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Ivana Soković[1]

ZNAČAJ OSIGURANJA I PERSPEKTIVE RAZVOJA U SRBIJI

PREGLEDNI RAD

Apstrakt

Osiguranje je delatnost koja u Srbiji baštini tradiciju još od Dušanovog zakonika. Autorka nastoji da ustanovi razvojni put koji je osiguranje prešlo od prvih zajednica rizika do osiguravajućih kuća, kao institucionalnih investitora koji u savremenoj ekonomiji imaju značajnu ulogu. Posebnu pažnju posvećuje prelasku na tržišni mehanizam i tranziciji koja je značila etabliranje osiguravajućeg sektora kao visoko regulisanog i iznad svega profitabilnog. U radu se ne izostavlja uloga Udruženja osiguravača Srbije, kao krovne organizacije koja je značajno doprinela promociji i zaštiti interesa delatnosti osiguranja. U zaključku se iznose predlozi kako bi tržište pro futuro trebalo da se razvija, s naglaskom na tome da je osiguranje rastuća delatnost koja čini važan deo održivog razvoja.

Ključne reči: *osiguranje, Zakon o osiguranju, tržište, profitabilnost, zaštita korisnika osiguranja, transformacija kapitala.*

I. Razvoj osiguranja u Srbiji do usvajanja Zakona o osiguranju iz 2004. godine

1. Razvojni put osiguranja do Drugog svetskog rata: od igre na sreću do postepenog regulisanja

Za razliku od modernog doba, za koje se vezuje razvoj osiguranja kao delatnosti koja pruža zaštitu od rizika i koje karakteriše regulisanost na svim nivoima, pre

[1] Predsednik Izvršnog odbora kompanije "Dunav osiguranje" a.d.o. .

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kraja XVIII odnosno početka XIX veka ne možemo govoriti o osiguranju u pravom smislu reči, niti o osiguravajućim društvima. Moderno osiguranje koje se zasniva na naučnoj osnovi i do detalja je zakonom regulisano, te koje vode licencirana i kvalifikovana lica, pripada drugoj polovini XIX veka.[2] Da bi se došlo do tog oblika organizovanja, osiguranje je prešlo određeni razvojni put o kome ćemo govoriti u ovom radu. Usredsredićemo se samo na istoriju društava za osiguranje na našim prostorima, podrazumevajući pod time ne nužno teritoriju Srbije, već i teritorije koje su, na bilo koji način, bile povezane sa Srbijom. Dve zakonitosti koje smo uočili tokom proučavanja razvoja sektora osiguranja, a pogotovo društava za osiguranje, tiču se istorijskih okolnosti i društveno-političkog konteksta.

Osiguranje kao delatnost koja počiva na zajednici rizika beleži početke razvoja u Srbiji još u srednjem veku. Naime, prve naznake onoga što ćemo kasnije nazvati obaveznim osiguranjem nalazimo u Dušanovom zakoniku iz 1349. godine. Iako Zakonik doslovno ne pominje reč osiguranje, njime je ustanovljena kolektivna odgovornost za naknadu štete, odnosno prelaz od plemenskih i seoskih zajednica rizika ka prvim zajednicama rizika. Međutim, osiguranje, kao ni većina privrednih delatnosti, nije moglo da se razvija u pravom smislu sve do kraja XIX veka.[3]

Jedan od prvih zakona od značaja za delatnost osiguranja u Srbiji bio je Srpski građanski zakonik, čije je donošenje 1829. godine inicirao knez Miloš Obrenović. Zakonik je donet tek 15 godina kasnije, tačnije 1844. godine za vreme vladavine kneza Aleksandra Karađorđevića, i napisan je po uzoru na Austrijski građanski zakonik iz 1811. godine. Srpski građanski zakonik pominje osiguranje u dva člana (čl. 798 i 799). Ono što ih čini vrednim pomena jeste njihov značaj za institut osiguranja i u savremenim uslovima. Naime, *Srpski građanski zakonik reguliše princip uticaja krivice*

[2] Detaljnije o istoriji osiguranja: Z. Petrović, V. Čolović, D. Knežević, *Istorija osiguranja u Srbiji, Crnoj Gori i Jugoslaviji do 1941. godine*, Beograd, 2013.

[3] „Ideja osiguranja – koja se razvila još u starom veku – jeste da se stvaranjem zajednice rizika, koju čine sva lica ugrožena istom opasnošću, omogući raspodela rizika između svih članova. Zajednica rizika, dakle, počiva na ideji *uzajamnosti i solidarnosti.* Ali istinski život zajednice rizika i nastanak osiguranja vezuju se za pojavu računa verovatnoće i zakona velikih brojeva. *Zakon velikih brojeva* zasniva se na utvrđivanju određenih pravilnosti u nastupanju određenih događaja. To je moguće na osnovu statističkih podataka o velikom broju slučajeva. Ključno je da se mogu utvrditi pravilnosti u ponavljanju. Što je broj posmatranih slučajeva veći, pravilnost u nastupanju jednog događaja je veća, a odstupanja manja. Ako se neki događaj posmatra pojedinačno, on je slučaj; čim se posmatra veliki broj slučajeva, dolazi se do određenih pravilnosti tj. zakonitosti (zakonitost se ispoljava u masi slučajeva!). Praksa je pokazala da se osiguravači mogu više osloniti na primenu zakona velikih brojeva ako je broj posmatranih slučajeva veći. Dakle, primenom zakona velikih brojeva utvrđuje se prosečna vrednost posmatrane veličine. Osiguravačima je, zahvaljujući primeni zakona velikih brojeva, postalo mnogo jednostavnije vođenje biznisa osiguranja. *Verovatnoća* nastupanja određenog događaja označava se kao odnos između broja povoljnih izgleda i broja ukupnih izgleda koji postoje u pogledu njegovog ostvarivanja. Primenom računa verovatnoće određuje se stepen verovatnoće nastupanja određene opasnosti, odnosno osiguranog rizika. Uz zakon velikih brojeva, račun verovatnoće je naučna osnova tehničke organizacije osiguranja. Za što veću verodostojnost rezultata primene računa verovatnoće potrebno je da portfelj osiguranja bude što veći." V.: N. Petrović Tomić, *Pravo osiguranja, Sistem, Knjiga prva*, Službeni glasnik, Beograd, 2019, str. 74-75.

osiguranika na prouzrokovanu štetu, što je jedno od osnovnih načela prava osiguranja.[4] S obzirom na njegovu ulogu u moralizaciji osiguranja i njegovom širem društvenom prihvatanju, Srpski građanski zakonik je nezaobilazni izvor u istoriji osiguranja. Drugim članom uređuju se posledice osiguranja već nastalog rizika, što je takođe jedno od najbitnijih pravila osiguranja.

Gotovo pola veka kasnije, 1892. godine, donet je Zakon o osiguravajućim društvima, koji je regulisao isključivo rad stranih osiguravajućih društava, kojih je jedino i bilo na našim prostorima,[5] da bi kasnije, 1898. godine, bio donet Zakon o akcionarskim društvima, koji je regulisao poslovanje domaćih osiguravajućih društava.[6]

U to vreme, u srpskom jeziku nije postojala reč za osiguranje, pa se koristio posrbljen italijanski izraz ASIKURACIJA, dok su se agenti osiguravajućih društava zvali ASIKURANTI.

Prvo osiguranje u Beogradu zaključio je 1839. godine izvesni Lazar Zuban, sudija Apelacionog suda. Zabeleženo je da je posle svega nekoliko dana njegova kuća izgorela u požaru i da je od osiguravajućeg društva „Assicurazioni Generali" naplatio odštetu u iznosu od 175 talira.[7]

Prvo domaće osiguravajuće društvo „Beogradska zadruga" osnovano je 1897. godine, a njen prvi predsednik bio je Đorđe Vajfert. Zanimljivo je da je već u prvoj godini rada ta zadruga ostvarila zapažene rezultate i sklopila 482 životna osiguranja i 858 osiguranja od požara. Država je podržala taj projekat i prvoj domaćoj osiguravajućoj kući poverila osiguranje svih državnih objekata na 20 godina. To je bio prvi korak u emancipaciji zemlje kada je reč o osiguranju.

Čedomilj Mijatović, ministar finansija Kraljevine Srbije, u svom radu „Mišljenja o osiguranju" napisao je nešto što se čini izuzetno važnim i danas:[8]

„Ja bih želeo da dođe, a nadam se da će doći jedno sretno doba u XX veku, kada će svaki Srbin mladoženja svojoj nevesti na dan venčanja pokloniti dokumenat koji joj osigurava parče hleba u slučaju smrti njegove, kada će svaki otac na dan kad mu se dete rodi osigurati ovome da kad postane punoletan, primi bar toliki kapital, da alate za rad nabavi, kao i devojčici miraz, da će svaki neženjenik smatrati za milu i neodoljivu dužnost da osigura da se na dan njegove smrti opštini njegovoj položi bar 1.000

[4] P. Šulejić, *Pravo osiguranja, Peto izmenjeno i dopunjeno izdanje*, Pravni fakultet Univerziteta u Beogradu, Beograd, 2005, str. 34.

[5] To je verovatno jedan od razloga što je postojao veliki uticaj iz inostranstva na osiguranje, a naročito na reosiguranje. Tako i V. Čolović, *Osiguravajuća društva, Zakonodavstvo Srbije, pravo EU, uporedno pravo,* Institut za uporedno pravo, Beograd, 2010, str. 30.

[6] Osiguravači su u početku u osiguranju videli izvor dobiti i nisu mnogo vodili računa o obavljanju delatnosti osiguranja u interesu osiguranika. Na ruku im je išlo to što nije postojala regulativa koja bi se odnosila na društva za osiguranje. To je dovelo do velikog broja stečajeva i likvidacija.

[7] V. Čolović, *Osiguravajuća društva, Zakonodavstvo Srbije, pravo EU, uporedno pravo*, Institut za uporedno pravo, Beograd, 2010, str. 29.

[8] Dostupno na: https://zivotnoosiguranje.co.rs/misljenja-o-osiguranju-19-vek-srbija/
Posećeno: 1. 4. 2024.

dinara na dobrotvorne ciljeve, doba, kad nijedne kuće neće biti koja nije osigurana za slučaj požara, nijedne njive, nijednog vinograda, nijednog voćnjaka koji nije osiguran za slučaj štete od elementarne nepogode, i kad će ne samo svaki činovnik nego i svaki seljak i svaki zanatlija moći da svojoj ženi i deci osigura penziju, i naposletku kad će svaki radnik na slučaj starosti ili privremene nemoći osigurati sebi izdržavanje, ne kao poklon ili milostinju od opštine ili države, nego kao plod svojih napora i svoga poštenog ugovora s jednom domaćom ustanovom za osiguranje."

Polako prolazi i treća decenija XXI veka, a mi i dalje čekamo da dođe to srećno doba.

Za vreme balkanskih ratova, osiguravajuća društva proširila su svoju praksu na tzv. ratni rizik, na osnovu specijalne premije. Dan nakon početka Prvog svetskog rata, donet je zakon kojim je propisano da premija za ratne rizike ne mora da se plati unapred. Društva su obavezana da za sve osiguranike preuzmu ratni rizik, a svaki osiguranik koji je želeo da mu osiguranje ostane u važnosti, morao je unapred, u roku od 15 dana od stupanja na snagu zakona dati izjavu o tome uz obećanje da će premiju naknadno platiti. Ratnu premiju bi tako platili osiguranici koji prežive rat, čime bi pomogli osiguravajućem društvu da isplati osigurane sume porodicama onih koju su u ratu nastradali. Nakon mnogo posleratnih sporova, država je donela Uredbu kojom je obavezala društva da isplate osigurane sume i onima koji nisu dali izjavu i taj presedan je skupo koštao osiguravajuća društva.

Uoči Drugog svetskog rata, u Jugoslaviji je bilo 28 osiguravajućih kuća. Dve trećine bile su filijale stranih osiguravajućih društava.

Sve do Drugog svetskog rata osiguranje je bilo poput igara na sreću. Osiguranje u predratnoj Jugoslaviji nije poznavalo prevenciju i represiju, te osiguravači nisu činili ništa u cilju sprečavanja i umanjenja šteta. Obavezan je bio samo vatrogasni doprinos, te se u takvim okolnostima nisu mogle izbeći fingirane štete. Do 1937. godine nije postojala držana kontrola osiguranja kakvu danas poznaju svi pravni sistemi. Osiguranje je, zapravo, služilo raspodeli profita, odnosno dividendi akcionarima, a ne zaštiti interesa klijenata. To je vodilo prihvatanju rizičnih poslova koje su vodila nedovoljno kompetentna lica, što je rezultiralo bankrotom jednog od najvećih austrijskih društava onog vremena „Feniks", koje je imalo najveći portfelj osiguranja života u Jugoslaviji.[9] Kao odgovor na veliko nepoverenje osiguranika usled propasti „Feniksa", doneta je Uredba o nadzoru nad osiguravajućim preduzećima, koja je stupila na snagu 1937. godine. Njome su postavljeni temelji onoga što je i danas odlika sistema osiguranja: državna kontrola, koja se odnosila na plasman rezervi osiguravajućih društava, zabranu otuđenja i opterećenja imovine itd.[10]

[9] D. Mrkšić, Z. Petrović, K. Ivančević, *Pravo osiguranja*, Privredna akademija, Novi Sad, 2006, str. 23.
[10] P. Šulejić, *Pravo osiguranja, Peto izmenjeno i dopunjeno izdanje,* Pravni fakultet Univerziteta u Beogradu, Beograd, 2005, str. 35.

2. Osiguranje posle Drugog svetskog rata – državni intervencionizam

Po mišljenju profesora Šulejića, period posle Drugog svetskog rata u Jugoslaviji može da se podeli u pet etapa, koje su pogodne za analizu budući da je došlo do značajnih promena u oblasti osiguranja uzrokovanih promenama u društveno-političkom sistemu.[11] To su sledeće etape:

Sistem centralizovanog državnog osiguranja, koji je važio od 1945. do 1961. godine. Do završetka Drugog svetskog rata na tržištu Jugoslavije dominirale su strane kompanije za osiguranje, a 1. marta 1945. doneta je Odluka o spajanju u državni osiguravajući zavod za osiguranje i reosiguranje svih konfiskovanih osiguravajućih preduzeća. Taj zavod je tokom iste godine preimenovan u *Državni zavod za osiguranje i reosiguranje* (dalje: DOZ), nakon čega sva osiguravajuća preduzeća prelaze u državnu svojinu. Vlada je 1947. godine donela Uredbu o organizaciji i poslovanju DOZ-a. DOZ prelazi u nadležnost Ministarstva finansija i postaje ekskluzivni osiguravač, takoreći monopolista, za poslove osiguranja od rizika požara i drugih rizika, svih poslova obaveznog osiguranja (osim socijalnog), ekskluzivni reosiguravač za sve poslove osiguranja, a obavljao je i poslove ulaganja dugoročnih sredstava iz svojih tehničkih i ostalih rezervi u državne hartije od vrednosti. Kako za privatne osiguravače čija imovina nije bila konfiskovana na osnovu Uredbe nije bilo posla, DOZ je 1947. godine postao jedini osiguravač i reosiguravač u zemlji.[12] Osiguranje je u tom periodu bilo javna služba sa strogo centralizovanom organizacijom.

Sistem decentralizovanog komunalnog osiguranja postojao je u periodu od 1962. do 1967. godine. Zakonom o osiguravajućim zavodima i zajednicama osiguranja iz 1962. godine počinje period decentralizacije.[13] Tada počinje osnivanje više osiguravajućih zavoda, odnosno zajednica osiguranja. Obično su se osnivali za teritoriju jedne ili više opština i činili Republičku zajednicu osiguranja, a te zajednice su skupa činile sistem jugoslovenske zajednice za osiguranje i reosiguranje. Osiguravajući zavodi bavili su se svim vrstama osiguranja imovine i lica na teritoriji opština, dok su zajednice osiguranja bile reosiguravači zavoda. Ideja je bila da se decentralizacijom DOZ-a ostvari racionalnije korišćenje kapaciteta osiguranja. Ali taj cilj nije postignut, jer je decentralizacija bila samo kozmetičkog karaktera, a suštinski je zadržan neizmenjeni sistem.

Sistem komercijalizovanog tržišnog osiguranja bio je na snazi je od 1968. do 1974. godine. Tokom 1968. sprovodi se reorganizacija sektora osiguranja. Nosioci osiguranja su osiguravajući zavodi, koje mogu da osnuju radne organizacije, društveno-političke zajednice i građani. Osiguravajući zavodi bili su privredne organizacije

[11] P. Šulejić, *Pravo osiguranja, Peto izmenjeno i dopunjeno izdanje*, Pravni fakultet Univerziteta u Beogradu, Beograd, 2005, str. 35–43.
[12] V. Čolović, str. 31,
[13] *Službeni list SFRJ*, br. 27/61.

koje sprovode osiguranje kao delatnost od posebnog društvenog interesa.[14] Oni su zamišljeni kao preduzeća koja imaju svoju imovinu i koja su samostalna. Ali pošto je osiguranje proglašeno delatnošću od posebnog društvenog interesa, pored samoupravljanja radnog kolektiva, postojalo je i društveno upravljanje u kome su učestvovali osiguranici i osnivači zavoda.[15] Funkcije osiguranja su prikupljanje sredstava radi naknade štete u slučaju nastupanja štetnog događaja i učestvovanje u preduzimanju preventivnih i represivnih mera. Zavodi slobodno biraju reosiguravače i odgovaraju za izvršenje obaveza preuzetih po osnovu osiguranja. Osnovnim zakonom o osiguranju i osiguravajućim organizacijama iz 1967. godine bila je predviđena i mogućnost osnivanja privrednih organizacija koje se isključivo bave poslovima posredovanja, zastupanja, procenjivanja štete i vršenja drugih usluga u vezi s poslovima osiguranja.[16]

Iako se sistemu osiguravajućih zavoda mogu uputiti brojne primedbe, s današnje tačke gledišta taj sistem je doneo nekoliko promena, za koje se s pravom može reći da su reformatorske. Ukratko, osiguranje tada prvi put počinje da funkcioniše po principima tržišnog mehanizma, ukidaju se teritorijalni monopoli i usvaja princip dobrovoljnosti osiguranja, osim u zakonom propisanim slučajevima. Taj sistem je bio izložen kritikama već od 1971. godine, u periodu ustavnih amandmana. *Sistem osiguranja zasnovan na načelima Ustava iz 1974. godine* karakteriše sledeće: formiraju se zajednice rizika kao novi oblik organizovanja zasnovan na principima udruženog rada i dogovorne ekonomije; Ustavom i zakonom izjednačavaju se funkcija naknade štete i prevencije; međusobni odnosi regulišu se samoupravnim sporazumima; itd.

Zakonom o osnovama sistema osiguranja imovine i lica iz 1990. godine dotadašnje zajednice transformišu se u nove finansijske organizacije koje nose karakter tržišnog subjekta privređivanja.[17] Mogli bismo reći da tada započinje sistem tržišnog osiguranja, budući da se postavljaju temelji tržišnog poslovanja. Ali istini za volju, to je bio samo začetak tržišnog modela privređivanja, koji će biti uveden Zakonom o osiguranju iz 2004. godine.[18]

Da zaključimo: nakon raspada SFRJ, sve republike uvele su tržišne sisteme privređivanja. Tokom devedesetih godina XX veka njihov ekonomski rast i razvoj se u velikoj meri razlikovao u zavisnosti od toga da li su ratna dejstva bila prisutna ili ne na njihovim teritorijama. Za Srbiju je to vreme bilo izuzetno složeno i teško,

[14] V. Čolović, *Osiguravajuća društva, Zakonodavstvo Srbije, pravo EU, uporedno pravo,* Institut za uporedno pravo, Beograd, 2010, str. 32.

[15] P. Šulejić, *Pravo osiguranja, Peto izmenjeno i dopunjeno izdanje*, Pravni fakultet Univerziteta u Beogradu, Beograd, 2005, str. 37.

[16] Značajno je napomenuti da je izvršeno i ukrupnjavanje osiguravajućeg sektora budući da je umesto 128 osiguravajućih zavoda, koliko ih je bilo 1967. godine, formirano 11 zavoda krajem iste godine.

[17] *Službeni list SFRJ*, br. 17/90, 82/90 i *Službeni list SRJ,* br. 31/93 i 24/94.

[18] *Službeni glasnik RS*, br. 55/2004, 70/2004, 61/2005, 85/2005 – dr. zakon, 101/2007, 63/2009 – odluka US, 107/2009, 99/2011, 119/2012, 116/2013 i 139/2014.

obeleženo ekonomskim sankcijama UN od 1992. do 1996, hiperinflacijom, NATO bombardovanjem 1999. godine, neuspešnim i u osnovi pogrešnim konceptom tranzicije, faktorima koji su ostavili dugoročne negativne posledice na ekonomski razvoj zemlje i životni standard građana.

