of life insurance in the age of slavery, the emergence of modern life insurance began only when the Royal Society in the late 17th century, i.e. in 1693, based on the calculations and assumptions of E. Halley, formed the first mortality tables.[2] With the establishment of the first life insurance companies that collect premiums from persons to cover risks related to death or long-term compensation due to bodily injury or disability, and with the development of financial markets, their funds are directed to the financial market.[3] The importance of insurance companies as financial market participants is confirmed by the fact that in the USA only commercial banks were ahead of insurance companies in terms of assets, and that in 2019 insurers worldwide managed assets worth over 24 trillion US dollars, of which insurers dealing with life insurance participated with about 60%.[4]

Unit-linked life insurance became attractive from 1995 to 2000 because income grew by 24% annually, and in the end of 2001 it was 11% of GDP in the Western Europe.[5] In anticipation of a slight recession that began in 2001, the US Federal Reserves lowered interest rates on interbank loans eleven times, i.e. from 6.5% to 1.75%. This enabled banks to expand the circle of people who can get a loan, so loans were granted to a large number of people with poor or non-existent creditworthiness, which led to the creation of a speculative bubble in which real estate prices rose above their real value. As lenders covered their obligations by issuing securities on financial markets, and in some cases concluded insurance, so did the circle of potential insolvency spread. When real estate prices fell in 2007, debtors could no longer refinance their obligations, and that was the beginning of the worst financial crisis since 1929-1939.[6] The same problems arose after the crisis caused by the coronavirus. Central banks worldwide have responded to the financial crisis by massively increasing liquidity and cutting key interest rates to historically low levels, hoping to stimulate the local economy and boost inflation, which lead to negative interest rates in certain European countries.[7]

---

[2] The first known life insurance policy in Britain dates from 1583 (Gordon Dickson, *Introduction to insurance*, CIITS, London, 1984, pp. 3-4), but life insurance was based primarily on bets and not on scientific grounds.

[3] Slobodan Jovanović, *Pravo osiguranja*, Pravni fakultet za privredu i pravosuđe, Novi Sad, 2016, p. 24.

[4] OECD (2021), *OECD Insurance Statistics 2020.* Paris: OECD Publishing, *https://doi.org/10.1787/adfe5566-en;* CLHIA (2020), *Canadian Life and Health - Insurance Facts 2020.* Toronto, Ottawa, Montreal: Canadian Life and Health Insurance Association; Banque de France (14 April 2020), *Financial investments of Insurance Corporations – France • 4th quarter 2019,* Paris.

[5] *Unit-linked life insurance in western Europe: regaining momentum?*, Sigma, No. 3/2003, p. 3.

[6] Brian Duignan, "Financial crisis of 2007–08", *Encyclopædia Britannica*, *https://www.britannica.com/topic/great-recession,* visited on 21 January 2021.

[7] Dirk Nieder, "The Impact of the Low Interest Rate Environment on Life Insurance Companies", *Risk Insights*, No. 9, General Reinsurance AG, Cologne, 2016.

II. Consequences of Interest Rate Volatility on Life Insurance Contracts

Although low interest rates were supposed to have positive effects on economic activity, such policy also had certain disadvantages that adversely affected the financial system. Some of them are, as indicated in the theory, the reduction of general interest rate, low return on capital (savings, time deposits), often interest rates lower than inflation, in even more difficult circumstances there is a burden due to so-called negative interest rate, and the function of money as a means of preserving value decreases.[8] Policy of negative interest rates of central banks led to the fact that interest rates on ten-year government bonds occasionally fell below zero, while five-year bonds were constantly below zero.[9] Income of life insurance companies is decreasing due to low interest rates, and due to conservative investment policy, which led to insureds being paid more than they earn on the capital market. As a result, reserves are decreasing, so insureds have to come to terms with lower profits.[10]

A negative interest rate exists when the nominal (real) interest rate on loans is less than the inflation rate, which is why the lender's earnings after deducting inflation are less than zero.[11] In other words, the lender has the operating loss, and in the best case, if the rates remain the same, it has neither a profit nor a loss. In the first case we are talking about a negative, and in the second about a zero return on sales. Considering that companies, including joint-stock insurance companies, are established for the purpose of gaining profit, the said situation is unacceptable because the intention of the founder is to make a profit from the capital invested through the company's business (Return-on-Equity - ROE).

Life insurance contracts with a savings component, such as life insurance payable at death, pure endowment, endowment, as well as annuity insurance, are the most suitable life insurance lines for investing savings premiums (mathematical reserves). As a rule, after the adoption of the financial statement and business report, the insurer makes a decision on the amount and manner of allocation of profits to

8 Rorbah Volfgang, „Uticaj politike niskih i negativnih kamatnih stopa na osiguranje", Jovanović, S. i Pjerpaolo, M. (urednici) u: *Moderni aspekti zakonskog i regulatornog koncepta osiguranja*, Udruženje za pravo osiguranja Srbije, Beograd, 2020, str. 85; Marke, E. Alberts, *Negative Interest Rates and the Insurance Industry*, Canadian Institute of Actuaries, Ottawa, Canada – Casualty Actuarial Society, Arlington, Virgina, USA – Society of Actuaries, Schaumburg, Illinois, USA, March 2020.