Društveni kapital i samoupravljanje predstavljali su specifičnost i osnovu privrednog ambijenta i poslovanja u SFRJ. Društveni kapital nije imao jasno određenog titulara, što je negativno uticalo na produktivnost, efikasnost i ekonomičnost, a samim tim i na konkurentnost u odnosu na privredna društva s drugim oblikom svojine. Već krajem osamdesetih godina započela je svojinska transformacija društvenog kapitala u privatni, odnosno državni kapital. Sprovođena je primenom različitih zakona sa više ili manje uspešnim konačnim rezultatom. Do 2021. godine društveni kapital je još uvek opstajao u pojedinim društvima za osiguranje, koja su činila značajan deo tržišta osiguranja u Srbiji. Tako je učešće društvenog kapitala u strukturi ukupnog kapitala u Kompaniji „Dunav osiguranje" bilo 51,86%, u „Dunavu Re" 4,58%, a u „Triglav osiguranju" a.d.o. Beograd 0,12%.

Posedovanje nasleđenog društvenog kapitala u strukturi ukupnog kapitala otežavalo je poslovanje društvima za osiguranje i stavljalo ih u neravnopravan položaj u odnosu na direktne konkurente, ali i na ostale učesnike na finansijskom tržištu. Navedena situacija uticala je na to da Vlada Republike Srbije, krajem aprila 2021. godine, usvoji Zakon o izmeni i dopunama Zakona o osiguranju. Taj zakon je uspeo da pomiri različite odredbe dotadašnjih zakona koji su se bavili pitanjem društvenog kapitala u društvima za osiguranje, kao i interese društava za osiguranje, države i zaposlenih. Naime, njime je predviđena promena vlasničkih prava na društvenom kapitalu tako što se 70% društvenog kapitala prenosi na Republiku Srbiju, do 25% društvenog kapitala se prenosi zaposlenima bez naknade (tzv. besplatne akcije), dok se najmanje 5% društvenog kapitala prenosi Akcionarskom fondu.

Sprovođenjem zakona, pomenuta osiguravajuća društva napokon imaju čistu strukturu kapitala, koja im omogućava nastavak poslovanja u modernom korporativnom okruženju, dok su zaposleni dobili besplatne akcije, kojima su odmah mogli da raspolažu.

II. Uređivanje i stabilizacija sektora osiguranja

Velike promene u sektoru osiguranja nastaju donošenjem Zakona o osiguranju iz 2004. godine, koji stvara pretpostavke za razvoj tržišta osiguranja u pravom smislu reči, a vršenje nadzora biva povereno Narodnoj banci Srbije.[19] Isti je slučaj i po

[19] U vreme donošenja tog zakona, a naročito za vreme javne rasprave, predlagači su kao jednu od najznačajnijih novina isticali upravo prenošenje nadzornih ovlašćenja sa Ministarstva finansija na NBS. Ključni argument predlagača bilo je objedinjavanje nadzorne funkcije nad svim finansijskim institucijama.

važećem zakonu o osiguranju.[20] Naglašeno je da se nadzor vrši radi zaštite interesa osiguranika i drugih korisnika osiguranja.[21] To je savremena tendencija, jer se zaštita slabije strane ugovora o osiguranju može znatno unaprediti ako se ova postavi kao cilj sprovođenja nadzora.[22]

NBS u sektoru osiguranja zatiče stanje koje karakteriše: odsustvo dobre prakse u poslovanju, adekvatnog upravljanja, sigurnosti ulaganja sredstava osiguranja radi izmirivanja preuzetih obaveza prema osiguranicima i trećim licima, odsustvo transparentnosti rada, redovnog izveštavanja, nekompletnost poslovnih knjiga, pa time i nepouzdanost iskazanih podataka, prelivanje sredstava osiguranja u povezana preduzeća, neuredno izmirivanje obaveza prema osiguranicima i trećim licima, dvostruko izdavanje polisa, pogrešno postavljeni ciljevi poslovanja društava za osiguranje – umesto zaštite interesa osiguranika i korisnika osiguranja, cilj je bio zaštita interesa vlasnika, nadalje visok stepen nezakonitosti u poslovanju, značajan broj pravnih lica koja posluju u sektoru osiguranja bez dozvole za rad.[23] Obaveze prema osiguranicima finansirane su iz tekućih priliva, što znači da su premije naplaćene za nove polise služile za izmirivanje obaveza po ranije izdatim polisama, umesto njihovog sigurnog ulaganja.[24] Sve to doprinelo je potpunom gubljenju poverenja javnosti u ovaj sektor.

Da bi ostvarila postavljeni cilj u navedenim okolnostima, NBS je svoje aktivnosti usmerila u nekoliko pravaca:

- Stabilizacija sektora osiguranja
- Vraćanje poverenja javnosti u sektor osiguranja
- Kreiranje osnove za razvoj sektora
- Stvaranje i razvoj funkcije supervizije
- Kontinuirana edukacija zaposlenih.

Na osnovu izveštaja NBS za 2004. godinu, sektor osiguranja u Srbiji bio je po stepenu razvijenosti znatno ispod proseka zemalja članica Evropske unije. Učešće premije u bruto domaćem proizvodu u Srbiji te godine bilo je ispod 2%, dok je u 25 zemalja članica EU iznosilo 8,3%, a u istočnoevropskim zemljama oko 3%. Prema premiji po stanovniku od oko 50 USD Srbija je zauzimala tek 70. mesto u svetu. Na prvom mestu bila je Švajcarska sa 5.716 USD, dok je Slovenija sa 920 USD

NBS je prema njihovom uverenju mnogo kompetentnija za vršenje nadzora na finansijskom tržištu. V.: N. Petrović Tomić, *Pravo osiguranja*, sistem, str. 225.

[20] *Službeni glasnik RS*, br. 139/2014 i 44/2021.

[21] R. Ayadi, C. O' Brian, *The Future of Insurance Regulation and Supervision in EU*, CEPS, 2006, str. 6.

[22] Detaljnije o zaštiti slabije strane: M. Glintić, „Zaštita prava slabije ugovorne strane u skladu sa principima evropskog ugovornog prava osiguranja", *Strani pravni život*, br. 3/2020, str. 57-73.

[23] Na razvijenim tržištima osiguranja situacija je potpuno drugačija. V.: R. H. Jerry II, *Understanding Insurance Law*, Lexis Nexis, New York 2007, 1021; M. Ćurković, V. Miletić, *Pravo osiguranja Europske ekonomske zajednice,* Croatia osiguranje, Zagreb 1993, str. 29.

[24] Predrag Šulejić, *Pravo osiguranja, Peto izmenjeno i dopunjeno izdanje*, Pravni fakultet u Beogradu, Beograd, 2005, str. 123–128.

zauzimala 28. mesto. Prema ukupnoj premiji, Srbija je u 2004. godini bila na 66. mestu sa 433.000.000 USD.

Ugašen je veliki broj insolventnih osiguravajućih društava. Njihov broj smanjen je sa 40 u 2004. godini na 19 u 2005. Ne zaboravimo da je na kraju 1996. na našem tržištu bilo 77 društava za osiguranje i tri društva za reosiguranje. Mnoga od njih su u periodu do 2004. izgubila dozvolu za rad.

Na tržištu osiguranja u 2005. godini poslovalo je 19 društava za osiguranje, od kojih se 16 bavilo isključivo poslovima osiguranja, dva društva samo poslovima reosiguranja, dok se jedno društvo bavilo poslovima osiguranja i reosiguranja. U 2005. godini smanjen je za 50% i broj ostalih učesnika na tržištu osiguranja – posrednika i zastupnika.

U strukturi premije u 2005. godini, učešće neživotnih osiguranja iznosilo je 90,5%, dok je učešće životnih osiguranja bilo svega 9,5%. U strukturi premije neživotnih osiguranja, imovinska osiguranja učestvovala su sa 33%, a zatim sledi osiguranje od odgovornosti za upotrebu motornih vozila sa 31%.

Značajan pokazatelj rezultata preduzetih aktivnosti na stabilizaciji i uređivanju tržišta osiguranja jeste i odnos porasta tehničkih rezervi i ukupne premije. Porast tehničkih rezervi od 99% (sa 11,5 mlrd dinara u 2004. na 22,8 mlrd dinara u 2005.) značajno je veći od porasta ukupne premije od 53%, što govori o tome da su društva počela da napuštaju lošu praksu neadekvatnog formiranja tehničkih rezervi. Pored toga, poboljšan je kvalitet ulaganja tehničkih rezervi u smislu manjeg ulaganja u nekretnine, povezana pravna lica i hartije kojima se ne trguje na organizovanom tržištu.

Zakonom o osiguranju iz 2014. godine, koji je i danas na snazi, stvoreni su bolji mehanizmi za zaštitu građana, ali i svi neophodni preduslovi da se pruže moderne usluge osiguranja.[25] Zakonom je predviđena adekvatna informisanost građana pre zaključivanja ugovora, kao i informisanost o tome kome treba da se obrate kako bi ostvarili svoja prava po osnovu zaključenog ugovora o osiguranju, o načinu i rokovima za podnošenje odštetnog zahteva, raskidu ugovora, kao i o načinima zaštite njihovih prava kod nadležnih organa.[26] Istovremeno, uvedeni su novi oblici tehničkih rezervi i pooštrene metode za obračun postojećih oblika rezervi, čime je njihov iznos za manje od decenije udvostručen. Time se pruža snažna poruka svim korisnicima usluge osiguranja da će uplaćena premija biti namenski korišćena i sačuvana.

[25] Narjess Boubakri, „Corporate governance and issues from the insurance industry", *The Journal of Risk and Insurance,* 2011, Vol. 78, No. 3, str. 502.

[26] Detaljnije: N. Petrović Tomić, *Zaštita potrošača usluga osiguranja, Analiza i predlog unapređenja regulatornog okvira*, Pravni fakultet u Beogradu, Beograd, 2015, str. 141–201; A. Keglević, *Građanskopravni aspekti obveze obavještavanja kod potrošačkog ugovora o osiguranju,* doktorski rad, Pravni fakultet Univerziteta u Zagrebu, Zagreb, 2012, str. 102.

Uveden je sistem upravljanja sa četiri osnovne funkcije – aktuarskom, funkcijom upravljanja rizikom, funkcijom interne revizije i funkcijom interne kontrole, pa se pored intenzivne eksterne kontrole, implementira i stimuliše mehanizam zaštite i praćenja unutar osiguravajućeg društva.[27]

Stvoren je zakonski okvir vrlo sličan onome u razvijenim evropskim zemljama, koji je omogućio stimulativan i stabilan ambijent za izgradnju i dalji napredak sektora osiguranja.[28] Naime, Zakonom iz 2014. gotovo u potpunosti su preuzete Direktive EU integrisane u režim Solventnosti I, pa čak i neki delovi direktive Solventnost II, tako da se naš sistem nalazi u međufazi, sa zadatkom svih učesnika na tržištu da se pripremi za punu implementaciju Direktive Solventnost II (krajnji rok za njenu punu primenu je prijem naše zemlje u EU).[29]

III. Tržište osiguranja u 2022.

Na osnovu podataka NBS, sektor osiguranja u Srbiji se po stepenu razvijenosti i pored kontinuiranog rasta iz godine u godinu i dalje nalazi znatno ispod proseka zemalja članica Evropske unije. Prema učešću premije u bruto domaćem proizvodu sa oko 2%, Srbija još nije dostigla nivo u zemljama članicama EU, gde to učešće iznosi oko 7%. Premija po stanovniku u Srbiji je 2021. iznosila 176 dolara, dok je u Sloveniji bila 1.047 dolara.

Na kraju 2022. godine u Srbiji je poslovalo 20 društava za osiguranje. Isključivo poslovima osiguranja bavi se 16 društava, a samo poslovima reosiguranja četiri društva. Isključivo životnim osiguranjem bave se četiri društva, isključivo neživotnim, odnosno i životnim i neživotnim osiguranjem bavi se po šest društava. Posmatrano po vlasničkoj strukturi, od 20 društava, 15 ih je u većinskom stranom vlasništvu.

U strukturi premije u 2022. učešće neživotnih osiguranja iznosilo je 78,6%, dok se učešće životnih osiguranja smanjilo sa 22,7% u 2021. na 21,4% u 2022. usled većeg nominalnog rasta premije neživotnih osiguranja od rasta premije životnih osiguranja.

U strukturi ukupnog portfelja pet vrsta neživotnih osiguranja učestvuju sa 66,8%: dobrovoljno zdravstveno osiguranje, osiguranje motornih vozila – kasko, osiguranje imovine od požara i drugih opasnosti, ostala osiguranja imovine i osiguranje od odgovornosti za upotrebu motornih vozila.

Osiguranje od odgovornosti za upotrebu motornih vozila – AO u 2022. zadržava vodeće učešće u ukupnoj premiji sa 29,1%, a zatim slede životna osiguranja

[27] Detaljnije: N. Petrović Tomić, *Pravo osiguranja, Sistem, Knjiga I*, Službeni glasnik, Beograd 2019, str. 276–280; P. Marano, „Nova nadzorna paradigma: kultura nošenja rizika i etički kodeks", Pravo osiguranja, uprava i transparenstnost – osnove pravne sigurnosti, Palić, 2015, str. 171–175.

[28] I. Tošić, „Uticaj Direktive Solventnost II na sektor osiguranja u Evropi", *Godišnjak Fakulteta pravnih nauka*, br. 7/2017, str. 301–313.

[29] Detaljnije o Direktivi Solventnost II: M. Dreher, *Trearies on Solvency II*, Springer Vergal, Berlin, 2015, str. 345–424.

sa 21,4% i imovinska osiguranja sa 19,9%. Učešće DZO je sa 5,8% u 2021. poraslo na 7,4% u 2022. godini, što je rezultat rasta ove premije od čak 43,5%

Uporedni prikaz sektora osiguranja 2004/2005, 2015. i 2021/2022.

Pokazatelj	**2004/2005.**	**2015.**	**2021/2022.**
Ukupna premija	433 mil USD	727 mil USD	1,3 mlrd USD
Premija po stanovniku	50 USD	102 USD	179 USD
Učešće premije neživotnih osiguranja u ukupnoj premiji	90,5%	76,1%	78,6%
Učešće premije životnih osiguranja u ukupnoj premiji	9,5%	23,9%	21,4%
Broj društava za osiguranje	19	24	20
Vlasnička struktura – strana	5	18	15
Vlasnička struktura – domaća	14	6	5
Tehničke rezerve	11,5 mlrd din	131,0 mlrd din	229,7 mlrd din

IV. Uloga Udruženja osiguravača Srbije u promovisanju delatnosti osiguranja

Društva za osiguranje i reosiguranje okupljena su u okviru profesionalne asocijacije – Udruženja osiguravača Srbije (dalje: UOS). Osnovna specifičnost UOS u odnosu na druge privredne asocijacije ogleda se u poverenim javnim ovlašćenjima. Naime, u svim ili gotovo svim zakonodavstvima osnovano je telo – Garantni fond, radi obezbeđenja obeštećenja za štete nastale u saobraćaju kada iz određenih razloga osiguravajuće pokriće ne deluje.[30] Obaveza osnivanja Garantnog fonda uvedena je Drugom direktivom o osiguranju od građanske odgovornosti za upotrebu motornih vozila (Direktiva 84/5/EEZ), radi jednake i bolje zaštite žrtava saobraćajnih nezgoda.[31] I naš zakon o obaveznom osiguranju u saobraćaju sadrži odredbe o Garantnom fondu.[32] Garantni fond je od osnivanja bio u nadležnosti UOS. Reč je o javnom ovlašćenju koje je neodvojivo od delatnosti osiguranja, a koje se vrši u najboljem interesu oštećenih lica.[33] Slučajevi kada postoji obaveza fonda u našem pravu su: šteta od neosiguranog vozila, šteta od nepoznatog vozila i stečaj osiguravača. Garantni fond zaokružuje sistem zaštite trećih oštećenih lica u saobraćaju i pruža gotovo bezuslovnu zaštitu svim licima koja su oštećena upotrebom motornog vozila, a tu štetu ne mogu

[30] N. Petrović Tomić, *Pravo osiguranja, Sistem,* str. 583; M. Ćurković, „Štete nanesene strancima u Jugoslaviji od nepoznatih i neosiguranih motornih vozila", *Osiguranje i privreda*, br. 5, 1979, str. 49–52.

[31] N. Petrović Tomić, *Pravo osiguranja, Sistem, Knjiga I*, str. 610–611.

[32] *Službeni glasnik RS*, br. 51/2009, 78/2011, 101/2011, 93/2012 i 7/2013 – Odluka US.

[33] N. Petrović Tomić, *Osnovi prava osiguranja, Drugo, dopunjeno izdanje*, Pravni fakultet Univerziteta u Beogradu, Beograd, 2023, str. 256.

nadoknaditi od društva za osiguranje: nepoznata vozila, neosigurana vozila i vozila osigurana kod društva u stečaju. Nema razlike u kriterijumima za naknadu štete i brzini likvidacije u odnosu na društva za osiguranje. Kod šteta koje su pričinjene od strane nepoznatih vozila nadoknađuje se šteta isključivo ukoliko je bilo povreda lica, zbog brojnih malverzacija sa ovim pravom u prošlosti.

Osim funkcije Garantnog fonda, UOS obavlja i sledeće značajne zadatke.

Funkcija Biroa zelene karte: Udruženje je član Sistema zelene karte u Briselu, koji čini 50 mahom evropskih zemalja.[34] Taj sistem omogućava kretanje vozila unutar granica sistema uz priznavanje domaćih polisa osiguranja AO, bez obaveze posedovanja skupih graničnih osiguranja. Podsećamo da je UOS od juna 2011. godine potpisnik Multigarantnog sporazuma (MGA), odnosno član Podsistema registarske oznake unutar Sistema zelene karte, kojim je vozačima vozila uobičajeno stacioniranih u Srbiji omogućen nesmetan ulazak u države koje su takođe potpisnice ovoga sporazuma, bez kontrole zelene karte. Time su građani Srbije u potpunosti izjednačeni s građanima EU i još nekoliko zemalja potpisnica Sporazuma, što znači da je UOS svojim valjanim radom već 2011. godine postigao standarde potrebne za pristup Sporazumu.

Zahvaljujući finansijskoj disciplini u likvidaciji šteta koja naša vozila pričine u inostranstvu naša zemlja je stalni član Sistema zelene karte i čak ima svog predstavnika u najvišim organima njegove uprave. Sistem podrazumeva dve funkcije, obradu, likvidaciju i refundaciju šteta koje pričine inostrana vozila na teritoriji naše zemlje, odnosno plaćanje šteta koje pričine naša vozila u inostranstvu.

Funkcija Informacionog centra: prikuplja podatke o polisama osiguranja od auto-odgovornosti, kao i štetama iz ovog osiguranja, sa dva osnovna cilja: 1) formiranje relevantne statistike za formiranje cena AO, koja će naročito biti upotrebljiva u periodu liberalizacije 2) vođenje bonus/malus sistema gde se u momentu izdavanja

[34] Sistem zelene karte nastao je na osnovu principa utvrđenih Preporukom br. 5, koju je 1949. godine sastavila radna grupa formirana od strane Ekonomske komisije UN za Evropu. Preporuka je upućena vladama država Evrope, s ciljem da se ostvari uticaj na osiguravače da zaključe sporazume sa osiguravačima drugih zemalja. Preporuka sledi dva cilja. Prvi je izjednačavanje saobraćajnih nezgoda sa elementom inostranosti s domaćim saobraćajnim nezgodama u pogledu naknade štete. Drugi cilj je zaštita vlasnika ili vozača motornog vozila u inostranstvu. Osnovni principi Preporuke su: 1) osiguravači osnivaju organizaciju koja se zove Biro, koja odgovara za fukcionisanje sistema zelene karte u izvršenje obaveza osiguravača; 2) Biro obezbeđuje osiguravačima ispravu o osiguranju – zelenu kartu, a oni je distribuiraju svojim osiguranicima; 3) isprava potvrđuje osiguranje od odgovornosti i obezbeđuje imaocu isto pokriće kakvo ima u državi registracije; 4) štete koje izazove imalac zelene karte u posećenoj državi isplaćuje Biro te zemlje, a njih zatim refundira Biro države koji je izdao zelenu kartu. Polazeći od načela iz Preporuke, predstavnici nacionalnih biroa zemalja članica sistema zelene karte izradili su tipski sporazum, na osnovu koga su zaključivani sporazumi između biroa. Bilateralni sporazum koji su zaključivali biroi na osnovu tipskog sporazuma zove se i Londonski sporazum, jer je usvojen na Generalnoj skupštini Saveta biroa održanoj u Londonu. Detaljnije: M. Ćurković, *Ugovori o obveznom osiguranju u cestovnom prometu,* Savjet stručne biblioteke „Croatia" zajednica osiguranja imovine i osoba, Zagreb 1989, str. 100.

polise društvo obraća UOS-u i u svakom trenutku dobija povratnu informaciju o pripadajućem bonusu/malusu, čime se omogućava promptno izdavanje polise sa adekvatnim tarifiranjem.