9 Marke, E. Alberts, *Negative Interest Rates and the Insurance Industry*, Canadian Institute of Actuaries, Ottawa, Canada – Casualty Actuarial Society, Arlington, Virgina, USA – Society of Actuaries, Schaumburg, Illinois, USA, March 2020, p. 6.

10 Wolfgang Rohrbach, „Problemi i šanse životnog osiguranja – *kraljevske* vrste osiguranja", *Revija za pravo osiguranja*, XI(2), 2012, p. 12.

11 Vikram Haksar, Emanuel Kopp, "How Can Interest Rates Be Negative?", *Finance & Development*, March 2020, International Monetary Fund, p. 50.

policyholders by adding the allocated profit to the agreed sum insured, and paying the sum insured in case of death and survival. However, the insured is entitled to profit only when share in the insurer's profit has been agreed. Therefore, the insured or the beneficiary, when it comes to policies without profit sharing, will be paid only the sum insured.[12] Realization of profit and the insured's share in the profit for life insurance is of special importance both from the point of view of fulfilling the requirements of technical bases and from the point of view of the need to preserve the real value of life insurance funds. On the other hand, the instability of financial markets, since the financial crisis in 2008, had a negative impact on insurers' investments for more than a decade, as well as in the first half of 2020. At the same time, the extended period of low returns increases negative outlook on the profitability of insurers' investment portfolios due to the risks posed by reinvestment.[13] As the profitability and sustainability of life insurers is threatened by such interest rate trends, insurance services with a minimum guaranteed profit and their exposure to interest rate risk have been analysed in detail by numerous economic theorists.[14] The latest tendencies indicate that European life insurers have found themselves in an unknown territory and will be stuck there for years.[15]

However, the theory also highlights the problem of endangering the capital of life insurers in the event of interest rates' increase. The higher the interest rate, the steeper the value of fixed income from securities in business books decreases, so a life insurer can find it increasingly difficult to pay guaranteed surrender values in the event of cancellation of an insurance contract by an insured. Due to the possibility of surrender of insurance at a certain point before expiry of the contracted period, the duration of the life insurer's obligation is uncertain. If none of the insureds uses the right to surrender insurance before expiry of the contracted perpetual insurance, the insurance period usually exceeds the maturity date of securities. However, if duration of the maturity period coincides with the expected duration of liabilities, it turns out that this is a significant mismatch of assets and liabilities in case of surrender of insurance.[16]

[12] Jasmina Labudović, „Ugovori o osiguranju života i njihov uticaj na politiku plasmana sredstava", *Revija za pravo osiguranja*, VII(4), 2008, p. 41.

[13] European Insurance and Occupational Pensions Authority (EIOPA), *Financial Stability Report*, Frankfurt am Main, 18 December 2020, p. 11. Risk that interest rates or dividends earned through investment may not be able to be reinvested at the same or higher rate of return on the investment is a reinvestment risk. According to the Decision (NBS) on the System of Governance in an Insurance/Reinsurance Undertaking, this type of risk is called "market risk" (*Official Gazette of the RS*, no. 51/2015, 29/2018 and 84/2020, item 7).

[14] Elia Berdin, Helmut Gründl, *The Effects of a Low Interest Rate Environment on Life Insurers*, SAFE Working Paper No. 65, Goethe University, Frankfurt am Main, 2015, p. 2.

[15] Walter Reinl, Shaun Yow, "Life and Life Insurance in a Time of Negative Rates", *Boston Consulting Group*, October 25, 2019, *https://www.bcg.com/publications/2019/life-insurance-in-time-negative-rates,* visited on 21.1.2021.

[16] Mark Feodoria, Till Förstemann, *Lethal lapses - how a positive interest rate shock might stress German life insurers*, Discussion Paper, No. 12, Deutsche Bundesbank, 2015, p. 2 and 6.

In this paper, we consider only life insurance where the insured's share in the insurer's profit is contracted, contractual protection of insurers against adverse trends of interest rates, the possibility of termination or amendment of life insurance contracts due to changed circumstances based on legal provisions and legal theory, and partly aspects of the legal nature of life insurance contracts.

III. Changed Circumstances as a Basis for Termination or Amendment to Life Insurance Contracts

In international trade practice, the institute of changed circumstances is included in the hardship clause, and in that sense it is understood by the Principles of International Commercial Contracts of the International Institute for the Unification of Private Law from Rome (UNIDROIT).[17] This institute is regulated by all legal systems by applying various concepts such as frustration of contract, disruption of business grounds (*Störung der Geschäftsgrundlage*), occurrence of excessive burden (*Excessiva onerosità sopravvenuta*) etc., and in the Law of Contracts and Torts it is in Articles 133 to 136. According to the general rules, when circumstances change, the parties have certain rights. In case of termination of the contract due to changed circumstances the affected party has the right to compensation of a fair value of the loss (the Law of Contracts and Torts, Article 133, paragraph 5), and the other party must be notified of the execution of the right to termination. It is possible to require negotiations on a fair amendment to the contract due to changed circumstances (Article 133, paragraph 4). According to the UNIDROIT Principles of International Commercial Contracts, because changed circumstances are reflected in a substantial change in the balance of a contract, the claimant is primarily given the right to request from the other party to negotiate changes of the contract terms in order to adapt them to changed circumstances.[18] However, this right does not exist if the contract stipulates an automatic adjustment to new circumstances. Changed circumstances represent an event or conditions due to which fulfilment of one party's contractual obligation is difficult or due to their occurrence the contract cannot be executed. In such cases, it is necessary that other assumptions stipulated by the Law be met, so that the contracting party affected by changed circumstances could terminate the contract or demand a fair amendment to the contract conditions. Assumptions could be unfairness of maintaining the contract in force according to agreed conditions and the difficulty of fulfilling the obligation.

[17] UNIDROIT, *Principles of International Commercial Contracts*, International Institute for the Unification of Private Law, Rome, 2016, Section 2: Hardship.

[18] UNIDROIT, *Principles of International Commercial Contracts*, International Institute for the Unification of Private Law, Rome, 2016, Article 6.2.3, p. 1.

Unfairness of maintaining the contract in force under agreed conditions is explained in more detail by the definition of changed circumstances in the German Civil Code as a case when circumstances that served as the basis for concluding the contract later changed *significantly*, so that the parties would not have concluded the contract or would have concluded it under different conditions or with other content if they could have predicted their occurrence.[19] This is a significant change in circumstances under which a contract is executed, which makes it unfair in relation to circumstances that the contracting parties had in mind when concluding a contract.

Perpetual life insurance is characterized by the formation of a mathematical reserve calculated by mathematical methods based on mortality and interest rate tables, which are elements that together with the underwriting costs make life insurance premium.[20] It is simply about a specific nature and elements on which life insurance is based, due to which it is common to apply a certain interest rate, as one of the elements used to make calculations in life insurance. If the actual interest rate is lower than the interest rate used when concluding the contract, life insurer is obliged to form an additional mathematical reserve, because the return on mathematical reserve funds is insufficient to cover the contractual obligations. This is an obligation existing under the bylaw of a supervisory-regulatory nature,[21] which does not leave room for an insurer to point out the unfairness of conditions and assumptions existing at the time of concluding the contract and significantly changed circumstances at the time of fulfilling contractual obligations in life insurance portfolio.

Difficulty of fulfilling the obligation under life insurance contract for an insurer is reflected in the financial burden, because the insurer must provide additional capital to cover the loss described above.

It is known that the standard clause on profit share has involved for decades share of insured persons and insurance beneficiaries in insurer's profit according to access to life insurance general and special conditions.[22] However, changes in interest rates over time led to a different design of insurance terms and conditions, so insurers switched to conditional profit share of insureds only when special insurance terms and conditions stipulate so,[23] while other insurers stipulated in their insurance

[19] The German Civil Code, Article 313, p. 1 (Bürgerliches Gesetzbuch in der Fassung der Bekanntmachung vom 2. Januar 2002 (BGBl. I S. 42, 2909; 2003 I S. 738), das zuletzt durch Artikel 13 des Gesetzes vom 22. Dezember 2020 (BGBl. I S. 3256) geändert worden ist [German Civil Code in version published on 2 January 2002 in Federal Law Gazette I, p. 42, 2909; 2003 I, p. 738), last changed by Article 13 of the Law from 22 December 2020, Federal Law Gazette I, p. 3256).

[20] Slobodan Jovanović, *Pravo osiguranja*, Pravni fakultet za privredu i pravosuđe, Novi Sad, 2016, p. 316.

[21] Odluka o tehničkim rezervama, *Službeni glasnik RS*, br. 42/2015 i 36/2017.

[22] DDOR Novi Sad, *Opšti uslovi za osiguranje života*, 1. 1. 1996, čl. 16; Wiener Städtische Osiguranje, *Opšti uslovi za osiguranje života*, WS.C05.1C.20.1, Beograd, 13. 6. 2006, čl. 22.

[23] DDOR Novi Sad, *Opšti uslovi za osiguranje života*, OU-00-2, Novi Sad, 1. 3. 2013, čl. 12, st. 1.

terms and conditions that profit share is not guaranteed,[24] that it depends on annual business results and current estimate that is not obligatory for an insurer.[25]

Generally accepted position of the legislator and case law that the institute of changed circumstances is applied to bilateral contracts, i.e. contracts with compensation, automatically excludes aleatory contracts, which include insurance contracts[26], including life insurance. On the other hand, insurance is deemed a bilateral contract,[27] which means that rules regulating onerous contracts apply to insurance, but due to aleatory nature of insurance contracts special rules apply. At this point, we would like to point out some characteristics due to which an insurance contract cannot be classified as an onerous contract. First, onerous contract implies that mutual actions of contracting parties are equal, i.e. that there is an equivalence of mutual benefits, as is the case with sale contracts, lease, barter, temporary service contract, etc. Regarding legal part of insurance, the premium that the policyholder or the insured is obliged to pay is always less than the amount of the insurer's liability, so there is no equivalence of mutual benefits.[28] Second, regarding the fulfilment of contractual obligations, in onerous contracts parties fulfil the obligations in a short

[24] Generali Osiguranje Srbija, *Uslovi za osiguranje Complete*, TL-U-20-OZ-34-01, Beograd, 1. 3. 2017, čl. 16, st. 2.