Funkcija promocije sektora osiguranja i zaštite interesa osiguravača: UOS sprovodi koordinisan nastup svih osiguravača ka društvenoj zajednici i zakonodavcu, gde se naročito ističe mogućnost jedinstvenog uticaja na kreiranje zakonodavnog ambijenta od interesa za osiguravače. Naročito ističemo ulogu UOS u promovisanju društveno odgovornog poslovanja na nivou delatnosti i zalaganje za unapređenje zaštite korisnika usluge osiguranja.

Funkcija utvrđivanja jedinstvene tarife premija i uslova osiguranja od auto-odgovornosti: Uloga UOS je da utvrdi jedinstvenu minimalnu premiju i zajedničke uslove osiguranja od auto-odgovornosti, a NBS daje saglasnost na njih. Tako će biti do trenutka liberalizacije tržišta, za koji je krajnji rok prijem u EU.

V. Zaključak

Na osnovu uvida u istorijski razvoj osiguranja na ovim prostorima i poznavanja domaćeg tržišta, moguće je izneti pretpostavke o tendencijama razvoja. Prvo, tržište osiguranja je jedno od najbrže rastućih, s obzirom na njegov značaj ne samo u ostvarivanju zaštitne uloge shvaćene u klasičnom smislu, već generalno u „društvu rizika", kako se sve češće naziva posttehnološko društvo. Ekonomska i zdravstvena kriza koja je zadesila ceo svet tokom pandemije virusa kovid, kao i u postkovid fazi, na koju se nadovezala energetska kriza, koja je podstakla i inflatorni pritisak, pokazala je da ubuduće treba više investirati u mehanizme zaštite od rizika. U takvim okolnostima od tržišta osiguranja očekuje se da pokaže spremnost da preuzme ulogu lidera upravljanja globalnim rizicima. Osiguravači se nalaze pred ozbiljnim izazovom, jer su u pitanju rizici bitno drugačiji od onih koje oni inače primaju u pokriće. Sve što već znaju o rizicima i sva statistička mašinerija nemoćni su pred brojnim rizicima globalnog karaktera koje treba pokriti po cenovno prihvatljivim uslovima. Budući da nam iskustvo, a još više ekonomski pokazatelji govore da su kapaciteti tržišta (re) osiguranja limitirani, ekonomski održivo osiguranje zahtevaće partnerstvo s državom češće nego ikada u istoriji osiguranja. Kada je reč o domaćem tržištu osiguranja, kojim će se tempom ostvarivati rast, zavisi najpre od izmena regulatornog okvira, kako u statusnom delu (dalja implementacija direktive Solvency II), tako i u nadzornom delu i delu zaštite korisnika usluga.

Drugo, kapital poverenja bez koga delatnost osiguranja ne može da opstane treba da se neguje iz dana u dan i pravnim i vanpravnim putevima. Kada govorimo o vanpravnim mehanizmima sticanja i održavanja socijalnog kapitala kakvo je poverenje, neophodno je da u sektoru osiguranja poslovanje bude zasnovano i na uvažavanju standarda poslovne etike i principa društveno odgovornog poslovanja. Drugim

rečima, treba investirati u fer i korektno postupanje prema klijentima osiguranja, na dnevnom nivou. Naglašavamo da i NBS u svojstvu ne samo tela nadzora već i regulatora na tržištu osiguranja ima jasan stav kada je reč o unapređenju poslovanja u delatnosti osiguranja. Iz Smernica koje je NBS usvojila nakon donošenja Zakona o osiguranju iz 2014. godine jasno proizlazi da ona od subjekata na tržištu osiguranja očekuje da razvijaju dobru praksu fer postupanja prema klijentima. Uostalom, i nadzorna funkcija obuhvata ne samo kontrolu zakonitosti poslovanja, već i dobre običaje i poslovnu etiku.

Pogled na istorijski razvoj osiguranja na našim prostorima sugeriše da tržište osiguranja nije imuno na dva faktora, koji su kod nas uslovili turbulentan poslovni ambijent. To su društveno-političko okruženje i ekonomska situacija u zemlji. Što se prvog faktora tiče, dostigli smo određeni nivo svesti o značaju preventive i upravljanja rizikom. Takođe, pravni okvir više ne ograničava osiguravače i reosiguravače kako je to nekada bio slučaj, dok NBS vršenjem nadzorne i regulatorne funkcije na tržištu osiguranja obezbeđuje finansijsku disciplinu i zaštitu korisnika usluga. Ostalo je da treba raditi na buđenju svesti građana, potencijalnih korisnika usluga o korisnosti osiguranja kao nužnog pratioca svih rizičnih situacija. Strategija koja bi dovela do veće zastupljenosti osiguranja od interesa je i za UOS, koje radi na promociji interesa industrije. Može se očekivati da će Udruženje nastaviti sa promocijom sektora osiguranja kako bi korisnici počeli da na osiguranje gledaju kao na investiciju, a ne kao na trošak.

Da zaključimo: pre usvajanja detaljne zakonske regulative osiguravači su u osiguranju videli izvor dobiti i nisu mnogo vodili računa o obavljanju delatnosti osiguranja u interesu osiguranika. To je dovelo do velikog broja stečajeva i likvidacija. Tek u devetnaestom veku dolazi do razvoja osiguranja i reosiguranja u pravom smislu te reči. To se naročito odnosi na Nemačku, čija društva su se udruživala u cilju preuzimanja poslova osiguranja koji prevazilaze granice jedne zemlje. Naporedo sa tim procesom, dolazi do usvajanja prvih zakona kojima se uređuje ugovor o osiguranju. Naročito je značajna pojava zakona o ugovoru o potrošačkom osiguranju, koji usvajaju principe za koje možemo reći da su se i danas, u nešto izmenjenom obliku, zadržali. Do usvajanja tih zakona, pogotovo u Nemačkoj i Francuskoj, na ugovor o osiguranju se primenjivalo samo opšte ugovorno pravo, što je ondašnje potrošače usluga osiguranja činilo lakim plenom osiguravača.

Dakle, slažemo se sa profesorkom Petrović Tomić da istorijski razvoj osiguranja kao privredne delatnosti može da se posmatra kao civilizacijski fenomen, na čije uobličavanje je uticala potreba za sigurnošću i zaštitom. Kako su izmenjeni uslovi života krajem XIX i početkom XX veka učinili brojne aspekte života savremenog čoveka rizičnim, to je njegova tražnja za osiguranjem počela da raste. Dobro osmišljeni sistem osiguranja treba da potencira potrebu za zaštitom od rizika i da ponudi prilagođene pakete osiguravajuće zaštite.

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IMPORTANCE OF INSURANCE AND PROSPECTS OF DEVELOPMENT IN SERBIA

REVIEW ARTICLE

Abstract

Insurance is an activity with a long-established tradition in Serbia that goes as far back as Dušan's Code. The author attempts to establish the developmental path that insurance has taken from the first communities of risk to insurance companies, as institutional investors that play a significant role in modern economy. Special attention is paid to the shift to the market mechanism and the transition that meant the establishment of the insurance sector as highly regulated and, above all, profitable. The paper does not leave out the role of the Association of Serbian Insurers, as an umbrella organization that has significantly contributed to the promotion and protection of the interests of the insurance industry. In the conclusion, proposals are made as to how the market should develop pro futuro, with an emphasis on the fact that insurance is a growing industry that makes an important part of sustainable development.

Key words: *insurance, Insurance Law, market, profitability, protection of insurance beneficiaries, transformation of capital.*

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I. Development of insurance in Serbia until the adoption of the Insurance Law of 2004

1. Developmental path of insurance until the Second World War: from a game of chance to gradual regulation

In difference from the modern age, which is linked to the development of insurance as an activity that provides protection against risks and is characterized by regulation on all levels, before the end of the 18th i.e. the beginning of the 19th century, we cannot talk about insurance in the true sense of the word, nor about insurance companies. Modern insurance, which is science-based and thoroughly regulated, as well as managed by licensed and qualified persons, belongs to the second half of the 19th century.[2] In order to get to that form of organization, insurance went through a specific developmental path, which we will discuss in this paper. We will focus only on the history of insurance companies in our region, which does not necessarily mean the territory of Serbia, but also the territories that were connected to Serbia anywise. Two patterns that we have observed while researching into the development of the insurance sector, and especially insurance companies, concern historical circumstances and the socio-political context.

Insurance, as an activity based on the community of risk, records the beginnings of its development in Serbia as early as the Middle Ages. Namely, the first indications of what we will later call compulsory insurance can be found in Dušan's Code from 1349. Although the Code does not mention the word insurance verbatim, it establishes collective responsibility for the compensation of loss, that is, the transition from tribal and village communities of risk to the first risk communities. However, insurance, like most economic activities, could not develop in the true sense until the end of the 19th century.[3]

[2] In more detail about the history of insurance: Z. Petrović, V. Čolović, D. Knežević, *Istorija osiguranja u Srbiji, Crnoj Gori i Jugoslaviji do 1941. godine*, Belgrade, 2013.

[3] "The idea of insurance - which was developed as early as in the Ancient World - is to create a community of risk, comprised of all individuals jeopardized by the same hazard, to enable the distribution of risk among all members. The community of risk, therefore, rests on the idea of *reciprocity and solidarity*. But the real life of the community of risk and the emergence of insurance is connected to the emergence of the calculus of probabilities and the law of large numbers. *The law of large numbers* is based on the establishment of certain regularities in the occurrence of certain events. This is possible based on statistical data on a large number of cases. The key is to be able to identify regularities in repetition. *The greater the number of observed cases, the greater the regularity in the occurrence of an event, and the smaller the deviation*. If an event is observed individually, it is a case; where a large number of cases is observed, particular regularities, that is, patterns (a pattern occurs in a mass of cases!) follow. Practice has shown that insurers can rely more on the application of the law of large numbers if the number of observed cases is greater. Therefore, by applying the law of large numbers, the average value of the observed quantity is determined. For insurers, owing to the application of the law of large numbers, running the insurance

One of the first laws important for the insurance industry in Serbia was the Serbian Civil Code, the adoption of which was initiated by Prince Miloš Obrenović in 1829. The Code was adopted only 15 years later, more precisely in 1844 during the rule of Prince Aleksandar Karađorđević, and was written on the model of the Austrian Civil Code from 1811. The Serbian Civil Code mentions insurance in two articles (Articles 798 and 799). What makes them worth mentioning is their importance for the insurance in modern conditions too. Namely, *the Serbian Civil Code regulates the principle of the influence of the insured's fault on the caused damage, which is one of the basic principles of insurance law*.[4] Considering its role in the moralization of insurance and its wider social acceptance, the Serbian Civil Code is an indispensable source in the history of insurance. The second article regulates the consequences of insurance of an already occurred risk, which is also one of the most important rules of insurance.

Almost half a century later, in 1892, the Law on Insurance Companies was passed, which regulated solely the operations of foreign insurance companies that were in fact the only insurance companies in our region,[5] and later, in 1898, the Law on Joint Stock Companies was passed, which regulated the operations of domestic insurance companies.[6]

At that time, the Serbian language did not have the word for insurance, so the term of Italian origin ASIKURACIJA was used, while the agents of insurance companies were called ASIKURANTI.

The first insurance in Belgrade was concluded in 1839 by a certain Lazar Zuban, a judge of the Court of Appeal. It was recorded that after only a few days his house burned down in a fire and that he collected compensation of 175 thalers from the insurance company "Assicurazioni Generali".[7]

business has become much simpler. *The probability* of the occurrence of an event is defined as the ratio between the number of favorable outcomes and the total number of outcomes regarding its realization. By applying the calculus of probabilities, the degree of probability of the occurrence of a certain hazard, that is, the insured risk, is determined. Along with the law of large numbers, the calculus of probabilities is the scientific basis of the technical organization of insurance. For the greater credibility of the results of the application of the calculus of probabilities, the insurance portfolio needs to be as large as possible." V.: N. Petrović Tomić, *Pravo osiguranja, Sistem, Volume One*, Official Gazette, Belgrade, 2019, pp. 74-75.

[4] Predrag Šulejić, *Pravo osiguranja, Peto izmenjeno i dopunjeno izdanje*, Faculty of Law, University of Belgrade, Belgrade, 2005, p. 34.

[5] This is probably one of the reasons why there was significant influence on insurance, and particularly on reinsurance, from abroad. Also V. Čolović, *Osiguravajuća društva, Zakonodavstvo Srbije, pravo EU, uporedno pravo,* The Institute for Comparative Law, Belgrade, 2010, p. 30.

[6] In the beginning, insurers considered insurance a source of profit and did not pay much attention to the performance of insurance activities in the interest of the insured. It was to their advantage that there was no regulation that would apply to insurance companies. This led to a large number of bankruptcies and liquidations.

[7] Vladimir Čolović, *Osiguravajuća društva, Zakonodavstvo Srbije, pravo EU, uporedno pravo*, The Institute for Comparative Law, Belgrade, 2010, p. 29.

The first domestic insurance company "Belgrade Cooperative" was founded in 1897, and its first president was Đorđe Vajfert. It is interesting that already in the first year of operation, that cooperative achieved notable results and issued 482 life insurance and 858 fire insurance policies. The state supported that project and entrusted the first domestic insurance company with the insurance of all government buildings for the period of 20 years. It was the first step in the emancipation of the state when it comes to insurance.

In his work "Opinions on Insurance", Čedomilj Mijatović, Minister of Finance of the Kingdom of Serbia, wrote something that seems extremely important even today:[8]

"I would like it to come, and I hope a fortunate time will come in the 20th century, when every Serbian groom will gift his bride a document on their wedding day that guarantees her livelihood in the event of his death, when every father will, on the day his child is born, ensure that the child, when becomes of age, receives at least so much capital as to buy tools for work, as well as a dowry for the girl, that every unmarried man will consider it a dear and compelling duty to ensure that on the day of his death, at least 1.000 dinars are deposited to his municipality for charitable goals, a time when there will be no house that is not insured against fire, no field, no vineyard, no orchard that is not insured against loss from natural disasters, and when not only every office worker but also every farmer and every artisan will be able to secure a pension for his wife and children, and finally when every working man will secure his own upkeep in case of old age or temporary incapacity, not as a gift or alms from the municipality or the state, but as a result of his efforts and his fair contract with a domestic insurance institution."

The third decade of the 21st century is slowly passing by, and we are still waiting for this fortunate time to come.

During the Balkan wars, insurance companies extended their practice to the so-called war risk, based on a special premium. The day after the beginning of the First World War, a law was enacted that stipulated that the premium for war risks did not have to be paid in advance. The companies were obliged to assume the war risk for all insureds, and every insured who wanted his insurance to remain valid had to make a statement about it in advance, within 15 days from the entry into force of the law, with a promise to pay the premium later. The war premium would thus be paid by the insureds who survive the war, which would help the insurance company to pay the insured sums to the families of those who were killed in the war. After many post-war disputes, the state passed a regulation obliging the companies to also pay the insured sums to those who did not make a statement, and that precedent cost the insurance companies dearly.

Before World War II, there were 28 insurance companies in Yugoslavia. Two thirds were branches of foreign insurance companies.

[8] Available at: https://zivotnoosiguranje.co.rs/misljenja-o-osiguranju-19-vek-srbija/ Accessed on: 01.04.2024

Up until World War II, insurance was like games of chance. Insurance in pre-war Yugoslavia did not know for prevention and repression, so insurers did nothing to prevent and mitigate loss. Only the fire contribution was required, and in such circumstances, fictitious losses could not be avoided. Until 1937, there was no state control of insurance as recognized by all legal systems today. Insurance, in fact, served to distribute profits, i.e. dividends to shareholders, and not to protect the interests of clients. This led to the acceptance of perilous business conducted by insufficiently competent persons, which resulted in the bankruptcy of one of the largest Austrian companies at the time, "Fenix", which had the largest life insurance portfolio in Yugoslavia.[9] In response to the great mistrust of insureds due to the downfall of "Phoenix", the Decree on Supervision of Insurance Companies was adopted, which came into force in 1937. It laid the foundations of what is still a trait of the insurance system today: state control, which related to the placement of the insurance companies' reserves, the prohibition of property alienation and encumbrance, etc.[10]

2. Insurance after the Second World War – state interventionism

According to professor Šulejić, the period after the Second World War in Yugoslavia can be divided into five stages, which are suitable for analysis given the fact that the field of insurance experienced significant changes caused by the changes in the socio-political system.[11] These are the following:

The system of centralized state insurance, valid from 1945 to 1961. Until the end of the Second World War, the market of Yugoslavia was dominated by foreign insurance companies, and on 1 March 1945, a decision was issued to merge all confiscated insurance undertakings into the state insurance institute for insurance and reinsurance. During the same year, that institute was renamed the *State Institute for Insurance and Reinsurance* (hereinafter: SIIR), after which all insurance undertakings became state-owned. In 1947, the government passed the Decree on the Organization and Operation of SIIR. SIIR falls within the jurisdiction of the Ministry of Finance and becomes an exclusive insurer, a monopolist so to speak, for the insurance against fire and other risks, all mandatory insurance business (except social), an exclusive reinsurer for all insurance operations, and it also carried out the activities of investment of long-term assets from its technical and other reserves into government securities. Since there was no work for private insurers whose assets were not confiscated on the basis of the Decree, SIIR became the only insurer and

[9] D. Mrkšić, Z. Petrović, K. Ivančević, *Pravo osiguranja*, Business Academy, Novi Sad, 2006, p. 23.
[10] P. Šulejić, *Pravo osiguranja, Peto izmenjeno i dopunjeno izdanje,* Faculty of Law, University of Belgrade, Belgrade, 2005, p. 35.
[11] P. Šulejić, *Pravo osiguranja, Peto izmenjeno i dopunjeno izdanje*, Faculty of Law, University of Belgrade, Belgrade, 2005, pp. 35–43.

reinsurer in the country in 1947.[12] In that period, insurance was a public service with a strictly centralized organization.

The system of decentralized communal insurance was in force from 1962 to 1967. The period of decentralization begins with the Law on Insurance Institutes and Insurance Communities from 1962.[13] That is when the establishment of more insurance institutes, i.e. insurance communities, began. They were usually established for the territory of one or more municipalities and formed the Republic Insurance Community, and these communities together formed the system of the Yugoslav Community for Insurance and Reinsurance. The insurance institutes engaged in all types of property and personal insurance in the territory of municipalities, while insurance communities were reinsurers of the institutes. The idea was to achieve a more rational use of the insurance capacity by decentralizing SIIR. However, that goal was not achieved, because the decentralization was only of a cosmetic nature, while essentially the unchanged system was kept.

The system of commercialized market insurance was in force from 1968 to 1974. During 1968, the reorganization of the insurance sector was carried out. Insurance carriers are insurance institutes, which can be established by labor organizations, socio-political communities and citizens. Insurance institutes were economic organizations that carry out insurance as an activity of special social interest.[14] They were conceived of as companies that have their own assets and are independent. But since insurance was declared an activity of special social interest, in addition to the self-management of the workers' collective, there was also social management in which the insureds and the founders of the institutes participated.[15] The insurance functions are the collection of funds for the payment of indemnity in case of occurrence and participation in taking preventive and repressive measures. The institutes freely choose the reinsurers and are responsible for the performance of the obligations assumed under the insurance. The Basic Law on Insurance and Insurance Organizations from 1967 also envisaged the possibility of founding economic organizations that carry out only brokerage, agency, loss assessment and other insurance-related services.[16]

Although many objections can be made as regards the system of insurance institutes, from today's point of view, that system has brought several changes, which can rightly be said to be reformatory. In short, insurance then for the first time

[12] V. Čolović, *Osiguravajuća društva, Zakonodavstvo Srbije, pravo EU, uporedno pravo,* p. 31.
[13] *Official Gazette of SFRY,* no. 27/61.
[14] V. Čolović, *Osiguravajuća društva, Zakonodavstvo Srbije, pravo EU, uporedno pravo,* p. 32.
[15] P. Šulejić, *Pravo osiguranja, Peto izmenjeno i dopunjeno izdanje*, Faculty of Law, University of Belgrade, Belgrade, 2005, p. 37.
[16] It is important to note that the consolidation of the insurance sector was also carried out, given the fact that instead of 128 insurance institutes, as there were in 1967, 11 institutes were formed at the end of the same year.

begins to function according to the principles of the market mechanism, territorial monopolies are abolished and the principle of voluntary insurance is adopted, except in cases prescribed by law. That system was exposed to criticism as early as 1971, during the period of constitutional amendments. *The insurance system based on the principles of the 1974 Constitution* is characterized by the following: risk communities are formed as a new form of organization based on the principles of associated labor and agreement economy; the function of loss compensation and prevention are equated under the Constitution and the law; mutual relations are regulated by self-management agreements; etc.