[25] UNIQA životno osiguranje, *Informacije za ugovarača osiguranja i osiguranika „SPEKTAR – Mešovito osiguranje života za slučaj smrti i doživljenja"*, Beograd, 26. 2. 2020, str. 6.

[26] Jakov Radišić, *Obligaciono pravo – Opšti deo*, Centar za publikacije Pravnog fakulteta Univerziteta u Nišu, Niš, 2016, str. 135: „U aleatorne ugovore spadaju, po definiciji, ugovor o igri i opkladi, o osiguranju i o doživotnom izdržavanju."; Andrija Gams, *Uvod u građansko pravo*, Naučna knjiga, Beograd, 1988, str. 207–208: „Komutativni su oni ugovori kod kojih su međusobne kauze, međusobni ekonomski efekti unapred određeni. Aleatorni su pak oni ugovori kod kojih ti efekti nisu određeni unapred već zavise od jedne buduće okolnosti… (Na primer)… Kod ugovora o osiguranju postojanje i veličina osiguravačeve obaveze zavise od nastupanja tzv. osiguranog slučaja (smrti osiguranika, požara, provale itd.)"; Slobodan Perović (gl. redaktor), *Komentar Zakona o obligacionim odnosima*, knjiga II, Savremena administracija, Beograd, 1995, str. 1463: „Neizvesnost je elemenat rizika utkan u samu bit osiguranja: pokrivanje rizika koji će sigurno nastupiti u određeno vreme značilo bi uklanjanje aleatornosti ugovora i vodilo bi zaključivanju posla suprotnog javnom poretku i moralu."; Šulejić, Predrag, *Pravo osiguranja*, Dosije, Beograd, 2005, str. 169-170: „Ugovor o osiguranju je aleatoran… Budući da je aleatoran, ugovor o osiguranju podleže opštim pravilima koja važe za ove ugovore: oni se ne mogu napadati zbog prekomernog oštećenja; jer osiguranik ne može da traži povraćaj premija ako ne nastupi osigurani slučaj."; Dragan Mrkšić, Zdravko Petrović, *Pravo osiguranja*, Fakultet za poslovno pravo, Beograd, 2004, str. 55: „Eventualno nastupanje osiguranog slučaja i zaključivanje povodom toga ugovora o osiguranju predstavlja uopšte osnovnu logiku postojanja delatnosti osiguranja."; Zakon o obligacionim odnosima čl. 898, st. 1: „Događaj s obzirom na koji se zaključuje osiguranje (osigurani slučaj) mora biti budući, neizvestan i nezavisan od isključive volje ugovarača." itd. Ekonomska teorija: Nebojša Žarković, *Pojmovnik osiguranja*, Skonto, Novi Sad, 2013, str. 562: „Premda u teoriji postoje neslaganja, pretežu mišljenja da je UGOVOR O OSIGURANJU ipak ugovor na sreću."

[27] Slobodan Perović, *Komentar Zakona o obligacionim odnosima*, knjiga I, Savremena administracija, Beograd, 1995, str. 232.

[28] It should be borne in mind that different methods of calculating the compensation are applied in insurance. The insurer can fulfil the obligation to compensate the loss with a cash payment or *in rem*, i.e. by handing over objects of the same quality, age, etc., or by providing services (construction, care, treatment, etc.) through third parties.

time, while in insurance there is an obligation of a policyholder or an insured to pay a premium when concluding an insurance contract – if payment is not agreed in instalments – while insurer's obligation is uncertain and depends on the occurrence of an insured event that is defined by general and/or special insurance terms and conditions. This means that the insurer will not be obliged to pay the indemnity if the insured event does not occur during the insurance period. Third, in onerous contracts parties are obliged to fulfil their obligations, while in aleatory contracts the occurrence of an insurer's obligation is uncertain (death and accident are uncertain events in lives of individuals, provided they are not intentionally caused /suicide or murder/ or, in case of illness that they are not chronic illnesses and health conditions). Therefore, in case of aleatory contracts, which include insurance, "…only the hope of achieving a certain benefit is obtained, and the contracting parties accept in advance the possibility of obtaining a disproportionate counter value or nothing. Therefore, their annulment cannot be requested due to excessive damage",[29] so a policyholder or an insured has no right to demand from an insurer the return of premium because the insured event did not occur during the contracted insurance period.[30] Fourth, liability for material defects in onerous contracts does not exist in insurance contracts due to its aleatory nature.

According to the comment of professor Perović along with Article 121 of the Law of Contracts and Torts, insurance could be equated with bilaterally incomplete contracts,[31] if the position is accepted that in the case of insurance contracts only one party is obliged at the time of concluding the contract, and the other party during the execution of the contract. This understanding coincides with the manner of fulfilment of obligations in insurance contracts. Insured is obliged to pay the premium when concluding an insurance contract, and the insurer's obligation will eventually arise if and when the insured event occurs during the insurance period. However, in life insurance, a policyholder may at some point stop paying the premium, so the rules specific to that insurance line apply (rules on decrease of the sum insured with continuation of insurance or surrender of insurance).

According to the prevailing opinion, changed circumstances in our commercial law and case law in aleatory contracts, by their nature or on the basis of the conditions under which they are concluded, are applied only exceptionally.[32] Therefore, our law is closer to the English law than the Italian law, in whose Civil Code

[29] Jakov Radišić, *Obligaciono pravo – Opšti deo*, Centar za publikacije Pravnog fakulteta Univerziteta u Nišu, Niš, 2016, p. 135.

[30] Šulejić, Predrag, *Pravo osiguranja*, Dosije, Beograd, 2005, p. 170.

[31] Slobodan Perović, *Komentar Zakona o obligacionim odnosima*, knjiga I, Savremena administracija, Beograd, 1995, p. 233.

[32] Đorđe Čobeljić, *Promenjene okolnosti u privrednom i građanskom pravu (Clausula rebus sic stantibus)*, Savremena administracija, Beograd 1972, p. 80.

the Article 1469 excluded the application of the rules on changed circumstances to aleatory contracts.

However, the question here is whether aleatory nature of life insurance contracts applies to both parties. According to the general position, aleatory element protects only weaker contracting party, and in life insurance contracts only the insured and the insurance beneficiary. Such attitude is explained by numerous reasons. One of them is that extraordinary and unforeseen costs increasing the obligation represent a common risk in commercial law contracts.[33] However, some authors believe that changes in the price system, changes in tariffs, and even certain economic phenomena can be considered abnormal and unusual risk, which, as a rule, is not taken into account.[34] An important aspect of life insurance risk management is an analysis of consequences of hypothetical scenarios of deviations of actual trends of the company's net cash flows from the planned ones, where such deviations are most often consequence of the model weaknesses, errors including used parameters, although they may be accidental such as mortality, tariff interest rate, return on investment rates and early termination of life insurance contracts.[35]

Risk assumption does not have to be explicit, but may also arise from the nature of the contract.[36] In the same sense, in case of aleatory contracts it is emphasized that the parties must be aware that they are exposed to risk due to long duration of a contract, and that the revision of a contract can be done by applying the index clauses (*clauses d'indexation*).[37] Life insurance contract is multi-annual, but the question arises whether it is possible to apply such clause in life insurance. However, assuming the biometric risk of death of an insured in life insurance significantly differs from bearing the risk of fluctuating the rate of return on investment. In the first case, the insurer has mortality tables, disease tables, etc. and knowingly insures the insured against such risk, while in case of negative interest rates it is a risk outside the relationship between the insured and the insurer that may jeopardize the main function of insurance – maintaining mathematical reserves, and thus render

[33] Jakov Radišić, *Obligaciono pravo – Opšti deo*, Centar za publikacije Pravnog fakulteta Univerziteta u Nišu, Niš, 2016, str. 175; Jelena Perović, „Promenjene okolnosti u srpskom ugovornom pravu i izvorima uniformnog ugovornog prava", *Anali Pravnog fakulteta*, LX(1), 2012, str. 194; Slobodan Perović (gl. redaktor), *Komentar Zakona o obligacionim odnosima*, knjiga I, Savremena administracija, Beograd, 1995, str. 261; Italijanski Građanski zakonik, čl. 1467, p. 2.

[34] Jakov Radišić. *Obligaciono pravo – Opšti deo*, Centar za publikacije Pravnog fakulteta Univerziteta u Nišu, Niš, 2016, p. 175.

[35] Jelena Kočović, Marija Jovović, Milica Kočović, **„**Aktuarski efekti prevremenog raskida ugovora o osiguranju života", Mladenović, N, Urošević, D, Stanimirović, Z. (Editors) **in:** *42nd International Symposium on Operations Research, SYM-OP-IS 2015*, Matematički institut SANU, Beograd, 2015, p. 78.

[36] UNIDROIT, *Principles of International Commercial Contracts*, International Institute for the Unification of Private Law, Rome, 2016, p. 221.

[37] Đorđe Čobeljić, *Promenjene okolnosti u privrednom i građanskom pravu (Clausula rebus sic stantibus)*, Savremena administracija, Beograd 1972, p. 20.

meaningless technical settings of life insurance. Therefore, according to the author of this paper, the insurer is forced to predict the interest rates' trends that depend on the laws of the financial market, irrespective of the insurer's influence or will. Institutional (laws and by-laws) limitation of the maximum interest rate up to which insurers have the freedom to contract also does not guarantee protection against the risk of fluctuations in the amount of return on investment. The consequence is the uncertainty of the economic effect, which is reflected in uncertainty of the amount and sources from which the profit will be paid to the insured[38] or insurance beneficiary. This can be from the profit realized from financial placements of the insured's premium or from the insurer's funds when he is obliged to form additional reserves, as we have previously described.