With the Law on Fundamentals of the System of Property and Personal Insurance from 1990, the previous communities are transformed into new financial organizations that have the character of a market economy entity.[17] It could be said that this is when the market insurance system began, since the foundations of market operations were laid. But truth be told, that was only the beginning of the market-based economy model that would be introduced under the Insurance Law of 2004.[18]

To conclude: after the dissolution of the SFRY, all republics introduced market-based economy systems. During the 1990s, their economic growth and development differed to a great extent depending on whether there were war operations on their territories or not. For Serbia, that time was extremely complex and difficult, marked by UN economic sanctions from 1992 to 1996, hyperinflation, NATO bombing in 1999, an unsuccessful and fundamentally wrong concept of transition, factors that left long-term negative consequences on the country's economic development and living standards of citizens.

Social capital and self-management were the peculiarity and basis of the economic environment and business activity in SFRY. Social capital did not have a clearly defined titleholder, which had a negative impact on productivity, efficiency and economy, and therefore on competitiveness in relation to companies with other form of ownership. Already at the end of the 1980s, the ownership transformation of social capital into private, that is, state capital, began. It was carried out by the implementation of various laws with more or less successful final result. Until 2021, social capital still existed in certain insurance companies, which comprised a significant part of the insurance market in Serbia. Thus, the share of social capital in the structure of the total capital in "Dunav Insurance Company" was 51,86%, in "Dunav Re" 4,58%, and in "Triglav osiguranje" a.d.o. Belgrade 0,12%.

The possession of inherited social capital in the structure of total capital made it difficult for insurance companies to operate and placed them in an unequal

[17] *Official Gazette of SFRY*, no. 17/90, 82/90 and *Official Gazette of FRY,* pp. 31/93 and 24/94.
[18] *Official Gazette of RS*, no. 55/2004, 70/2004, 61/2005, 85/2005 – other law, 101/2007, 63/2009 – Decision of the Constitutional Court, 107/2009, 99/2011, 119/2012, 116/2013 and 139/2014.

position in relation to direct competitors, but also to other participants in the financial market. The aforementioned situation influenced the Government of the Republic of Serbia to adopt the Law on Amendments to the Insurance Law late in April 2021. The said law succeeded to reconcile various provisions of previous laws that dealt with the issue of social capital in insurance companies, as well as the interests of insurance companies, the state and the employees. Namely, it envisaged a change in the ownership rights in the social capital by transferring 70% of the social capital to the Republic of Serbia, up to 25% of the social capital is transferred to the employees with no compensation (so-called free shares), while at least 5% of the social capital is transferred to the Shareholders Fund.

By implementing the law, the mentioned insurance companies finally have a clean capital structure, which enables them to continue operating in a modern corporate environment, while the employees received free shares, which they could immediately dispose of.

II. Regulation and stabilization of insurance sector

Major changes in the insurance sector are brought about by adoption of the Insurance Law of 2004, which creates the conditions for the development of the insurance market in the true sense of the word, and the supervision is entrusted to the National Bank of Serbia.[19] The same is the case under the applicable Insurance Law.[20] It is emphasized that the supervision is performed to protect the interests of the insureds and other insurance beneficiaries.[21] This is a modern tendency, as the protection of the weaker party to the insurance contract can be notably improved if it is set as the goal of the supervision.[22]

The NBS finds a situation in the insurance sector characterized by: the absence of good practice in business, adequate management, safety of investment of insurance funds for the purpose of settling the obligations towards insureds and third parties, absence of transparency of work, of regular reporting, incompleteness of business books, hence the unreliability of the presented data, transfer of insurance funds to associated companies, unduly settlement of obligations towards insureds and third parties, double issuance of policies, wrongly set business goals of

[19] At the time of the adoption of that law, and in particular during the public discussion, the proponents emphasized the transfer of supervisory powers from the Ministry of Finance to the NBS as one of the most significant novelties. The key argument of the proponents was the unification of the supervisory function over all financial institutions. According to their belief, the NBS is much more competent in supervising the financial market. V.: N. Petrović Tomić, *Pravo osiguranja*, sistem, p. 225.

[20] *Official Gazette of the RS*, no. 139/2014 and 44/2021.

[21] R. Ayadi, C. O' Brian, *The Future of Insurance Regulation and Supervision in EU*, CEPS, 2006, p. 6.

[22] In more detail on the protection of the weaker party: M. Glintić, „Zaštita prava slabije ugovorne strane u skladu sa principima evropskog ugovornog prava osiguranja", *Strani pravni život*, no. 3/2020, pp. 57-73.

insurance companies - instead of protecting the interests of insureds and insurance beneficiaries, the goal was to protect the interests of owners, furthermore, a high degree of illegality in business, a significant number of legal entities operating in the insurance sector without a license to operate.[23] Obligations towards the insureds were funded from current inflows, which means that the premiums collected for new policies served to settle obligations under previously issued policies, instead of their safe investment.[24] All this contributed to the complete loss of public trust in this sector.

In order to achieve the set goal in the stated circumstances, the NBS directed its activities in several directions:

- Stabilization of the insurance sector
- Restoring public trust in the insurance sector
- Creation of the basis for the development of the sector
- Creation and development of the supervisory function
- Continuous education of employees.

Based on the NBS report for 2004, the level of development of the insurance sector in Serbia was significantly below the average of the European Union member states. The share of the premium in the gross domestic product in Serbia that year was below 2%, while in the 25 EU member states it was 8,3%, and in Eastern European countries it was approximately 3%. According to the premium per capita of around 50 USD, Serbia ranked only 70th in the world. Switzerland ranked first with 5.716 USD, while Slovenia was 28th with 920 USD. According to the total premium, in 2004 Serbia ranked 66th with 433.000.000 USD.

A large number of insolvent insurance companies was closed. Their number decreased from 40 in 2004 to 19 in 2005. Let's not forget that at the end of 1996, there were 77 insurance companies and three reinsurance companies on our market. Many of them lost their operating license in the period up to 2004.

In 2005, 19 insurance companies operated in the insurance market, 16 of which were engaged only in insurance activities, two only in reinsurance activities, and one carried on both insurance and reinsurance business. In 2005, the number of other participants in the insurance market – brokers and agents - also recorded a drop by 50%.

In the premium structure in 2005, the share of non-life insurance was 90,5%, while the share of life insurance accounted for only 9,5%. In the structure of non-life insurance premiums, property insurance accounted for 33%, followed by motor third party liability insurance with 31%.

[23] In developed insurance markets the situation is completely different. V.: R. H. Jerry II, *Understanding Insurance Law*, Lexis Nexis, New York 2007, 1021; M. Ćurković, V. Miletić, *Pravo osiguranja Europske ekonomske zajednice,* Croatia osiguranje, Zagreb 1993, p. 29.

[24] P. Šulejić, *Pravo osiguranja, Peto izmenjeno i dopunjeno izdanje*, Faculty of Law in Belgrade, Belgrade, 2005, pp. 123–128.

A significant indicator of the results of the activities undertaken to stabilize and regulate the insurance market is the ratio of the increase in technical reserves to the total premium. The increase in technical reserves of 99% (from 11,5 billion dinars in 2004 to 22,8 billion dinars in 2005) is significantly higher than the increase in the total premium of 53%, which suggests that companies have started to abandon the bad practice of inadequate formation of technical reserves. In addition, the quality of investment of technical reserves has improved in terms of less investment in real estate, associated legal entities and securities that are not traded on the organized market.

Under the Insurance Law from 2014, which is still in force, better mechanisms have been created for the protection of citizens, as well as all the necessary prerequisites for the provision of modern insurance services.[25] The Law provides for proper informing of citizens prior to concluding a contract, as well as information on who they should contact in order to exercise their rights under the concluded insurance contract, on the manner and deadlines for submitting a claim for indemnity, cancellation of the contract, as well as on the ways to protect their rights with the competent authorities.[26] At the same time, new forms of technical reserves and stricter methods for the calculation of existing forms of reserves were introduced, doubling their amount in less than a decade. This provides a strong message to all insurance service users that the paid premium will be purposefully used and kept.

A management system with four main functions - actuarial, risk management, internal audit and internal control was introduced, so in addition to an intensive external control, a protection and monitoring mechanism is implemented and stimulated within the insurance company.[27]

A legal framework very similar to that in developed European countries was created, which provided for a stimulating and stable environment for the construction and further progress of the insurance sector.[28] Namely, the 2014 Law almost completely took over the EU Directives integrated into the Solvency I regime, and even some parts of the Solvency II Directive, so that our system is in an intermediate stage, with the task of all market participants to prepare for the full implementation of the Directive Solvency II (the deadline for its full application is the admission of our country to the EU).[29]

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[25] Narjess Boubakri, „Corporate governance and issues from the insurance industry", *The Journal of Risk and Insurance,* 2011, Vol. 78, No. 3, p. 502.

[26] In more detail: N. Petrović Tomić, *Zaštita potrošača usluga osiguranja, Analiza i predlog unapređenja regulatornog okvira*, Faculty of Law in Belgrade, Belgrade, 2015, pp. 141–201; A. Keglević, *Građanskopravni aspekti obveze obavještavanja kod potrošačkog ugovora o osiguranju,* doctoral thesis, Faculty of Law of University of Zagreb, Zagreb, 2012, p. 102.

[27] In more detail: N. Petrović Tomić, *Pravo osiguranja, Sistem, Volume I*, Official Gazette, Belgrade 2019, pp. 276–280; P. Marano, „Nova nadzorna paradigma: kultura nošenja rizika i etički kodeks", Pravo osiguranja, uprava i transparenstnost – osnove pravne sigurnosti, Palić, 2015, pp. 171–175.

[28] I. Tošić, „Uticaj Direktive Solventnost II na sektor osiguranja u Evropi", *Godišnjak Fakulteta pravnih nauka*, no. 7/2017, pp. 301–313.

[29] In more detail about the Solvency II Directive: M. Dreher, *Trearies on Solvency II*, Springer Vergal, Berlin, 2015, pp. 345–424.

III. Insurance market in 2022

On the basis of the NBS data, the level of development of the insurance sector in Serbia, despite continuous growth from year to year, is still significantly below the average of the EU member states. According to the share of the premium in the gross domestic product with approximately 2%, Serbia has not yet reached the level of the EU member states, where that share is around 7%. The premium per capita in Serbia in 2021 was 176 dollars, whereas in Slovenia it amounted to 1.047 dollars.

At the end of 2022, 20 insurance companies were operating in Serbia. Sixteen companies are engaged in insurance activities only, and four in reinsurance activities only. Four companies are engaged only in life insurance, six only in non-life, and six companies carry on both life and non-life business. Looking at the ownership structure, out of 20 companies, 15 are majority foreign-owned.

In the premium structure in 2022, the share of non-life insurance was 78,6%, while the share of life insurance decreased from 22,7% in 2021 to 21,4% in 2022 due to the higher nominal growth of non-life insurance premium than the growth of life insurance premium.

In the total portfolio structure, five types of non-life insurance participate with 66,8%: voluntary health insurance, motor insurance - casco, insurance of property against fire and other perils, other property lines and motor third party liability insurance.

Motor third party liability insurance - MTPL in 2022 retains the leading share in the total premium with 29,1%, followed by life insurance with 21,4% and property lines with 19,9%. The share of voluntary health insurance rose from 5,8% in 2021 to 7,4% in 2022, which is the result of the growth of this premium of as much as 43,5%.

Comparative overview of insurance sector 2004/2005, 2015 and 2021/2022

Indicator	2004/2005	2015	2021/2022
Total premium	433 mil USD	727 mil USD	1,3 bn USD
Premium per capita	50 USD	102 USD	179 USD
Non-life premium share in total premium	90,5%	76,1%	78,6%
Life premium share in total premium	9,5%	23,9%	21,4%
Number of insurance companies	19	24	20
Ownership structure – foreign	5	18	15
Ownership structure – domestic	14	6	5
Technical reserves	11,5 bn din	131,0 bn din	229,7 bn din

IV. Role of the Association of Serbian Insurers in promoting insurance industry

Insurance and reinsurance companies are gathered within a professional association - Association of Serbian Insurers (hereinafter: the ASI). The main peculiarity of the ASI in relation to other business associations is reflected in the entrusted public powers. Namely, in all or almost all legislations, a body is established - the Guarantee Fund, for the purpose of securing the compensation for losses incurred in traffic when, for certain reasons, the insurance coverage does not work.[30] The obligation to establish the Guarantee Fund was introduced by the Second Directive on Insurance against Civil Liability in respect of the Use of Motor Vehicles (Directive 84/5/EEC), for the purpose of equal and better protection of victims of traffic accidents.[31] Our Law on Compulsory Traffic Insurance also contains provisions on the Guarantee Fund.[32] The Guarantee Fund has been under the jurisdiction of the ASI since its establishment. It is a public authority that is inseparable from the activity of insurance, and which is carried out in the best interest of the claimants.[33] The cases when there is an obligation of the Fund in our law are: damage caused by an uninsured vehicle, damage caused by an unknown vehicle and bankruptcy of the insurer. The Guarantee Fund integrates the system of protection of the third-party claimants in traffic and provides almost unconditional protection to all persons who sustained damage caused by the use of the motor vehicle, which cannot be compensated by insurance companies: unknown vehicles, uninsured vehicles and vehicles insured by a company in bankruptcy. There is no difference in the criteria for the loss compensation and the speed of settlement compared to insurance companies. In the event of losses caused by unknown vehicles, the loss is indemnified only if there were personal injuries, due to numerous frauds with this right in the past.

Apart from the function of the Guarantee Fund, the ASI performs the following important tasks as well.

The function of the Green Card Bureau: The Association is a member of the Green Card System in Brussels, which includes 50 mainly European countries.[34]

[30] N. Petrović Tomić, *Pravo osiguranja, Sistem,* p. 583; M. Ćurković, „Štete nanesene strancima u Jugoslaviji od nepoznatih i neosiguranih motornih vozila", *Osiguranje i privreda*, no. 5, 1979, pp. 49–52.

[31] N. Petrović Tomić, *Pravo osiguranja, Sistem, Volume I*, pp. 610–611.

[32] *Official Gazette of the RS*, no. 51/2009, 78/2011, 101/2011, 93/2012 i 7/2013 – Decision of the Constitutional Court.

[33] N. Petrović Tomić, *Osnovi prava osiguranja, Drugo, dopunjeno izdanje*, Faculty of Law, University of Belgrade, Belgrade, 2023, p. 256.

[34] The green card system was created on the basis of principles established by Recommendation no. 5, created in 1949 by a working group formed by the UN Economic Commission for Europe. The recommendation was addressed to the governments of European countries, with the aim of influencing insurers to conclude agreements with insurers of other countries. The Recommendation follows to goals. The first one

This system enables the circulation of vehicles within the borders of the system with the recognition of domestic MTPL insurance policies, without the obligation to have expensive border insurance. We remind you that since June 2011, the ASI has been a signatory of the Multilateral Guarantee Agreement (MGA), i.e. a member of the License Plates Subsystem within the Green Card System, which enables drivers of vehicles normally stationed in Serbia to freely enter countries that are also signatories to this Agreement, without green card control. With this, the citizens of Serbia are completely equal to the EU citizens and several other countries that are signatories to the Agreement, which means that already in 2011, with its proper operation, the ASI met standards required for the access to the Agreement.

Owing to financial discipline in the settlement of losses caused by our vehicles abroad, our country is a permanent member of the Green Card System and even has its representative in the highest bodies of its administration. The System includes two functions, processing, settlement and reimbursement of losses caused by foreign vehicles in the territory of our country, i.e. payment of losses caused by our vehicles abroad.

The function of the Information Center: collects data on MTPL insurance policies as well as losses under this insurance, with two main goals: 1) creation of relevant statistics for the formation of MTPL prices, which will be particularly useful in the period of liberalization 2) management of bonus/malus system where at the moment of policy issue, the company addresses the ASI and at any time receives feedback on the associated bonus/malus, enabling prompt policy issue with proper rating.

The function of promoting the insurance sector and protecting the interests of insurers: the ASI carries out a coordinated approach of all insurers towards the social community and the legislator, where the possibility of a unique influence on the creation of a legislative environment of interest to insurers is particularly highlighted. We particularly emphasize the role of the ASI in promoting socially responsible business on the industry level and advocating for the improvement of the protection of insurance service beneficiaries.

is the equation of foreign traffic accidents with domestic traffic accidents in terms of loss compensation. The second goal is the protection of the owner or driver of a motor vehicle abroad. The basic principles of the Recommendation are: 1) the insurers establish an organization called the bureau, which is responsible for the functioning of the green card system and the performance of the insurer's obligations; 2) the bureau provides insurers with an insurance document - a green card, and they distribute it to their insureds; 3) the document confirms liability insurance and provides the holder with the same coverage as he has in the country of registration; 4) losses caused by the green card holder in the visited country are paid by the bureau of that country, and then reimbursed by the bureau of the country that issued the green card. Starting from the principles of the Recommendation, the representatives of the national bureaus of the member states of the green card system drafted a standard agreement, on the basis of which the agreements between the bureaus were concluded. The bilateral agreement concluded by the bureaus based on the standard agreement is also called the London Agreement, because it was adopted at the General Assembly of the Bureau Council held in London. In more detail: M. Ćurković, *Ugovori o obveznom osiguranju u cestovnom prometu,* Savjet stručne biblioteke „Croatia" zajednica osiguranja imovine i osoba, Zagreb 1989, str. 100.

The function of determining a uniform premium tariff and MTPL insurance conditions: The role of the ASI is to determine the uniform minimum premium and joint motor third party liability terms and conditions, and the NBS gives the approval for them. This will be the case until the moment of market liberalization, for which the deadline is admission to the EU.

V. Conclusion

Based on an insight into the historical development of insurance in this region and knowledge of domestic market, it is possible to make assumptions about development tendencies. First, the insurance market is one of the fastest growing, given its importance not only in realizing the protective role understood in classical terms, but in general in "risk society", as post-technological society is being more and more called. The economic and health crisis that hit the whole world during the coronavirus pandemic, as well as in the post-covid phase, followed by the energy crisis, which also fueled inflationary pressure, showed that in the future more investment should be made in risk protection mechanisms. In such circumstances, the insurance market is expected to show readiness to take on the role of a global risk management leader. Insurers are facing a serious challenge, since the risks involved are notably different from those that they normally underwrite. Everything they already know about risks and all the statistical machinery are powerless in the face of numerous risks of a global character that need to be covered at a favorable price. Since experience, and even more economic indicators, tell us that the capacities of the (re)insurance market are limited, economically sustainable insurance will require a partnership with the state more often than ever in the history of insurance. When it comes to the domestic insurance market, the rate at which growth will be achieved depends primarily on changes in regulatory framework, both in the status part (further implementation of the Solvency II directive), as well as in the supervisory part and the protection of service users.

Second, the capital of trust, without which the insurance industry cannot survive, should be nurtured day by day by both legal and extralegal means. When talking about the extralegal mechanisms of acquiring and maintaining social capital, such as trust, it is necessary for the business operations in the insurance sector to be based on the respect for the standards of business ethics and the principles of socially responsible business. In other words, one should invest in fair and correct treatment of insurance clients, on a daily basis. We emphasize that the NBS, in its capacity not only as a supervisory body but also as a regulator in the insurance market, has a clear position when it comes to improving operations in the insurance industry. From the Guidelines adopted by the NBS after the adoption of the Insurance Law of 2014, it is clear that it expects entities on the insurance market to develop good practice of fair treatment of clients. After all, the supervisory function includes not only the control of the legality of business, but also good customs and business ethics.

A look at the historical development of insurance in our region suggests that the insurance market is not immune to two factors that have caused a turbulent business environment here. These are the socio-political environment and the economic situation in the country. As regards the first factor, we have reached a certain level of awareness of the importance of prevention and risk management. Also, the legal framework no longer restricts insurers and reinsurers, as it used to be the case, while the NBS, by performing its supervisory and regulatory function on the insurance market, ensures financial discipline and protection of service users. What remains is to work on raising the awareness of citizens, potential users of services, about the usefulness of insurance as a necessary companion in all perilous situations. A strategy that would lead to a greater presence of insurance is also of interest to the ASI, which works on the promotion of the interests of the industry. The Association can be expected to continue with the promotion of the insurance sector in order for the users to start looking at insurance as an investment and not as an expense.

To conclude: before the adoption of detailed legislation, insurers saw insurance as a source of profit and did not pay much attention to the performance of insurance activities in the interest of the insured. This led to a large number of bankruptcies and liquidations. It was only in the nineteenth century that the development of insurance and reinsurance in the true sense of the word took place. This particularly applies to Germany, whose companies joined together in order to take over insurance operations that go beyond the borders of one country. Along with that process, the first laws regulating the insurance contract were being adopted. The appearance of the consumer insurance contract act is particularly significant, adopting principles that can be said to have been retained even today, in a somewhat modified form. Until the adoption of those laws, especially in Germany and France, only general contractual law was applied to the insurance contract, which made users of insurance services easy prey for insurers.

Therefore, we agree with Professor Petrović Tomić that the historical development of insurance as an economic activity can be viewed as a civilizational phenomenon, whose shaping was influenced by the need for security and protection. As the changed living conditions at the end of the 19th and the beginning of the 20th century made many aspects of the life of the modern man risky, his demand for insurance began to grow. A well-devised insurance system should emphasize the need for protection against risk and offer customized insurance protection packages.

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OCENA STEPENA MONOPOLISANOSTI SEKTORA OSIGURANJA U SRBIJI U PERIODU 2011–2022.

ORIGINALNI NAUČNI RAD

Apstrakt

Članak se bavi problemom određivanja stepena monopolisanosti u sektoru osiguranja Srbije (bez Kosova i Metohije) u razdoblju 2011–2022. Osnov istraživanja bili su podaci o ukupnoj premiji osiguranja društava za osiguranje, na kojima je izvršen obračun koeficijenta tržišne koncentracije i Hiršman–Herfindalovog koeficijenta, kao najpopularnijih i ujedno najčešće korišćenih mera koncentracije. Njihove vrednosti pokazuju (relativno) visok nivo koncentracije, ali bez jasnih tendencija u njegovom kretanju, i s minimalnim padom u celosti. Na osnovu ekvivalentnog broja, kao recipročne (inverzne) vrednosti Hiršman–Herfindalovog koeficijenta, predložen je indeks ili racio granica monopolisanosti tržišta, koji pokazuje stepen u kome je dato tržište monopolisano. Njegove vrednosti u posmatranom periodu kreću se od oko 75 do 60, s jasnom tendencijom opadanja, znatno intenzivnijim od minimalnog pada vrednosti koeficijenata koncentracije. To pokazuje da se na tržištu osiguranja u Srbiji u datom periodu smanjuje uticaj monopolskih (i oligopolskih) struktura i da ono postaje sve konkurentnije, uprkos smanjivanju broja društava za osiguranje u prvoj polovini posmatranog perioda i njihovom neizmenjenom broju od 2018.

***Ključne reči**: monopolisanost, koncentracija, konkurencija, osiguranje, Srbija, pokazatelji, tržišni udeli, broj kompanija, ekvivalentni broj.*

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I. Uvod

Konkurencija kao jedan od fundamentalnih ekonomskih pojmova u centru je pažnje teorijskih i primenjenih istraživanja dugi niz godina, naročito tokom poslednjih nekoliko decenija u kojima, i u teoriji i u praksi, preovladava paradigma slobodno-tržišnog mehanizma. Pri tome, dejstvo i poštovanje tržišnih kriterijuma smatra se neophodnim ne samo kada je reč o realnom sektoru privrede, već se oni podrazumevaju i kad je posredi finansijski sektor. Stoga se i u našim uslovima sve veći broj istraživanja usmerava na taj aspekt privrednih i finansijskih kretanja.

Najopštije definisana kao „proces svesnog takmičenja među ekonomskim agentima za najpovoljnije uslove prodaje ili kupovine na tržištu",[2] konkurencija je postala predmet razmatranja faktički i pre uspostavljanja ekonomske nauke. U spisima antičkih mislilaca, hrišćanskih teologa, drevnih kineskih mislilaca i ostalih, problemi konkurencije tretirani su u vezi s potrebama uvođenja raznih ograničenja na tržištima zajmovnog kapitala, odnosno zelenaštva, određivanja tzv. pravednih cena i sl. Tradicionalno, ustanovljenje teorije konkurencije kao predmeta naučnog interesovanja vezuje se za Adama Smita, po mnogima osnivača ekonomske nauke, i njegovo čuveno delo *Istraživanje prirode i uzroka bogatstva naroda*, objavljeno 1776. godine,[3] iako su slične probleme razmatrali mnogi filozofi pre njega.[4] Smit je zasnovao tri pristupa konkurenciji, koja se i danas javljaju u ekonomskoj nauci: bihevioralni, funkcionalni i strukturni.[5] Tokom godina, zahvaljujući radovima brojnih ekonomista, i ne samo njih, konkurencija je stekla renome modela pogodnog za primenu ne samo u ekonomiji već i u sociologiji, antropologiji, kao i u prirodnim naukama (biologiji, ekologiji) i drugim disciplinama.

Uporedo s razvojem tržišnih ekonomija razvijali su se i metodi i tehnike istraživanja konkurencije. Tokom dvoipovekovne tradicije analizirani su i objašnjeni mnogi njeni aspekti i karakteristike. Ipak, ni izdaleka ne svi. Teorija, tako, još uvek nije izgradila čak ni jedinstvenu i opšteprihvatljivu definiciju pojma konkurencije. Shodno tome, i razni drugi aspekti tog složenog fenomena nisu rešeni na adekvatan način. Jedno od takvih pitanja predstavlja ujedno i jedno od centralnih mesta teorije

[2] А. Д. Некипелов (red.), *Популярная экономическая энциклопедия*, Moskva: Большая Российская энциклопедия, 2003, str. 129.

[3] A. Smith, An Inquiry into the Nature and Causes of the Wealth of Nations, u srpskom prevodu: A. Smit, *Istraživanje prirode i uzroka bogatstva naroda*, Beograd: Kultura, 1970.

[4] Imaju se u vidu pre svega antički mislioci (Ksenofont, Platon, Aristotel), a u moderno doba merkantilisti. Pored poznatih i često navođenih merkantilističkih pisaca (T. Man, A. Monkretjen, V. Staford i dr.), u čijim delima je značajna pažnja posvećivana državnom protekcionizmu kao sredstvu za ograničavanje konkurencije inostranih robnih proizvođača, svakako bi trebalo pomenuti i Ivana Posoškova, čije je glavno delo (*Knjiga o siromaštvu i bogatstvu*) objavljeno pre tačno 300 godina.

[5] Videti detaljnije u: А. А. Рязанов, Эволюция теории конкуренции, *Вестник Московского университета имени С. Ю. Витте. Серия 1: Экономика и управление*, 2017, (2), str. 21–22.

– merenje konkurencije, kao problem posebno važan ne samo u teorijskom smislu, već i mnogo više u praksi, odnosno primeni rezultata (na primer, pri koncipiranju i sprovođenju antimonopolske politike, ili politike zaštite konkurencije).

U odsustvu opšteprihvatljivog odgovora na gornje pitanje najčešće dolazi do primene opisnih, relativnih ocena na ordinalnoj skali, kao što bi bile jaka, umerena, slaba konkurencija i sl., koje se zasnivaju na ekspertskim procenama, sociološkim anketama, a ponekad, u nešto strožem pristupu, na rezultatima, odnosno posledicama konkurencije. U takve rezultate spadaju broj tržišnih učesnika, njihov ostvareni prihod (dohodak) i profit, odnosno imovina i kapital i sl. Ti podaci (rezultati) služe zatim za izračunavanje udela učesnika na tržištu u odgovarajućim veličinama na nivou grane, ili cele privrede, a koji su zapravo ostvareni u procesu konkurencije. Na taj način, dakle, iz domena bihevioralnog i funkcionalnog pristupa istraživanje se usredsređuje na strukturni pristup, čiji je predmet stanje na tržištu (struktura tržišta).

Obračuni i analize udela tržišnih učesnika pretpostavljaju poznavanje odnosa između koncentracije i konkurencije. Iako njegova prava priroda nije poznata,[6] opšte je prihvaćeno da je on inverzan, to jest da veća koncentracija označava manju konkurenciju i obrnuto. Uz tu, opštu pretpostavku, otvara se najpre pitanje izbora mere za samu tržišnu koncentraciju, a zatim i pitanje analitičkih mogućnosti koje odabrana mera (ili mere) pruža(ju). I jedno i drugo od tih pitanja, nažalost, u većini relevantnih radova ne osvetljavaju se i ne obrazlažu dovoljno produbljeno i uglavnom se nalaze na nivou deskripcija, kakve su postojale u odgovarajućim istraživanjima u periodu FNR/SFR Jugoslavije.[7] Budući da su takve analize, naravno, nedostatne, u svojim prethodnim radovima postarao sam se da do sada korišćene pristupe dopunim i modifikujem, i time pružim uvide u dodatne aspekte istraživanog fenomena.[8]

Jedan od takvih pokušaja predstavlja i naredno istraživanje, posvećeno utvrđivanju stepena monopolisanosti u sektoru osiguranja u Srbiji (bez Kosova i Metohije). U skladu s poslednjom napomenom, biće primenjen jedan novi pristup, tačnije analitički instrument za čiju će verifikaciju, naravno, biti potrebna dodatna

[6] П. Ф. Воробьёв и С. Г. Светуньков. Новый подход к оценке уровня конкуренции, *Современная конкуренция*, 2016, 10(6).

[7] Videti detaljno razmatranje u: R. Bukvić, Istraživanja tržišnih struktura u privredi druge Jugoslavije, *Ekonomika*, 1999, 35(1–2).

[8] Sektor osiguranja u tom smislu razmatra se u sledećim radovima: R. M. Bukvić, „Dekompozicija promena u koncentraciji u sektoru osiguranja u Srbiji 2011–2020: uticaj promena u strukturi tržišta i broju osiguravajućih društava", *Ekonomski vidici*, 2021, 26(3–4); R. M. Bukvić, „Novi pristupi ocenjivanju stepena koncentracije i konkurencije: primer sektora osiguranja u Srbiji", XLVIII International Symposium on Operational Research, SYM-OP-IS 2021 Banja Koviljača, 20–23. septembar 2021, Zbornik radova, ur. D. Urošević, M. Dražić, Z. Stanimirović, Beograd: Univerzitet u Beogradu, Matematički fakultet, 2021; R. M. Bukvić, „Koncentracija u sektoru osiguranja u Srbiji: promene u periodu 2011–2020. i njihova dekompozicija", *Tokovi osiguranja*, 2022, 38(1).

istraživanja i provere. U odnosu na prethodna istraživanja analiza je produžena na period 2011–2022, i zasniva se na uobičajenim koeficijentima koncentracije, naime u prvom redu na Hiršman–Herfindalovom indeksu. Osnov za istraživanje postavljen je u prethodnom autorovom tekstu, u kojem je korišćen veći broj različitih mera koncentracije.[9] Ovom prilikom su ti, možemo reći prethodni rezultati, uopšteni i dopunjeni, a zatim je predložen novi pristup i na osnovu njega data ocena stepena monopolisanosti sektora.

II. Metodološke napomene

Polazište jednog od najčešće primenjivanih pristupa ocenjivanju tržišne konkurencije predstavljaju ostvareni udeli tržišnih aktera, gde raspored tih udela među njima i služi za ocenu konkurencije. Osnovu ovog pristupa čini jednostavno rezonovanje: što je manja koncentracija tržišnih udela, tim manje vlasti (moći) na tržištu imaju pojedini akteri, a samim tim veća je i mogućnost razvoja konkurencije. Takvu relaciju moguće je predstaviti pojednostavljenim linearnim modelom L = 1 – C, koji ilustruje pomenuti inverzan odnos koji postoji između konkurencije (L) i koncentracije (C) na tržištu. Pretpostavku o linearnom karakteru tog odnosa treba smatrati za suviše simplifikovanu, ona u osnovi verovatno i nije (potpuno) tačna, u nekim istraživanjima se, naime, pokazalo da je taj odnos drugačije, nelinearne prirode.[10] Za potrebe istraživanja u ovom radu razmatranje konkretne prirode tog odnosa nije od značaja, dovoljna nam je pretpostavka o njegovom inverznom karakteru.

U gornjoj relaciji ključno je utvrđivanje, odnosno merenje koncentracije (C). Nivo ili stepen koncentracije C određuje se na osnovu udela s_i tržišnih aktera na relevantnom tržištu:

$$s_i = \frac{Q_i}{Q} = \frac{Q_i}{\sum_{j=1}^{N} Q_j} \qquad (1)$$

gde je sa N označen broj učesnika (najčešće proizvođača) na tržištu, ili nekom njegovom delu (grani, na primer), Qi je obim proizvodnje (iskazan fizički ili vrednosno, ili pak neka druga veličina – prihodi ili dohodak, ukupna sredstva tj. aktiva, kapital, broj zaposlenih i dr.) i-tog aktera na tržištu. Udeli s_i u (1) mogu se izražavati u procentima, što se onda odražava i na vrednosti samih koeficijenata koncentracije, obračunavanih

[9] R. Bukvić, „Novi pristupi ocenjivanju stepena koncentracije i konkurencije: primer sektora osiguranja u Srbiji", *XLVIII International Symposium on Operational Research*, SYM-OP-IS 2021, Beograd: Univerzitet u Beogradu, Matematički fakultet, 2021, str. 93–98.

[10] Videti: П. Ф. Воробьёв и С. Г. Светуньков. Новый подход к оценке уровня конкуренции, *Современная конкуренция*, 2016, 10(6), str. 6.

na osnovu njih, ali izbor jednog ili drugog načina iskazivanja udela, pa i pokazatelja, naravno, nema značaja za tumačenje rezultata.

Za ocenu stepena koncentracije ekonomisti i statističari su od početka 20. veka i početnih radova Korada Đinija i Maksa Lorenca razvili i koristili veći broj metoda, odnosno pokazatelja.[11] Veliki podsticaj razvoju te oblasti usledio je s velikom ekonomskom krizom na početku četvrte decenije, kada je postao dostupan ogroman obim industrijske statistike. Među merama koncentracije u početku su najčešće primenjivana dva pokazatelja, u određenom smislu međusobno inverzna: 1) broj preduzeća koja ostvaruju određeni procenat (u većini slučajeva 80%) relevantnog agregata (proizvodnje, prodaje, prihoda ili dohotka, sredstava i dr.)

$$S_{m^*} = \sum_{j=1}^{m^*} s_j = 80\% \tag{2}$$

gde je m* broj preduzeća koji se traži (broj preduzeća koji udovoljava postavljenom kriterijumu), i 2) suma udela nekoliko najvećih preduzeća na tržištu

$$CRn = \sum_{j=1}^{n} s_j \ , \tag{3}$$

pri čemu je kod pokazatelja (3) za n u empirijskim analizama najčešće uzimano 4, mada ni za taj, niti za neki drugi izbor po pravilu nije pružano bilo kakvo objašnjenje.[12] Bez obzira na konkretan izbor za n u obračunu koeficijenta (3), očigledno je da je ovaj pokazatelj (kao jednostavna suma udela prvih, dakle najkrupnijih, n tržišnih aktera) fokusiran na deo tržišta koji se uobičajeno označava kao „jezgro" tržišta, a da shodno tome zapostavlja njegovu „periferiju", pri čemu granica između ovih dvaju tržišnih segmenata nije ni približno precizno određivana i objašnjavana. Ali i više od toga, koeficijent koncentracije zapravo ne otkriva ni šta se skriva u tome što čini „jezgro" tržišta, naime kakav je raspored udela u okviru tih n (3, 4 ili 5, 8 itd.) najvećih tržišnih učesnika.

Od pokazatelja (2) i (3) u praksi se kao pouzdaniji i informativniji, ali i lakši za izračunavanje zadržao drugi, poznat pod jednostavnim imenom koeficijent koncentracije (CRn). On je stekao i dugo održavao najveću popularnost i primat među brojnim pokazateljima, naročito nakon što ga je DOJ (Department of Justice) prihvatio

[11] Videti detaljniji pregled istorijskog razvoja merenja koncentracije u: T. Roberts, When Bigger Is Better: A Critique of the Herfindahl-Hirschman Index's Use to Evaluate Mergers in Network Industries, *Pace Law Review*, 2014, 34(2), str. 896. i dalje.

[12] Najčešće je nekritički uziman broj 4, po ugledu na monografije Privremenog nacionalnog ekonomskog komiteta (Temporary National Economic Committee, TNEC), u kojima je taj broj tržišnih učesnika izabran iz praktičnih razloga, a bez teorijskih objašnjenja. Videti: M. A. Adelman, The Measurement of Industrial Concentration, *The Review of Economics and Statistics*, 1951, 33(4).

u svom prvom Vodiču za spajanja,[13] a ostao je, uz Hiršman–Herfindalov koeficijent (HH),[14] sve do danas najčešće primenjivan pokazatelj koncentracije.[15]

Dok je za izračunavanje koeficijenta koncentracije CRn potrebno svega nekoliko podataka, Hiršman–Herfindalov koeficijent obračunava se uzimanjem u obzir udela svih učesnika na relevantnom tržištu, odnosno tržištu koje se istražuje. Budući da je taj zbir svih udela po definiciji jednak jedinici, radi izračunavanja tog koeficijenta umesto odgovarajućih udela koriste se njihovi kvadrati

$$HH = \sum_{j=1}^{N} s_j^2 \tag{4}$$

a to zapravo znači da su tržišni udeli učesnika ponderisani samim tim udelima. Veliku popularnost i prihvatanje kod ekonomista koji se bave industrijskom organizacijom Hiršman–Herfindalov indeks u značajnoj meri duguje Herfindalovom mentoru Džordžu Stigleru,[16] a postao je gotovo neizostavan nakon što je uvršćen u novi Vodič za horizontalna spajanja[17] 1982. godine.

Za izračunavanje koeficijenta koncentracije (3) dovoljno je imati podatke o proizvodnji, prihodima i sl. za svega nekoliko (najvećih) tržišnih aktera, stoga je ono jednostavno i lako. Njega, međutim, karakteriše niz krupnih nedostataka (uz ostalo, on može imati istu vrednost za različit raspored udela u okviru „jezgra", na koje je usredsređen), a to u značajnoj meri ograničava njegovu upotrebljivost. U akademskim radovima često se ističe da koeficijent (4) takav nedostatak nema, a to bi ga

[13] Videti: 1968 Merger Guidelines, U.S. Department of Justice, Antitrust Division, *https://www.justice.gov/sites/default/files/atr/legacy/2007/07/11/11247.pdf.* /pristupljeno 01.02.2024.

[14] U literaturi ovaj koeficijent se često sreće kao Herfindalov koeficijent (indeks), iako primat svakako pripada Albertu Hiršmanu, koji ga je koristio još 1945. (doduše, kao kvadratni koren izraza koji je kasnije dao Herfindal, i koji se i danas koristi), a Oris Herfindal tek 1950. To možemo istaći kao jedan od najpoznatijih primera tzv. Stiglerovog zakona, ili Stiglerovog zakona o eponimiji, prema istoimenom radu iz 1980. godine, videti: S. Stigler, Stigler's Law of Eponymy. *Transactions of the New York Academy of Sciences*, 1980, 39 (1 Series II)), prema kome „nijedno naučno otkriće nije nazvano imenom svog pronalazača". Sam Stigler isticao je (s pravom) da ovaj zakon pripada Robertu K. Mertonu (koji mu je dao ime Matejev efekat, videti: R. K. Merton, The Matthew Effect in Science, *Science*, 1968, 159(3810)), tako da se sam zakon može primeniti i na autora koji ga je otkrio!

[15] Slične ocene mogu se izreći i za istraživanja tržišta i njihovih stanja u našim uslovima, gde je od početaka u kasnim 1950-im pa sve do kraja postojanja SFR Jugoslavije u analizama korišćen isključivo indeks koncentracije CRn (najpre CR5 a zatim CR4). Videti detaljnije u: R. Bukvić, „Istraživanja tržišnih struktura u privredi druge Jugoslavije", *Ekonomika*, 1999, 35(1–2). Hiršman–Herfindalov indeks prvi put je primenjen tek 2002. godine u studiji Begović i dr., *Antimonopolska politika u SR Jugoslaviji*, Beograd: Centar za liberalno-demokratske studije, 2002, dakle gotovo pola stoleća nakon početka istraživanja tržišnih struktura.

[16] Videti: S. Calkins, „The New Merger Guidelines and the Herfindahl-Hirschman Index", *California Law Review*, 1983, 71(2), str. 409.

[17] Videti: 1982 Merger Guidelines, U.S. Department of Justice, Antitrust Division, https://www.justice.gov/sites/default/files/atr/legacy/2007/07/11/11248.pdf. /pristupljeno 01.02.2024.

naravno činilo znatno prihvatljivijim i upotrebljivijim od koeficijenta (3). Međutim, ako imamo u vidu da se njegove vrednosti kreću u rasponu

$$\frac{1}{N} \leq HH \leq 1 \tag{5}$$

videćemo da se ne može zanemariti činjenica da njegova minimalna vrednost zavisi od broja tržišnih učesnika (N). Otuda sledi da je interpretacija koeficijenta (4) u značajnoj meri otežana, što, naravno, važi utoliko pre i za koeficijent koncentracije (3). Uticaj broja učesnika na veličinu koeficijenta koncentracije veći je i značajniji, naravno, kod tržišta s manjim brojem učesnika, kakvo je i tržište osiguranja, zapravo i većina tržišta u Srbiji, i to se nikako ne sme zapostaviti. Zbog svega toga potrebno je da se uticaj broja učesnika neutrališe, a za takve ciljeve formulisan je i koristi se, doduše ne baš tako često, normalizovani Hiršman–Herfindalov indeks[18]

$$HHn = \frac{HH - \frac{1}{N}}{1 - \frac{1}{N}} \tag{6}$$

čije se vrednosti, naravno, nalaze u rasponu od 0 do 1.