Another reason why changed circumstances cannot be unreservedly applied are the principles of *pacta sunt servanda* and the principles of conscientiousness and honesty.[39]

According to the first principle, parties to obligation relations are obliged to fulfil their obligation and are responsible for its fulfilment. Obligation may be discharged only by mutual consent of the parties to obligation relations or pursuant to the law. However, can the impossibility of fulfilling the purpose of the contract, as one of conditions for the application of the institute of changed circumstances, exclude the application of the principle of duty to fulfil contractual obligations in life insurance contracts? Here, we knowingly disregard the general position that would exclude the possibility of accepting the non-execution of the contract as a changed circumstance for the purpose of negotiating the amendment to a life insurance contract or its termination. If we start with the position that life insurance has a social function, in addition to compulsory health and pension insurance, then this points to the conclusion that the purpose of life insurance is to pay the compensation and profit to the insured or the insurance beneficiary, if contracted. The stated position does not take into account any financial reasons, even if they referred to the violation of the insurer's solvency, and especially to the share capital of private insurance companies in conditions of negative interest rates and decrease of mathematical reserves. In this sense, comparative law expresses the view that reference to changed circumstances is justified in case when fulfilment of the obligation, especially due to increased costs, would lead to financial failure of a debtor or, at best, when increased costs due to changed circumstances would be in the range from 80% to 100% of the value of the contractual obligation.[40] According

[38] Andrija Gams, *Uvod u građansko pravo*, Naučna knjiga, Beograd, 1988, p. 207.

[39] Jakov Radišić, *Obligaciono pravo – Opšti deo*, Centar za publikacije Pravnog fakulteta Univerziteta u Nišu, Niš, 2016, p. 174–175;

[40] Jelena Perović, „Promenjene okolnosti u srpskom ugovornom pravu i izvorima uniformnog ugovornog prava", *Anali Pravnog fakulteta*, LX(1), 2012, p. 194.

to the author, it is possible to make several objections to such position. First, if life insurance should have its social function, then how can a life insurance company make a profit in accordance with the legal provision according to which a legal entity performs an activity for the purpose of making profit (Law on Companies, Article 2)? Social function of insurance is not disputable, but it is also the insurer's right to terminate or significantly reduce conclusion of insurance lines where it generates loss. Nature of private insurance is reflected in desire to make profit for the shareholders of an insurance company. This goal is primary, and the social function is secondary and arises from the character of insurance as an activity that pays indemnities. For example, the social function is increasingly narrowing in public health for economic reasons by shifting cost coverage to natural persons. If natural persons conclude private health insurance, then insurance companies take on a social function that the public healthcare sector does not want to perform. Likewise, insurance companies are not obliged to conclude health insurance policies (as well as other insurance lines) if that insurance line creates a financial loss for them. Second, the fact is that neither the insurer nor the insured could have foreseen or avoided negative interest rates at the moment of concluding the contract. Third, such a position means an additional financial burden on the insurer's shareholders who are certainly not to blame for new circumstances. Fourth, the purpose of life insurance is for the benefit of the insured or the insurance beneficiary, but the same does not apply to the insurer. Fifth, the insurer concludes a large number of life insurance contracts, so it is unfair and immoral for the insured to "earn" profit at the expense of the insurer's assets, and not from investments as usual etc.

The principle of conscientiousness and honesty dictates that in establishing obligatory relations and exercising rights and obligations from those relations the parties must adhere to ethical standards of conduct and care and honourable fulfilment of contractual obligations. However, negative interest rates in the financial market is not something that can be attributed to the violation of this principle. Having in mind the aleatory nature of insurance contracts, it is logical to conclude that aleatory element exists in both parties, but only in insurer does this uncertainty regarding the realization of profit affects his ability to pay the profit in the agreed amount. On the other hand, the insured is not obliged to keep the above in mind without a special written warning/notification of the insurer when concluding a life insurance contract and through an appropriate clause in insurance terms and conditions.

Changed circumstances may also lead to only one part of the contract being affected at the time of partial execution. This will, as a rule, be the case with multi-annual contracts, so the changed circumstances will then be relevant only for the part of the contractual obligation that has yet to be fulfilled.[41] Life insurance lasts

[41] UNIDROIT, *Principles of International Commercial Contracts*, International Institute for the Unification of Private Law, Rome, 2016, p. 221–222.

for many years, and this feature leads to a greater susceptibility to fulfil obligations by sudden events that change assumptions and reasonable expectations the insurer had in mind when concluding the contract. The degree of unpredictability of external factors can also be seen from the world economic crisis caused by Covid-19 in the USA. Comparing parameters such as changes in gross domestic product, unemployment rate and inflation at the end of the second quarter of 2020, in relation to projected values at the end of 2019, there was a significant deviation from the planned values that can be attributed to the impact of the coronavirus pandemic.[42] On the other hand, fixed tariffs are necessary because of reliability on the accuracy of calculations of all elements of life insurance, in order for it to be sustainable and guarantee the fulfilment of obligations. However, the dynamics of the financial market, which is sometimes manifested by negative interest rates and which can also be affected by pandemics, is a factor that disrupts life insurance calculations and puts insurers in a position they would never want to find themselves in. In addition, given the specificity of life insurance, it is not appropriate to apply the subsidiary rules on the sale of goods when the price is not determined either according to our Law of Contracts and Torts or international legal sources on the sale of goods[43] (Uniform Law on the Formation of Contracts for the International Sale of Goods from 1964 and the United Nations Convention on Contracts for the International Sale of Goods from 1980). If we adjusted the application of these rules to life insurance, the insurer would be obliged to pay the profit according to return from investment of the mathematical reserve that he regularly realized at the time of conclusion of the contract. This solution is completely inapplicable, because it is a multi-annual insurance contract with permanent obligations (mandatory calculation of profit for each year of insurance at the end of the year) until its expiry, occurrence of the insured event or surrender of insurance. If the rule were applied according to which the insurer would owe the profit according to the return determined by the official records on the market of the insurer's place of business at the time when the fulfilment was to follow, the insurer would have the same problem of negative interest rate.

IV. Conclusion

Life insurance contracts have characteristics that classify them as bilateral contracts, but because of such characteristics (subject matter of contract, occurrence of the insurer's obligation and multi-annual duration) they do not meet the requirements to be onerous contracts, although they are contracts with compensation.

[42] Kristina Gavrilovic, Milos Vucekovic, „Impact and consequences of the COVID-19 virus on the economy of the United States", *International Review*, No. 3-4, 2020, p. 61.

[43] Radica Pavlović, „Modaliteti međunarodnih ugovora u trgovinskom prometu robe – Pravni osvrt", *Megatrend revija*, 17(4), 2020, p. 110.

Assuming that the subject matter of insurance is an uncertain future event (death or survival), it is classified as aleatory contracts, and therefore the rules on excessive damage and legal and material deficiencies in the fulfilment of obligation are inappropriate for application to life insurance contracts.[44]

The main obstacle for effect of changed circumstances to life insurance contracts is their aleatory legal nature and general principles of contract law that do not take into account the economic effects of that insurance line. Negative interest rates undermine the basic settings of life insurance, which is why insurers must pay special attention to the manner they formulate their insurance conditions. Institutional framework, as well as the indifference of legal theory and case law regarding approval of application of the institute of changed circumstances to insurance contracts due to negative interest rates, will continue to burden insurers with the obligation to form additional mathematical reserves to cover contractual obligations.

Literature

- Alberts, E. Mark, *Negative Interest Rates and the Insurance Industry*, Canadian Institute of Actuaries, Ottawa, Canada – CasualtyActuarial Society, Arlington, Virgina, USA – Society of Actuaries, Schaumburg, Illinois, USA, March 2020.
- Banque de France, *Financial investments of Insurance Corporations – France • 4th quarter 2019,* Paris, 14 April 2020.
- Berdin, Elia, Gründl, Helmut, *The Effects of a Low Interest Rate Environment on Life Insurers*, SAFE Working Paper No. 65, Goethe University, Frankfurt am Main, 2015.
- Bürgerliches Gesetzbuch in der Fassung der Bekanntmachung vom 2. Januar 2002 (BGBl. I S. 42, 2909; 2003 I S. 738), das zuletzt durch Artikel 13 des Gesetzes vom 22. Dezember 2020 (BGBl. I S. 3256) geändert worden ist [Nemački Građanski zakonik u verziji objavljenoj 2. januara 2002. godine u Saveznom službenom listu I, str. 42, 2909; 2003 I, str. 738), koji je poslednji put izmenjen čl. 13 Zakona od 22. decembra 2020. godine, Savezni službeni list I, str. 3256].
- CLHIA, *Canadian Life and Health – Insurance Facts 2020,* Canadian Life and Health Insurance Association, Toronto, Ottawa, Montreal, 2020.
- Čobeljić, Đorđe, *Promenjene okolnosti u privrednom i građanskom pravu (Clausula rebus sic stantibus)*, Savremena administracija, Beograd, 1972.
- DDOR Novi Sad, *Opšti uslovi za osiguranje života*, Novi Sad, 1. 1. 1996.
- DDOR Novi Sad, *Opšti uslovi za osiguranje života*, OU-00-2, Novi Sad, 1. 3. 2013.

[44] See a footnote no. 25.