Oba koeficijenta (3) i (4) pripadaju grupi tzv. aditivnih mera koncentracije, u okviru koje je razvijen i koristi se veći broj koeficijenata. Oni se među sobom razlikuju po ponderima koje dodeljuju tržišnim udelima. Koeficijent (3) je neponderisani indeks, što znači da svaki udeo koji se uzima u obračun indeksa ima ponder jednak jedinici. Nasuprot tome, Hiršman–Herfindalov indeks te udele ponderiše, kao i drugi indeksi iz te grupe. Pri tome, kao ponderi u ovom slučaju služe zapravo sami ti udeli. Očigledno, na taj način Hiršman–Herfindalov koeficijent veći značaj daje tržišnim učesnicima s većim udelima, dakle jačim tržišnim akterima. Međutim, verovatno je važnije nešto drugo: potrebno je istaći da ta ponderacija ne obezbeđuje jednoznačan odnos između rasporeda tržišnih udela i nivoa (stepena) koncentracije, tako da se ista vrednost HH koeficijenta može dobiti za vrlo različite konfiguracije tržišnih udela, dakle za različita tržišna stanja.[19]

U praksi sprovođenja antimonopolske politike (politike zaštite konkurencije) primena oba navedena indeksa (3) i (4) suočava se i s problemima identifikovanja tipova (oblika) konkurencije na osnovu njihovih vrednosti. Ti se problemi u realizovanju antimonopolske politike, iako ne i u teoriji, „rešavaju" arbitrarnim postavljanjem

[18] Prema: D. Fibingr, Analýza koncentrace na trhu vepřového masa v České republice, *Acta universitatis agriculturae et silviculturae Mendelianae Brunensis*, 2004, 52(3).

[19] И. А. Смарагдов и В. Н. Сидорейко, «Индексы рыночной концентрации: неоднозначная информативность», *Концепт*, 2015, 9.

određenih granica (na primer, kod Hiršman–Herfindalovog koeficijenta uobičajene granice bile su 1.000 i 1.800 za tri tipa tržišta), kako bi se prema vrednosti indeksa (4) i njegovog nalaženja u odgovarajućem segmentu odredio i tip konkurencije na posmatranom, odnosno istraživanom tržištu: nekoncentrisano, umereno koncentrisano i visokokoncentrisano tržište.[20]

U ovom radu mi ćemo najpre izložiti rezultate dobijene primenom razmotrenih koeficijenata, pre svega HH koeficijenta. Detaljnije razmatranje drugih koeficijenata i rezultata dali smo u nedavnom saopštenju,[21] uključujući i drukčije pristupe u odnosu na logiku agregiranja tržišnih udela u jedan broj, koju prate i neki drugi koeficijenti, koji su za ove potrebe ili manje popularni ili prosto manje korišćeni (Đinijev, Rozenblatov, Tajdman-Holov i sl.). Osnovni razlog redukciji broja pokazatelja nije u njihovim (dobrim ili lošim) karakteristikama, on se nalazi u drugačijim ciljevima postavljenim u ovom radu. Ovde nas ne interesuje razgraničavanje uticaja dvaju faktora (broja učesnika na tržištu i veličine disperzije njihovih udela) na veličinu pokazatelja koncentracije, do čega se dolazi na osnovu prirode samog pokazatelja. Naime, kao što je više puta istaknuto,[22] a što se potvrđuje i elementarnim transformacijama koeficijenta (4), Hiršman–Herfindalov koeficijent koncentracije može biti predstavljen kao suma dve komponente:

$$HH = N\sigma^2 + \frac{1}{N} \tag{7}$$

gde je σ^2 varijansa (disperzija) tržišnih udela s_i a N broj tržišnih učesnika. To ima dve, među sobom suprotstavljene, posledice. Kao prvo, izraz (7) pokazuje nejednoznačnost u tumačenju vrednosti HH koeficijenta, što se nikako ne sme zanemariti.[23] Druga posledica odnosi se na okolnost da izraz (7) daje mogućnost razgraničenja uticaja

[20] Ta podela je prvobitno određena u SAD, u Vodiču za horizontalna spajanja 1997, a zatim je 2010. bila zamenjena granicama od 1.500 i 2.500, videti: Horizontal Merger Guidelines (1997) i Horizontal Merger Guidelines (2010). U drugim zemljama koje za potrebe antimonopolske politike koriste Hiršman–Herfindalov indeks definisane su drugačije granice između ovih tipova tržišta, ali su naravno i one postavljene arbitrarno.

[21] R. Bukvić, „Novi pristupi ocenjivanju stepena koncentracije i konkurencije: primer sektora osiguranja u Srbiji", *XLVIII International Symposium on Operational Research*, SYM-OP-IS 2021, Beograd: Univerzitet u Beogradu, Matematički fakultet, 2021, str. 93–98.

[22] С. Б. Авдашева и Н. М. Розанова, *Теория организации отраслевых рынков*, Moskva: Издательство Магистр, 1998; И. А. Смарагдов и В. Н. Сидорейко, «Индексы рыночной концентрации: неоднозначная информативность», *Концепт*, 2015, 9.

[23] U hipotetičkom primeru Smaragdova i Sidorejka («Индексы рыночной концентрации: неоднозначная информативность», *Концепт*, 2015, 9), čak i u slučaju jednakih tržišnih udela svih tržišnih aktera, vrednost indeksa HH biće za pet tržišnih aktera 2.000 a za 10 aktera 1.000. Dakle, u prvom slučaju prema uobičajenim granicama za razgraničenje tržišnih struktura tržište bi bilo klasifikovano kao visokokoncentrisano, a u drugom kao nekoncentrisano, što je očigledno apsurdno.

varijanse tržišnih udela (dakle, promena u strukturi tržišta) i broja tržišnih učesnika na promene nivoa koncentracije.[24] Upravo to poslužilo je kao osnov za istraživanje čije smo rezultate izložili u prethodnom radu.[25]

Polazeći od Hiršman–Herfindalovog koeficijenta, kao jedne od najčešće korišćenih mera tržišne koncentracije, moguće su analize u više pravaca i aspekata. Jedan od mogućih, a čini se nedovoljno korišćenih, zasnovan je na transformaciji aktuelnog tržišta u tržište aktera jednakih veličina, tj. ekvivalentnih aktera.[26] Reč je, dakle, o konceptu ekvivalentnog broja, definisanog kao inverzna (recipročna) vrednost ovog koeficijenta

$$Ne = \frac{1}{HH} \tag{8}$$

koji je, kao što vidimo, dat kao kardinalan broj. Šta predstavlja ekvivalentni broj? Pogledajmo izraz (6) i pretpostavimo da su na posmatranom tržištu svi učesnici jednake snage, dakle da imaju jednake tržišne udele s_i. U tom slučaju vrednost koeficijenta (6), odnosno (4), svešće se na 1/N, što je i njegov teoretski minimum. Prema tome, recipročna vrednost Hiršman–Herfindalovog koeficijenta je broj tržišnih aktera jednake veličine i snage (jednakih udela) koji generiše datu vrednost HH indeksa (minimalnu u ovom slučaju, odnosno bilo koju u opštem slučaju).[27] Drugim rečima, ekvivalentni broj se može tumačiti kao efektivan broj učesnika na tržištu, odnosno u bilo kom drugom procesu, na primer u izbornom takmičenju.[28] Upravo tako tumači ekvivalentni broj i pomenuti Vodič iz 1982,[29] i to ne treba mešati s uobičajenim shvatanjem pojma „efektivan", koje se sreće i u akademskim tekstovima.

Pošto su granice HH koeficijenta date rasponom [1/N, 1], s minimumom kada svi učesnici imaju jednake udele i maksimumom u slučaju postojanja samo jednog tržišnog učesnika (potpuni monopol), granice ekvivalentnog broja date su rasponom [1, N]. Minimalnu vrednost (Ne = 1) ekvivalentni broj će imati u slučaju potpunog monopola, a maksimalnu (Ne = N) u slučaju jednakosti svih učesnika na tržištu.[30]

[24] С. Б. Авдашева и Н. М. Розанова, *Теория организации отраслевых рынков*, Moskva: Издательство Магистр, 1998.

[25] R. M. Bukvić, „Koncentracija u sektoru osiguranja u Srbiji: promene u periodu 2011–2020. i njihova dekompozicija", *Tokovi osiguranja*, 2022, 38(1)

[26] M. O. Finkelstein, R. M. Friedburg, "The Application of an Entropy Theory of Concentration to the Clayton Act", *Yale Law Journal*, 1967, 76(4), str. 689.

[27] M. A. Adelman, Comment on the H Concentration Measure as a Numbers-Equivalent, *The Review of Economics and Statistics*, 1969, 51(1), str. 100.

[28] Videti: The Inverse Herfindahl–Hirschman Index as an "Effective Number of" Parties, is.R() in R bloggers, December 17, 2012, https://www.r-bloggers.com/2012/12/the-inverse-herfindahl-hirschman-index-as-an-effective-number-of-parties/. pristupljeno 01.04.2024.

[29] Videti: III. HORIZONTAL MERGERS, A. Concentration and Market Share, 1. General Standards, c) Post-Merger HHI Above 1800.

[30] Ako je broj učesnika na tržištu veliki, to bi odgovaralo savršenoj konkurenciji, ali ne i kada je taj broj mali.

Očigledno je odatle da će razlika N–Ne pokazivati koliko je konkretno stanje na tržištu udaljeno od stanja potpune jednakosti svih tržišnih aktera, koje uslovno možemo označiti kao stanje savršene konkurencije. Ta razlika će se nalaziti u granicama [0, N – 1], uzimajući minimalnu vrednost (N – Ne = 0) u slučaju savršene konkurencije, a maksimalnu vrednost (N – Ne = N – 1) u slučaju potpunog monopola.

Polazeći od navedenog, može se predložiti koeficijent koji će pokazivati udaljenost konkretnog tržišta od stanja savršene konkurencije, odnosno stepen monopolisanosti tržišta. Njega ćemo dobiti kada normalizujemo razliku (N – Ne):

$$RMB = \frac{N-Ne}{N-1} \tag{9}$$

čije će se vrednosti, očito, nalaziti u rasponu od 0 (kada je Ne = N, dakle u slučaju savršene konkurencije) do 1 (kada je Ne = 1, dakle u slučaju potpunog monopola). Koeficijent, ili racio, RMB, dakle, pokazuje predeo (oblast, ili granice) monopolisanosti tržišta, koji je utoliko veći ukoliko je njegova vrednost bliža jedinici. Očigledno je takođe i da njemu komplementarni koeficijent (1 – RMB) pokazuje domen konkurencije na tom tržištu.

III. Osvrt na nivo koncentracije u sektoru osiguranja u Srbiji 2011–2022.

Posmatrani period 2011–2022. obeležile su na tržištu osiguranja u Srbiji[31] značajne promene, koje se ogledaju prvenstveno u smanjenju broja osiguravajućih društava u prvom delu perioda (zaključno sa 2018. godinom). Taj broj se kretao između 27 (u 2011), odnosno 28 (u 2012. i 2013) i 20 (u poslednjih pet godina), s tendencijom smanjivanja. U relativnom iznosu smanjenje broja društava bilo je veoma značajno, ali ono je zaustavljeno u 2018. Među društvima koja posluju u ovom sektoru četiri se bave isključivo reosiguranjem. U narednim analizama mi smo se usredsredili na društva za osiguranje, uz korišćenje podataka Narodne banke Srbije, koji su prezentovani u izveštajima *„Ukupna premija i raspored premije društava za osiguranje"* za posmatrane godine, kao što smo učinili i u našim prethodnim, već citiranim radovima.

Karakteristike konkurencije u sektoru osiguranja, kao i u drugim delovima finansijskog sektora, kako smo u navedenim radovima već naglasili, opredeljuju neadekvatnost korišćenja kao kriterijuma ostvarenog prihoda, a što je uobičajeno u realnom sektoru privrede (pored fizičkog obima proizvodnje, koji u finansijskom sektoru nema analogona). Stoga je najpre nužno odabrati promenljivu na osnovu koje će se određivati koncentracija (i posledično konkurencija). Problem je u osnovi rešen našim važećim propisima (Zakon o zaštiti konkurencije, čl. 7), prema kome se za

[31] U izveštajima Narodne banke Srbije nisu dostupni podaci za Kosovo i Metohiju, tako da sektor osiguranja Srbije u ovom radu ne obuhvata celu Republiku Srbiju.

ocenu stepena koncentracije u ovom sektoru koristi ukupna premija po svim oblicima osiguranja.[32] I mi smo odabrali tu promenljivu, s obzirom na to da nas interesuje sektor osiguranja u celosti, ali jasno je da je za određene svrhe, naravno, poželjno (pa i nužno) koristiti i druge promenljive (ukupna premija neživotnog osiguranja i ukupna premija životnog osiguranja), kako je, na primer, učinila M. Dimić u svojoj doktorskoj disertaciji.[33]

Pogledajmo prvo neke relevantne rezultate, koje smo, za tada razmatrani period, izložili u prethodnom radu.[34] Koncentraciju ćemo u opštem odrediti pomoću pomenutih indeksa – koeficijenta koncentracije CRn i Hiršman–Herfindalovog koeficijenta. Ta opšta slika biće dopunjena i u određenom smislu verifikovana indeksima Linda. Tabela 1. prikazuje vrednosti indeksa koncentracije CRn preko četiri pokazatelja (CR3, CR4, CR5 i CR8) i Hiršman–Herfindalovog indeksa u razmatranom razdoblju. Vrednosti indeksa koncentracije ovde su date u procentima, dakle udele (1) pomnožili smo sa 100. Time se, naravno, ništa neće promeniti u smislu i značenju pokazatelja, kao ni u tumačenju prezentovanih vrednosti.

Tabela 1. Vrednosti indeksa koncentracije CR3, CR4, CR5 i CR8 i Hiršman–Herfindalovog indeksa u sektoru osiguranja u Srbiji* 2011–2022.

Godina	Indeks koncentracije					Godina	Indeks koncentracije				
	CR3	CR4	CR5	CR8	HH		CR3	CR4	CR5	CR8	HH
2011.	63,1	72,1	77,4	88,6	1551	2017.	59,8	71,5	77,2	88,6	1543
2012.	62,4	71,6	77,3	87,5	1596	2018.	61,0	72,6	78,4	89,7	1597
2013.	59,8	70,3	75,8	85,6	1495	2019.	59,7	71,4	77,8	89,3	1545
2014.	60,6	70,8	76,5	87,7	1495	2020.	59,1	71,0	77,6	88,7	1526
2015.	61,2	70,9	76,1	87,5	1558	2021.	57,7	69,0	75,9	87,3	1468
2016.	59,5	70,2	74,9	86,2	1496	2022.	56,6	68,0	75,0	87,1	1435

* Bez Kosova i Metohije.
Izvor: Obračunato na osnovu podataka Narodne banke Srbije u publikacijama *Ukupna premija i raspored premije društava za osiguranje*, za odgovarajuće godine.

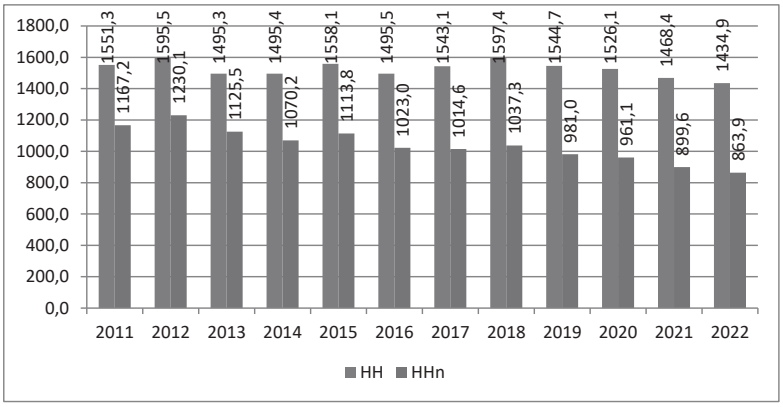
Vrednosti indeksa prikazanih u Tabeli 1 ukazuju na (relativno) visok stepen koncentracije, bez obzira na to što već istaknuto pitanje određivanja granica između niske, srednje i visoke koncentracije (odnosno ma koje druge klasifikacije) u stvari i ne omogućuje precizno određenje tog stepena. Vrednosti indeksa CR3 kreću se, uz manje

[32] Druge argumente za korišćenje ove promenljive dao je M. Kostić u: M. Kostić, „Analiza koncentracije ponude u sektoru osiguranja Srbije", *Industrija*, 2009, 37(2).
[33] M. Dimić. *Analiza nivoa koncentracije u bankarskom sektoru i u sektoru osiguranja u zemljama centralne i istočne Evrope*, doktorska disertacija, Beograd: Univerzitet Singidunum, 2015.
[34] R. Bukvić, „Novi pristupi ocenjivanju stepena koncentracije i konkurencije: primer sektora osiguranja u Srbiji", *XLVIII International Symposium on Operational Research*, SYM-OP-IS 2021, Beograd: Univerzitet u Beogradu, Matematički fakultet, 2021, str. 93–98.

oscilacije, na nivou od oko 60%, indeksi koncentracije CR4 pokrivaju nešto preko 70% ukupnog iznosa premije, a CR5 preko tri četvrtine. Može se, na osnovu toga, smatrati da se u tim okvirima nalazi ono što se uobičajeno označava kao „jezgro" tržišta. Rezultati izloženi u Tabeli 2, dobijeni drugim metodološkim postupkom (indeksi Linda) to i potvrđuju. U okviru na taj način utvrđenog „jezgra" izdvajaju se dva osiguravajuća društva, s udelima od oko 26%, odnosno 20%, s blagom tendencijom opadanja. S druge strane, ali i potpuno u skladu s tim, očito je da indeks CR8 ima za naše uslove (i potrebe) malu informativnu upotrebljivost (u svim godinama njegova vrednost je tek nešto manja od 90%), a to se i može očekivati zbog relativno malog broja učesnika (osiguravajućih kuća) i značajnih tržišnih udela najkrupnijih. Ono što se na osnovu rezultata iz Tabele 1 još može primetiti, i što treba posebno istaći, jeste činjenica da u celom ovde razmatranom razdoblju nije bilo jasne tendencije u kretanju vrednosti korišćenih indeksa koncentracije. To bi moglo da sugeriše da je „jezgro" tržišta u posmatranom periodu bilo dosta stabilno, a promene unutar „jezgra" (posmatrajmo vrednosti indeksa CR3, CR4, CR5) nisu bile posebno izražene.

Nešto drukčija slika proističe na osnovu vrednosti Hiršman–Herfindalovog indeksa (videti Sliku 1). Ako se kao granica između umereno i visoko koncentrisanog tržišta prihvati vrednost ovog indeksa od 1.800, kako je propisano u Vodiču iz 1982, tržište sektora osiguranja u Srbiji u posmatranom periodu 2011–2022. moralo bi biti klasifikovano kao umereno koncentrisano. Očigledno, to je, makar u izvesnoj meri, u suprotnosti s informacijom koju pružaju vrednosti indeksa koncentracije CRn, pre svega CR4 i CR5. Na osnovu toga još jednom se može zaključiti da za klasifikaciju tržišta, odnosno struktura na njima nije dovoljno koristiti jedan indikator (indeks), već treba kombinovati veći broj indeksa, odnosno metodoloških postupaka.

Slika 1. Koncentracija tržišta osiguranja u Srbiji*: Hiršman–Herfindalov i normalizovani Hiršman–Herfindalov indeks 2011–2022.



* Bez Kosova i Metohije

Izvor: Sastavljeno na osnovu podataka Narodne banke Srbije.

Obračunate vrednosti Hiršman–Herfindalovog indeksa predstavljene su na Slici 1. Kako je već istaknuto, na vrednosti tog indeksa veliki uticaj ima broj N (broj učesnika na tržištu). Na slici je ilustrovan takav zaključak – kao što se vidi, znatno je manji nivo koncentracije iskazan preko normalizovanog indeksa, obračunatog prema formuli (6). Za zemlju kakva je Srbija, u kojoj većinu tržišta karakteriše mali broj učesnika, takav zaključak mora se stalno imati na umu, i buduća istraživanja stoga treba usmeravati ka većem korišćenju tog indeksa.

Vrednosti indeksa prezentovane u gornjoj Tabeli 1 ukazuju na moguće postojanje oligopolske strukture, s koncentrisanjem visokih tržišnih udela u okviru manje grupe društava. Da bismo proverili tu mogućnost, primenili smo i drugačiji metodološki postupak, uobičajen u praksi odgovarajućeg antimonopolskog tela u Evropskoj uniji (Evropska komisija za konkurenciju). Reč je o indeksu (preciznije – sistemu indeksa) Linda, koji je razvio saradnik Komisije EU u Briselu Remo Linda.[35] Linda je predložio indeks sa sledećim opštim obrascem

$$IL_m = \frac{1}{m(m-1)} \sum_{i=1}^{m-1} \frac{m-i}{i} \cdot \frac{CRi}{CRm-CRi} \qquad (10)$$

iz kog se za svaku vrednost m dobija poseban izraz (formula), odnosno poseban indeks, a dobijeni indeksi formiraju niz kao osnov za analizu udaljenosti tržišta od tržišta savršene konkurencije. Indeksi dati izrazom (10) namenjeni su upravo testiranju postojanja oligopolskih struktura, pri čemu se za tu svrhu ne koriste nikakve arbitrarno postavljene granice, kao što se to inače čini kod korišćenja drugih pokazatelja koncentracije. Same vrednosti indeksa će ukazati na to da li na datom tržištu postoji oligopol ili ne: u uslovima tržišta savršene konkurencije vrednosti indeksa će konstantno opadati (ILm+1>ILm za sve m), dok suprotno tome, narušavanje ove zakonitosti ukazuje da na datom tržištu postoji oligopol. Shodno teorijskim razmatranjima, oligopol može biti čvrst (sa 3–5) ili labav (sa 7–8 tržišnih aktera).

Vrednosti indeksa Linda u razmatranom periodu prikazane su u Tabeli 2. Kao što se može videti, te vrednosti u svakoj od godina ilustruju upravo prekid opadanja niza, dakle ukazuju na postojanje (čvrstog) oligopola, iako ima određenih razlika između pojedinih godina. Nizovi opadajućih vrednosti tih indeksa, naime, prekidaju se u svakoj od posmatranih godina, ali ne istim redosledom. U najvećem broju slučajeva to se dešava kod petog po redu indeksa (IL5 > IL4), u nekim godinama i ranije, a u poslednjim dvema godinama kod šestog. Sve to sugeriše pomenuti zaključak o postojanju oligopolske strukture. Dakle, oligopol u najvećem broju godina formiraju četiri društva, a u dvema godinama (2015. i 2016) struktura se približava duopolnoj.

[35] R. Linda, *Methodology of concentration analysis applied to the study of industries and markets*, Brussels: Commission of the European Communities, 1976.

Najzad, u poslednjim dvema godinama oligopol je proširen (IL6 > IL5), i čini ga pet društava, ali se on još uvek nalazi u okvirima čvrstog oligopola.

Tabela 2. Vrednosti indeksa Linda u sektoru osiguranja u Srbiji* 2011–2020.

IL	Godina											
	2011.	2012.	2013.	2014.	2015.	2016.	2017.	2018.	2019.	2020.	2021.	2022.
IL2	0,7089	0,7272	0,7011	0,5840	0,5759	0,5772	0,6302	0,6434	0,6150	0,6723	0,6748	0,7092
IL3	0,4703	0,5966	0,5828	0,5240	0,6102	0,5977	0,6107	0,6175	0,6042	0,6056	0,6103	0,6089
IL4	0,4911	0,5403	0,4840	0,4692			0,4620	0,4718	0,4586	0,4548	0,4636	0,4570
IL5		0,5488	0,5189	0,4997			0,5009	0,5066	0,4736	0,4661	0,4553	0,4435
IL6											0,4921	0,4759

* Bez Kosova i Metohije.
Izvor: Obračunato na osnovu podataka Narodne banke Srbije u publikacijama *Ukupna premija i raspored premije društava za osiguranje*, za odgovarajuće godine.

IV. Ocena stepena monopolisanosti sektora osiguranja

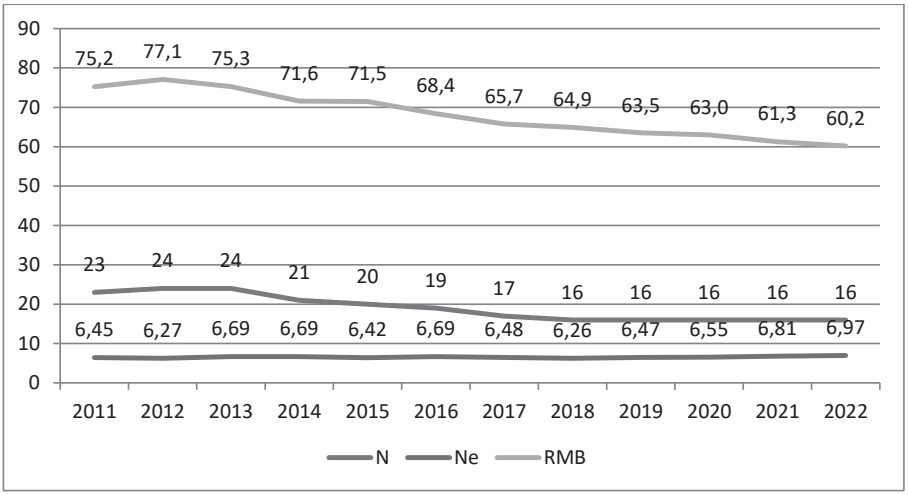
Kao što je već rečeno, ovaj deo rada biće posvećen problemima ocenjivanja stepena monopolisanosti sektora osiguranja u posmatranom periodu 2011–2022. U odeljku II date su neophodne teorijsko-metodološke napomene, a u odeljku III opšti pogled na nivo koncentracije. Ovde će na osnovu toga biti izložena empirijska analiza i data ocena stepena monopolisanosti na osnovu predložene metodologije, odnosno pokazatelja RMB.

Pogledajmo najpre sumarno predstavljene rezultate (Slika 2). Primetimo kao prvo da su vrednosti ekvivalentnog broja prilično stabilne, iako je do 2018. broj učesnika (društava za osiguranje) opadao. U poslednjim dvema godinama vrednosti ekvivalentnog broja dostigle su maksimum u celom periodu. Iako su u pojedinim godinama (2012, 2015, 2017. i 2018) one čak i opadale, to nije uticalo na generalni trend rasta. Već i to pokazuje da se tržište osiguranja u Srbiji (bez Kosova i Metohije) u posmatranom razdoblju lagano kretalo u pravcu jačanja tržišnih uslova, odnosno većeg uticaja konkurencije na njemu.

Vrednosti izračunatog indeksa RMB takav zaključak i više nego potvrđuju. Od 75,2 u početnoj 2011. on je opao na 60,2 u poslednjoj 2022, sa stalnom tendencijom pada (uz jedini izuzetak u 2012, kada je ostvaren manji rast). Takvo kretanje indeksa pokazuje da tržište osiguranja u Srbiji (bez Kosova i Metohije) tokom datog perioda postaje sve konkurentnije, do čega je došlo bez obzira na značajno smanjenje broja osiguravajućih društava (do 2018) i njihov zatim neizmenjeni broj. S obzirom na istaknuto kretanje broja osiguravajućih društava, očigledno je da su takvom kretanju predloženog indeksa RMB u većoj meri doprinele vrednosti disperzije tržišnih udela ovih društava, odnosno da je došlo do smanjenja koncentracije tržišnih udela. Na

osnovu vrednosti indeksa koncentracije korišćenih u ovom radu, takav nedvosmislen zaključak nije mogao da bude izveden, i u tome vidimo jednu od ključnih vrednosti ovde izvršenih istraživanja.

Slika 2. Broj učesnika na tržištu (N), ekvivalentni broj (Ne) i indeks monopolisanosti (RMB) na tržištu osiguranja u Srbiji* 2011–2022.



* Bez Kosova i Metohije
Izvor: Sastavljeno na osnovu podataka Narodne banke Srbije.

U zaključku možemo konstatovati da dobijeni rezultati deluju logično. Iako je Hiršman–Herfindalov indeks osnov za indeks RMB, između njih postoji dosta niska korelacija (0,42), što pokazuje da izračunati indeks RMB u značajnoj meri donosi novu informaciju, koje nema u Hiršman–Herfindalovom indeksu. Treba svakako imati u vidu da je vremenska serija u našem istraživanju (12 godina) kratka da bi se izračunata korelacija smatrala pouzdanom, ali njena vrednost ipak je indikativna. Svakako, potrebno je pored toga načiniti i određena upozorenja, koja se pre svega tiču uticaja broja učesnika na tržištu na njegovu strukturu. To je već više puta istaknuto u tekstu i svakako zahteva dodatna ispitivanja i provere. Ali čak i nezavisno od toga, bilo bi poželjno izvršiti slična istraživanja zasnovana na konceptu ekvivalentnog broja i s drugim indeksima koncentracije.

V. Zaključak

Ekonomska teorija u savremenim uslovima posmatra konkurenciju kao neizostavan faktor povećanja konkurentnosti i efikasnosti poslovanja, pri tome ne

samo u realnom sektoru, već i u infrastrukturnim delatnostima, dakle i u finansijskom sektoru, i u okviru njega u sektoru osiguranja. Takav pristup konkurenciji u finansijskom sektoru javlja se u sve većoj meri i u radovima naših istraživača, koji uz korišćenje standardnih, ali i novijih metoda analiziraju koncentraciju i konkurenciju. Broj takvih istraživanja, kao i primenjenih metodoloških postupaka, do sada je nešto veći u bankovnom sektoru nego u sektoru osiguranja, ali se i ovom drugom sve više posvećuje pažnja. Sve se to može oceniti pozitivno.

Izloženi rad najpre daje osvrt na stepen i promene u koncentraciji u sektoru osiguranja, uz korišćenje standardnih pokazatelja (indeks tržišne koncentracije i Hiršman–Herfindalov indeks). Osnovni nalazi potkrepljeni su i vrednostima indeksa Linda, koji potvrđuju pretpostavku o postojanju oligopolske strukture u svim posmatranim godinama. U narednom delu rada izvršena je, na osnovu predloga novog postupka, procena stepena monopolisanosti u sektoru osiguranja u Srbiji (bez Kosova i Metohije) u periodu 2011–2022.

Rezultati istraživanja u ovom radu ukazali su na (relativno) visok stepen koncentracije, sugerišući postojanje oligopolske tržišne strukture, pri tome strukture poznate kao „čvrsti" oligopol. U razmatranom periodu nije bilo značajnijih promena nivoa koncentracije (i konkurencije), ali se primećuju određene, manje promene vrednosti obračunatih indeksa i izvesna, blaga tendencija njihovog opadanja. Možemo naglasiti da je u toku posmatranog perioda broj osiguravajućih društava značajno opao (sa 23 u 2011, odnosno 24 u 2012. i 2013, do 16 u poslednjih pet godina), a to se po teorijskim postavkama ne bi moglo smatrati pozitivnim kada je reč o konkurenciji. Naime, pretpostavka je da smanjenje broja učesnika po definiciji dovodi do smanjenja konkurencije na tržištu. Međutim, smanjenje broja kompanija u sektoru osiguranja u analiziranom periodu nije imalo značajnijeg uticaja na nivo koncentracije, već je na njegovu veličinu prvenstveno uticala struktura, tj. raspored tržišnih udela među osiguravajućim društvima. Upravo stoga i istaknuto relativno značajno smanjenje broja društava nije u rezultatu dovelo do povećanja nivoa koncentracije.

Sve navedeno potvrđuje i kretanje predloženog koeficijenta stepena monopolisanosti tržišta, koji je u celom periodu bio relativno visok, ali je konstantno opadao. Njegov pad u posmatranom periodu bio je čak izrazitiji nego (blagi) pad indeksa koncentracije. Time su očito neutralisani uticaji opadanja broja osiguravajućih kuća i ujedno stvarani uslovi za značajniji uticaj konkurencije među osiguravajućim društvima, što se svakako može smatrati pozitivnim kretanjem.

Na kraju, imajući u vidu da je još uvek relativno mali broj istraživanja posvećen koncentraciji i konkurenciji u sektoru osiguranja u Srbiji, potrebno je još jednom preporučiti dalja istraživanja, kao što smo to učinili i u prethodnim radovima. Naravno, pri tome je poželjno korišćenje i drugačijih metodoloških postupaka. To je neophodno radi što svestranijeg sagledavanja ovog složenog fenomena, utoliko pre što se pokazalo da najčešće korišćeni metodi poseduju izvesne, veće ili manje,

nedostatke, kao i da se u pokušajima njihovog prevladavanja konstantno dolazi do novih metodoloških rešenja. Takva nova rešenja uvek je korisno proveravati i u našim uslovima, utoliko pre što je u pitanju kompleksan problem, kao što je tržišna konkurencija.

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ASSESMENT OF DEGREE OF MONOPOLIZATION OF INSURANCE SECTOR IN SERBIA IN THE PERIOD 2011–2022.

SCIENTIFIC PAPER

Abstract

This article deals with the matter of determining the level of monopolization in the insurance sector of Central Serbia during the period 2011–2022. The basis of the research were data on the total insurance premium of insurance companies, for which we calculated the market concentration coefficient and the Hirschman-Herfindahl Index (HHI), as the most popular and most commonly used measures of concentration. Their values show a (relatively) high level of concentration, but without clear tendencies in its movement, and with minimal decline overall. Based on the equivalent number, as the reciprocal (inverse) value of the HHI coefficient, an index called the monopoly market ratio or boundary index of market monopolization was proposed, showing the degree to which the market is monopolized. The values of this index during the observed period range from around 75 to 60, with a clear downward tendency, significantly more intense than the minimal decline in the concentration coefficient values. This indicates that the insurance market in Serbia is reducing the influence of monopolistic (and oligopolistic) structures during the given period and is becoming increasingly competitive, despite the decrease in the number of insurance companies in the first half of the observed period and their unaltered number since 2018.

Key words: *monopolization, concentration, competition, insurance, Serbia, indicators, market shares, number of companies, equivalent number.*

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I. Introduction

Competition, as one of the fundamental economic concepts, has been at the centre of attention in theoretical and applied research for many years, especially during the last few decades, during which the paradigm of the free-market mechanism has prevailed both in theory and in practice. Furthermore, the action and observance of market criteria are considered necessary not only when it comes to the real sector of the economy but when dealing with the financial sector, where they are also implied. Therefore, in our business environment, an increasing number of studies are directed towards this aspect of economic and financial tendencies.

Most generally defined as "the process of conscious competition among economic agents for the most favourable conditions of sale or purchase in the market,"[2] competition has been a subject of consideration even before the establishment of economic science. In the writings of ancient thinkers, Christian theologians, ancient Chinese philosophers, and others, issues of competition were treated in relation to the need to introduce various restrictions on capital markets, usury, determining so-called fair prices, and so on. Traditionally, the establishment of the theory of competition as a subject of scientific interest is associated with Adam Smith, considered by many as the founder of economic science, and his famous work "An Inquiry into the Nature and Causes of the Wealth of Nations," published in 1776[3], although similar issues were discussed by many philosophers before him[4]. Smith founded three approaches to competition, which are still present in economic science today: behavioural, functional, and structural.[5] Over the years, thanks to the works of numerous economists, and not only them, competition has gained renown as a model suitable for application not only in economics but also in sociology, anthropology, as well as in natural sciences (biology, ecology), and other disciplines.

Over the course of the development of market economies, methods and techniques for researching the competition have also evolved. Throughout a tradition spanning more than two centuries, many aspects and characteristics of competition

[2] А. Д. Некипелов (ред.), *Популярная экономическая энциклопедия*, Москва: Большая Российская энциклопедия, 2003, pp. 129.

[3] A. Smith, An Inquiry into the Nature and Causes of the Wealth of Nations, translated into Serbian as A. Smit, *Istraživanje prirode i uzroka bogatstva naroda*, Beograd: Kultura, 1970.

[4] Primarily, ancient thinkers such as Xenophon, Plato, Aristotle, and in the modern era, mercantilists have been considered here. Alongside well-known and frequently cited mercantilist writers like Thomas Mun, Antoine de Montchrétien, Walter Stafford, and others, in whose works significant attention is dedicated to state protectionism as a means of restricting competition from foreign commodity producers, it is certainly worth mentioning Ivan Pososhkov. His main work, "Book on Poverty and Wealth," was published exactly 300 years ago.

[5] For more details, refer to А. А. Рязанов, Эволюция теории конкуренции, *Вестник Московского университета имени С. Ю. Витте. Серия 1: Экономика и управление*, 2017, (2), pp. 21–22.

have been analysed and explained. However, not all aspects have been fully addressed. Consequently, theory has yet to establish even a unified and universally accepted definition of the concept of competition. Accordingly, various other aspects of this complex phenomenon have not been adequately resolved. One such issue, which also represents a central concern of the theory, is the measurement of competition, as an issue that is particularly important not only in theoretical terms but also much more so in practice, relative to the implementation of results (for example, in conceiving and implementing antitrust policies or competition protection policies).

In the absence of a generally accepted answer to the above question, descriptive, relative ratings on an ordinal scale are most often applied, such as strong, moderate, weak competition, etc., based on expert assessments, sociological surveys, and sometimes, in a somewhat stricter approach, on the results or consequences of competition. Such results include the number of market participants, their achieved revenue (income) and profit, i.e., assets and capital, etc. These data (results) are then used to calculate the market shares of participants in the relevant quantities at the branch level or the entire economy, which were actually achieved in the competition process. In this way, research shifts from the domain of behavioural and functional approaches to a structural approach, whose subject is the state of the market (market structure).

Calculations and analyses of market participants' shares assume an understanding of the relationship between concentration and competition. Although its true nature is not known,[6] it is generally accepted that it is inverse, that is, higher concentration indicates lower competition, and vice versa. With this general assumption, the first question that arises is the choice of a measure for market concentration itself, followed by the question of the analytical possibilities provided by the selected measure(s). Unfortunately, both of these questions are not sufficiently illuminated or explained in most relevant studies and are generally found at the level of descriptions that existed in corresponding research during the period of the FPR/SFR Yugoslavia.[7] Given that such analyses are, of course, insufficient, the author has endeavoured, in his earlier works, to supplement and modify the approaches used so far, thereby providing insights into additional aspects of the investigated phenomenon.[8]

[6] П. Ф. Воробьёв и С. Г. Светуньков. Новый подход к оценке уровня конкуренции, *Современная конкуренция*, 2016, 10(6).

[7] See detailed consideration in: R. Bukvić, Research on market structures in the economy of the Second Yugoslavia, *Ekonomika*, 1999, 35(1–2).

[8] In this context, the insurance section is considered in the following works:- R. M. Bukvić, «Decomposition of Changes in Concentration in the Insurance Sector in Serbia 2011–2020: The Impact of Changes in Market Structure and Number of Insurance Companies,» *Ekonomski vidic*i, 2021, 26(3–4); R. M. Bukvić, «New Approaches to Assessing the Degree of Concentration and Competition: The Example of the Insurance Sector in Serbia» XLVIII International Symposium on Operational Research, SYM-OP-IS 2021 Banja Koviljača, September 20–23, 2021, Proceedings, editors D. Urošević, M. Dražić, Z. Stanimirović, Belgrade: University of Belgrade, Faculty of Mathematics, 2021; R. M. Bukvić, «Concentration in the Insurance Sector in Serbia: Changes in the Period 2011–2020 and their Decomposition,» Inurance Trends Journal, 2022, 38(1).

One such attempt is the following research, dedicated to determining the degree of monopolization in the insurance sector in Central Serbia. In line with the last note, a new approach will be applied, specifically an analytical tool that will, of course, require additional research and verification. Compared to previous research, the analysis has been extended to the period 2011–2022 and is based on conventional concentration coefficients, primarily the Hirschman-Herfindahl Index. The foundation for this research was laid in the author's previous work, which utilized a greater number of different concentration measures.[9] On this occasion, these, we might say, previous results have been generalized and supplemented. Subsequently, a new approach is proposed, and based on this, an assessment of the degree of monopolization in the sector is provided.

II. Methodology notes

The starting point of one of the most commonly applied approaches to assessing market competition is the actual shares of market actors, where the allocation of these shares among these actors serves as an indicator of competition. The basis of this approach lies in simple reasoning: the smaller the concentration of market shares, the less power individual actors have in the market, and therefore, the greater the development potential of competition. Such a relationship can be represented by a simplified linear model L = 1 – C, illustrating the aforementioned inverse relationship between competition (L) and concentration (C) in the market. The assumption of a linear relationship should be considered too simplified; it is probably not entirely accurate. In some studies, it has been shown that this relationship is of a different, non-linear nature.[10] For the purposes of research in this paper, however, considering the specific nature of this relationship is not important; it is sufficient for us to assume its inverse character.

In the above relation, the crucial aspect is determining or measuring concentration (C). The level or degree of concentration - C, is determined based on the shares s_i of market actors in the relevant market:

$$s_i = \frac{Q_i}{Q} = \frac{Q_i}{\sum_{j=1}^{N} Q_j} \tag{1}$$

where N represents the number of participants (usually producers) in the market, or some of the market parts (such as industry branches). Qi denotes the production volume (expressed physically or in value terms, or another quantity such as revenue, income, total assets, capital, number of employees, etc.) of the i^{th} actor in the market.