- Dickson, Gordon, *Introduction to insurance*, Chartered Insurance Institute Tuition Service, London, 1984.
- Duignan, Brian, "Financial crisis of 2007-08", *Encyclopædia Britannica*, *https://www.britannica.com/topic/great-recession*, posećeno 21. 1. 2021.
- European Insurance and Occupational Pensions Authority (EIOPA), *Financial Stability Report*,Frankfurt am Main, 18 December 2020.
- Feodoria, Mark, Förstemann, Till, *Lethal lapses - how a positive interest rate shock might stress German life insurers*, Discussion Paper, No. 12, Deutsche Bundesbank, 2015.
- Gams, Andrija, *Uvod u građansko pravo*, Naučna knjiga, Beograd, 1988.
- Gavrilovic Kristina, Vucekovic Milos, "Impact and consequences of the COVID-19 virus on the economy of the United States", *International Review*, No. 3-4, 2020, str. 56–64.
- Generali Osiguranje Srbija, *Uslovi za osiguranje Complete*, TL-U-20-OZ-34-01, Beograd, 1. 3. 2017.
- Haksar, Vikram, Kopp, Emanuel, "How Can Interest Rates Be Negative?", *Finance & Development*, March 2020, International Monetary Fund, p. 50–51, *https://www.imf.org/external/pubs/ft/fandd/2020/03/pdf/what-are-negative-interest-rates-basics.pdf*, 21. 1. 2013.
- Jovanović, Slobodan, *Pravo osiguranja*, Pravni fakultet za privredu i pravosuđe, Novi Sad, 2016.
- Kočović, Jelena, Jovović, Marija, Kočović, Milica, „Aktuarski efekti prevremenog raskida ugovora o osiguranju života", Mladenović, N., Urošević, D., Stanimirović, Z. (Editors) in: *42nd International Symposium on Operations Research, SYM-OP-IS 2015*, Matematički Institut SANU, Beograd, 2015, str. 77–84.
- Labudović, Jasmina, „Ugovori o osiguranju života i njihov uticaj na politiku plasmana sredstava", *Revija za pravo osiguranja*, VII(4), 2008, str. 40–50.
- Mrkšić, Dragan, Petrović, Zdravko, *Pravo osiguranja*, Fakultet za poslovno pravo, Beograd, 2004.
- Nieder, Dirk, "The Impact of the Low Interest Rate Environment on Life Insurance Companies", *Risk Insights*, No. 9, General Reinsurance AG, Cologne, 2016.
- OECD, *OECD Insurance Statistics 2020*, OECD Publishing, Paris, 2021, *https://doi.org/10.1787/adfe5566-en*.
- Pavlović, Radica, „Modaliteti međunarodnih ugovorau trgovinskom prometu robe – Pravni osvrt", *Megatrend revija*, 17(4), 2020, str. 107–124.
- Perović, Jelena, „Promenjene okolnosti u srpskom ugovornom pravu i izvorima uniformnog ugovornog prava", *Anali Pravnog fakulteta*, LX(1), 2012, str. 185–202.

- Perović, Slobodan (gl. redaktor), *Komentar Zakona o obligacionim odnosima*, knjiga I, Savremena administracija, Beograd, 1995.
- Perović, Slobodan (gl. redaktor), *Komentar Zakona o obligacionim odnosima*, knjiga II, Savremena administracija, Beograd, 1995.
- Radišić, Jakov, *Obligaciono pravo – Opšti deo*, Centar za publikacije Pravnog fakulteta Univerziteta u Nišu, Niš, 2016.
- Reinl, Walter, Yow, Shaun, "Lifeand Life Insurancein a Time of Negative Rates", *Boston Consulting Group*, October 25, 2019, *https://www.bcg.com/publications/2019/life-insurance-in-time-negative-rates,* posećeno 21. 1. 2021.
- Rorbah, Volfgang, „Uticaj politike niskih i negativnih kamatnih stopa na osiguranje", Jovanović, S. i Pjerpaolo, M. (urednici) u: *Moderni aspekti zakonskog i regulatornog koncepta osiguranja*, Udruženje za pravo osiguranja Srbije, Beograd, 2020, str. 83–91.
- Rohrbach, Wolfgang, „Problemi i šanse životnog osiguranja – ‚kraljevske' vrste osiguranja", *Revija za pravo osiguranja*, XI(2), 2012, str. 8–18.
- Šulejić, Predrag, *Pravo osiguranja*, Dosije, Beograd, 2005.
- UNIDROIT, *Principles of International Commercial Contracts*, International Institute for the Unification of Private Law, Rome, 2016.
- UNIQA životno osiguranje, *Informacije za ugovarača osiguranja i osiguranika „SPEKTAR – Mešovito osiguranje života za slučaj smrti i doživljenja"*, Beograd, 26. 2. 2020.
- Wiener Städtische Osiguranje, *Opšti uslovi za osiguranje života*, WS.C05.1C.20.1, Beograd, 13. 6. 2006.
- Zakon o obligacionim odnosima (ZOO), *Službeni list SFRJ*, br. 29/1978, 39/1985, 45/1989 – USJ, 57/1989, *Službeni list SRJ*, br. 31/1993, *Službeni glasnik RS*, br. 18/2020.
- Žarković, Nebojša. *Pojmovnik osiguranja*, Skonto, Novi Sad, 2013.

Translated by: ***Jelena Rajković***