[9] R. Bukvić, "New Approaches to Assessing the Degree of Concentration and Competition: The Example of the Insurance Sector in Serbia," XLVIII *International Symposium on Operational Research*, SYM-OP-IS 2021, Belgrade: University of Belgrade, Faculty of Mathematics, 2021, pp. 93–98.

[10] See: П. Ф. Воробьёв и С. Г. Светуньков. Новый подход к оценке уровня конкуренции, *Современная конкуренция*, 2016, 10(6), p. 6.

The shares of the s_i in (1) can be expressed as percentages, which then reflects on the values of the concentration coefficients calculated on that basis. However, the choice of expressing shares or indicators in one way or another does not affect the construing of the results.

Since the beginning of the 20th century and the early works of Corrado Gini and Max Lorenz, the economists and statisticians have developed and utilized a variety of methods or indicators to assess the degree of concentration.[11] A significant impetus to the development of this area came along with a major economic crisis at the beginning of the fourth decade, when a vast amount of industrial statistics became available. Among the concentration measures, two indicators were most commonly used in the early stages, somewhat inversely related to each other: 1) the number of firms that account for a certain percentage (in most cases 80%) of the relevant aggregate (production, sales, revenue or income, assets, etc.).

$$S_{m^*} = \sum_{j=1}^{m^*} s_j = 80\% \tag{2}$$

where m* denotes a number of enterprises looked for (the number of entities satisfying the set criterion), and 2) sum of shares of a few major enterprises on the market

$$CRn = \sum_{j=1}^{n} s_j \ , \tag{3}$$

whereby at the indicator (3), in empirical analyses, n was most commonly taken as 4, although for this or any other option, explanations were generally not provided.[12] Regardless of the specific choice for n in calculating coefficient (3), it's evident that this indicator (as a simple sum of the shares of the top n market actors) focuses on the part of the market commonly referred to as the "core," while neglecting the "periphery." However, the boundary between these two market segments has not been precisely defined or explained. Moreover, the concentration coefficient does not actually reveal what is hidden in the "core" of the market, namely, the distribution of shares among these *n* (3, 4, or 5, 8, etc.) largest market participants.

Among indicators (2) and (3), in practice, the second one, known simply as the Concentration Ratio (CRn), has retained greater popularity as more reliable and

[11] To see a more detailed overview of the historical development of measuring concentration, refer to: T. Roberts, "When Bigger Is Better: A Critique of the Herfindahl-Hirschman Index's Use to Evaluate Mergers in Network Industries," Pace Law Review, 2014, 34(2), pp. 896 and further.

[12] The number 4 has often been uncritically adopted, following the monographs of the Temporary National Economic Committee (TNEC), where this number of market participants was chosen for practical reasons without theoretical explanations. See: M. A. Adelman, "The Measurement of Industrial Concentration," The Review of Economics and Statistics, 1951, 33(4).

informative, but also easier to calculate. The CRn gained and long maintained major popularity and significance amongst the numerous indicators, especially after being embraced by the DOJ (Department of Justice) in their first Merger Guidelines.,[13] and has until nowadays remained, with The Hirschman-Herfindahl Index (HHI) [14] the most commonly used concentration indicator.[15]

While calculating the concentration ratio CRn requires only a few data points, the Hirschman-Herfindahl Index is computed by considering the shares of all participants in the relevant market, and/or, the market observed. Since the sum of all shares is, by definition, equal to one, we use the squares of these shares rather than the shares themselves for calculating this coefficient.

$$HH = \sum_{j=1}^{N} s_j^2 \tag{4}$$

This actually means that the market shares of participants are weighted by those shares themselves. The Hirschman-Herfindahl Index owes much of its popularity and acceptance among economists specializing in industrial organization to Herfindahl's mentor, George Stigler. [16] It became nearly indispensable after being included in the new Horizontal Merger Guidelines[17] in 1982.

To calculate concentration coefficient (3), it is sufficient to have data on production, revenues, etc., for only a few (largest) market actors, making it simple and easy. However, it is characterized by several significant drawbacks, that limit its

[13] See: 1968 Merger Guidelines, U.S. Department of Justice, Antitrust Division, https://www.justice.gov/sites/default/files/atr/legacy/2007/07/11/11247.pdf. /accesed on 01.02.2024.

[14] In the literature, this coefficient is often referred to as the Herfindahl coefficient (index), although the credit should go to Albert Hirschman, who used it as early as 1945 (albeit as the square root of the expression later provided by Herfindahl, which is still used today), while Orris Herfindahl did so only in 1950. This can be highlighted as one of the most well-known examples of the so-called Stigler's Law, or Stigler's Law of Eponymy, according to the eponymous paper from 1980. See: S. Stigler, "Stigler's Law of Eponymy," Transactions of the New York Academy of Sciences, 1980, 39 (1 Series II), which states that "no scientific discovery is named after its original discoverer." Stigler himself pointed out (rightly) that this law belonged to Robert K. Merton (who named it the Matthew Effect; see: R. K. Merton, "The Matthew Effect in Science," Science, 1968, 159(3810)), so the law can be applied even to the author who discovered it!

[15] Similar assessments can be made for market research and their conditions in our context, where from the beginnings in the late 1950s until the end of the existence of the SFR Yugoslavia, only the concentration index CRn (first CR5 and then CR4) was used in analyses. For more details, see: R. Bukvić, "Istraživanja tržišnih struktura u privredi druge Jugoslavije," Ekonomika, 1999, 35(1-2). The Hirschman-Herfindahl index was first applied only in 2002 in the study by Begović et al., "Antimonopoly Policy in the FR Yugoslavia," Belgrade: Center for Liberal-Democratic Studies, 2002, almost half a century after the beginning of market structure research..

[16] See: S. Calkins, „The New Merger Guidelines and the Herfindahl-Hirschman Index", *California Law Review*, 1983, 71(2), p. 409.

[17] See: 1982 Merger Guidelines, U.S. Department of Justice, Antitrust Division, https://www.justice.gov/sites/default/files/atr/legacy/2007/07/11/11248.pdf. /accesed on 01.02.2024.

usefulness (among other things, it may have the same value for different distributions of shares within the "core" of the market it focuses on). In academic papers, it is often highlighted that coefficient (4) does not have such a drawback, which would make it considerably more acceptable and useful than coefficient (3). However, considering that its values range from

$$\frac{1}{N} \leq HH \leq 1 \tag{5}$$

We will see that the fact that its minimum value depends on the number of market participants (N) cannot be ignored. Hence, the interpretation of coefficient (4) is significantly complicated, which also applies, to a large extent, to concentration coefficient (3). The impact of the number of participants on the size of the concentration coefficient is larger and more significant, especially in markets with fewer participants (which is actually the case for most markets in Serbia), such as the insurance market. This aspect must not be overlooked. Therefore, it is necessary to neutralize the impact of the number of participants, and for such purposes, the normalized Hirschman-Herfindahl Index is formulated and used, although not as frequently.[18]

$$HHn = \frac{HH - \frac{1}{N}}{1 - \frac{1}{N}} \tag{6}$$

Its values are, of course, within the range from 0 to 1.

Both coefficients (3) and (4) appertain to the group of the so-called concentration measures, within which a greater number of coefficients have been developed and used. They differ in the weights assigned to market shares. Coefficient (3) is an unweighted index, meaning that each share included in the index calculation has had a weight equal to one. In contrast, the Hirschman-Herfindahl Index weights these shares, as do other indices in this group. In this case, the weights are actually the shares themselves. Clearly, in this way, the Hirschman-Herfindahl Index assigns greater significance to market participants accounting for larger shares, that is, to stronger market actors. However, it is probably more important to note that this weighting does not guarantee a unique relationship between the distribution of market shares and the level (degree) of concentration. Thus, the same value of the HHI coefficient can be obtained for very different configurations of market shares, indicating different market conditions.[19]

[18] As per D. Fibingr, Analýza koncentrace na trhu vepřového masa v České republice, *Acta universitatis agriculturae et silviculturae Mendelianae Brunensis*, 2004, 52(3).

[19] И. А. Смарагдов и В. Н. Сидорейко, „Индексы рыночной концентрации: неоднозначная информативность", *Концепт*, 2015, p. 9.

In the practical implementation of antitrust policy (competition protection policy), the application of both above specified indices (3) and (4) faces challenges in identifying types (forms) of competition based on their values. These challenges in implementing antitrust policy, although not in theory, are often "resolved" by arbitrarily setting particular levels of thresholds (for example, in the case of the Hirschman-Herfindahl Index, common thresholds have equalled 1,000 and 1,800 for three types of markets). This is carried out to establish the type of competition in the observed or researched market segment based on the value of index (4) and its placement in the corresponding segment: non-concentrated, moderately concentrated, and highly concentrated markets.[20]

In this paper, the authors have presented the results obtained through the application of the discussed coefficients, primarily the Hirschman-Herfindahl Index (HHI). A more detailed examination of other coefficients and results was provided in a recent communication,[21] including different approaches regarding the logic of aggregating market shares into a single number, accompanied by some other coefficients, either less popular or simply less used (such as the Gini, Rosenblatt, Theil-Holm, and others) for these purposes. The main reason for reducing the number of indicators is not in their (good or bad) characteristics; it lies in different goals set in this paper. Here, we are not interested in distinguishing the influence of two factors (the number of participants in the market and the magnitude of the dispersion of their shares) on the size of concentration indicators, which is determined based on the nature of the indicator itself. Namely, as emphasized several times, [22] and as confirmed by elementary transformations of the coefficient (4), the Hirschman-Herfindahl concentration coefficient can be represented as the sum of two components.

$$HH = N\sigma^2 + \frac{1}{N} \tag{7}$$

where σ^2 is variation (dispersion) of market shares s_i and N is the number of market participants. This has two conflicting implications. Firstly, expression (7) demonstrates

[20] This division was initially defined in the U.S. in the 1997 Horizontal Merger Guidelines and was later replaced in 2010 with thresholds of 1,500 and 2,500. See: Horizontal Merger Guidelines (1997) and Horizontal Merger Guidelines (2010). In other countries that use the Hirschman-Herfindahl Index for antitrust policy purposes, different thresholds between these types of markets are defined, but they are, of course, also set arbitrarily.

[21] R. Bukvić, „New approaches to assessing the degree of concentration and competition: an example from the insurance sector in Serbia", *XLVIII International Symposium on Operational Research*, SYM-OP-IS 2021, Beograd: University of Belgrade, Faculty of Mathematics, 2021, pp. 93–98.

[22] С. Б. Авдашева и Н. М. Розанова, *Теория организации отраслевых рынков*, Москва: Издательство Магистр, 1998; И. А. Смарагдов и В. Н. Сидорейко, „Индексы рыночной концентрации: неоднозначная информативность", *Концепт*, 2015, 9.

the ambiguity in interpreting the value of the Hirschman-Herfindahl coefficient, which must not be overlooked.[23] The second implication pertains to the fact that expression (7) offers the possibility of distinguishing between the impact of market share variance (i.e., changes in market structure) from the number of market participants on changes in the level of concentration.[24] This distinction served as the basis for the research whose results we presented in the previous paper.[25]

Starting from the Hirschman-Herfindahl coefficient, as one of the most commonly used measures of market concentration, analyses can branch out in various directions and aspects. One possible yet underutilized approach is based on transforming the current market into one with an equal number of actors, i.e., equivalent actors.[26] This concept revolves around the idea of an equivalent count, defined as the inverse (reciprocal) value of this coefficient

$$Ne = \frac{1}{HH} \tag{8}$$

which is, as we can see, given as a cardinal number. What does the equivalent number represent? Let's look at expression (6) and assume that all participants in the observed market have equal strength, i.e., they have equal s_i market shares. In that case, the value of the coefficient (6), that is, (4), will reduce to 1/N, which is also its theoretical minimum. Therefore, the reciprocal value of the Hirschman-Herfindahl coefficient is the number of market participants of equal size and strength (equal shares) that generate the given value of the HHI (the minimum in this case, or any value in the general case)[27]. In other words, the equivalent number can be interpreted as the effective number of participants in the market, or in any other process, such as in an electoral competition[28]. This is exactly how the equivalent number is interpreted

[23] In the hypothetical example of Smaragdova and Sidorejka («Market Concentration Indices: Ambiguous Informativeness,» Concept, 2015, 9), even in the case of equal market shares for all market players, the value of the Hirschman-Herfindahl index (HHI) would be 2,000 for five market actors and 1,000 for ten actors. Thus, in the first case, according to the usual thresholds for distinguishing market structures, the market would be classified as highly concentrated, while in the second case, it would be classified as unconcentrated, which is obviously absurd..

[24] С. Б. Авдашева и Н. М. Розанова, *Теория организации отраслевых рынков*, Москва: Издательство Магистр, 1998.

[25] R. M. Bukvić, „Concentration in the insurance sector in Serbia: Changes in the period 2011–2020 and their decomposition", *Insurance Trends Journal*, 2022, 38(1)

[26] M. O. Finkelstein, R. M. Friedburg, „The Application of an Entropy Theory of Concentration to the Clayton Act", *Yale Law Journal*, 1967, 76(4), pp. 689.

[27] M. A. Adelman, Comment on the H Concentration Measure as a Numbers-Equivalent, *The Review of Economics and Statistics*, 1969, 51(1), pp. 100.

[28] To read: The Inverse Herfindahl–Hirschman Index as an „Effective Number of" Parties, is.R() in R bloggers, December 17, 2012, *https://www.r-bloggers.com/2012/12/the-inverse-herfindahl-hirschman-index-as-an-effective-number-of-parties/*. accessed: 01.04.2024.

by the mentioned 1982 Guide [29] and it should not be confused with the common understanding of the term "effective," which is also encountered in academic texts.

Since the boundaries of the HH coefficient have been presented by range [1/N, 1], with the minimum when all participants have equal shares and the maximum in the case of only one market participant (complete monopoly), the boundaries of the equivalent number are given by range [1, N]. The equivalent number will have its minimum value (Ne = 1) in the case of a complete monopoly, and maximum value (Ne = N) in the case of equality among all market participants.[30]

It is clear from this that the difference (N - Ne) will indicate how far the specific market situation is from the state of complete equality of all market participants, which we can conditionally designate as a state of perfect competition. This difference will lie within the range[0, N - 1], taking the minimum value (N - Ne = 0) in the case of perfect competition, and the maximum value (N - Ne = N - 1) in the case of a complete monopoly.

Further to the foregoing, we can propose a coefficient that will indicate the deviation of a specific market from the state of perfect competition, that is, the degree of market monopolization. We will obtain this coefficient by normalizing the difference (N - Ne):

$$RMB = \frac{N-Ne}{N-1} \tag{9}$$

whose values, clearly, will range from 0 (when Ne = N), in the case of perfect competition to 1 (when Ne = 1), in the case of a complete monopoly. The RMB coefficient, or ratio , therefore, indicates the extent (area, or boundaries) of market monopolization, which is greater the closer its value is to figure one. It is also evident that its complementary coefficient(1-RMB) indicates the domain of competition in that market.

III. Overview of Level of Concentration in Insurance Sector in Serbia 2011–2022.

The observed 2011 to 2022 period was marked by significant changes in the insurance market in Serbia[31], primarily reflected in the reduction in the number of insurance companies in the first part of the period (up to and including the year

[29] Видети: III. HORIZONTAL MERGERS, A. Concentration and Market Share, 1. General Standards, c) Post-Merger HHI Above 1800.

[30] If the number of participants in the market is large, that would correspond to perfect competition, but not when that number is small.

[31] In the reports of the National Bank of Serbia, data for Kosovo and Metohija are not available, so the insurance sector of Serbia in this study does not cover the entire Republic of Serbia.

2018). The number of companies ranged from 27 (in 2011) to 28 (in 2012 and 2013) and then dropped down to 20 (in the last five years), with a tendency to further decline. In relative terms, the reduction in the number of companies was very significant, but it was stopped in 2018. Among the companies operating in this sector, four have transacted exclusively the reinsurance business. In the subsequent analyses, the authors have focused on insurance companies, using data from the National Bank of Serbia, which have been presented in the reports titled "Total *Premium and Distribution of Premium by Insurance Companies*" for the observed years, as they did in their previous, already cited papers.

As we have already emphasized in the aforementioned papers, the characteristics of competition in the insurance sector, as well as in other parts of the financial sector, make the use of achieved revenue as a criterion inadequate, which is commonly used in the real sector of the economy (in addition to the physical volume of production, which has no analogue in the financial sector). Therefore, it is of primary significance to select the variable based on which concentration (and consequently, competition) will be defined. This issue is essentially resolved by Serbian current regulations (*Law on Protection of Competition*, Article 7), according to which the total premium for all types of insurance is used to assess the degree of concentration in this sector.[32]. The authors have also opted for that variable, considering that they were interested in the insurance sector as a whole. However, it is clear that for certain purposes, it is desirable (and sometimes necessary) to use other variables (total non-life insurance premium and total life insurance premium), as M. Dimić did in her doctoral dissertation. .[33]

Let's first look at some relevant results that we presented in our previous paper[34], for the than observed period. We shall generally determine concentration using the mentioned indices – the concentration ratio (CRn) and the Hirschman-Herfindahl Index (HHI). This general picture will be supplemented and, in a certain sense, verified by the Linda indices. The Table 1 shows the values of the concentration indices CRn across four indicators (CR3, CR4, CR5, and CR8) and the Hirschman-Herfindahl Index relating to the observed period. The concentration index values here are given in percentages, meaning that the shares (1) were multiplied by 100. This, of course, does not change anything in terms of the meaning and significance of the indicators or the construing of the presented values.

[32] M. Kostić provided other arguments for using this variable in: M. Kostić, "Analysis of supply concentration in the insurance sector of Serbia," *Industrija*, 2009, 37(2).

[33] M. Dimić. *Analiza nivoa koncentracije u bankarskom sektoru i u sektoru osiguranja u zemljama centralne i istočne Evrope*, doctoral dissertation, Beograd: Singidunum University, 2015.

[34] R. Bukvić, "New Approaches to Assessing the Degree of Concentration and Competition: Example of the Insurance Sector in Serbia," XLVIII *International Symposium on Operational Research*, SYM-OP-IS 2021, Belgrade: University of Belgrade, Faculty of Mathematics, 2021, pp. 93–98.

Table 1. Values of CR3, CR4, CR5, and CR8 concentration indices, and/ or Hirschman-Herfindahl Index in insurance sector in Serbia 2011 to 2022.

Year	Concentration index					Year	Concentration index				
	CR3	CR4	CR5	CR8	HH		CR3	CR4	CR5	CR8	HH
2011.	63.1	72.1	77.4	88.6	1551	2017.	59.8	71.5	77.2	88.6	1543
2012.	62.4	71.6	77.3	87.5	1596	2018.	61.0	72.6	78.4	89.7	1597
2013.	59.8	70.3	75.8	85.6	1495	2019.	59.7	71.4	77.8	89.3	1545
2014.	60.6	70.8	76.5	87.7	1495	2020.	59.1	71.0	77.6	88.7	1526
2015.	61.2	70.9	76.1	87.5	1558	2021.	57.7	69.0	75.9	87.3	1468
2016.	59.5	70.2	74.9	86.2	1496	2022.	56.6	68.0	75.0	87.1	1435

* Central Serbia only

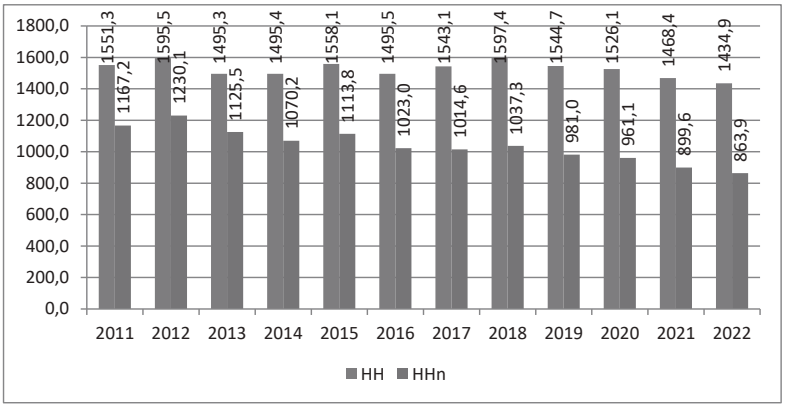
Source: Stated according to the data of the National Bank of Serbia in the publications titled „Total premium and premium distribution of insurance companies" for the relevant years.

The values of indices presented in Table 1 indicate a (relatively) high degree of concentration, regardless of highlighted issue of determining the boundaries between low, medium, and high concentration (or any other classifications), which in fact does not enable precise determination of such a degree. The values of the CR3 index range, with minor fluctuations, at around 60%, the concentration indexes CR4 cover just over 70% of the total premium amount, whereas the CR5 covers over three-quarters. Based on this, it can be considered that what is commonly referred to as the "core" of the market lies within these parameters. The results presented in Table 2, obtained by another methodological approach (Lerner indices), confirm this. Within this identified "core," two insurance companies stand out, with shares of around 26% and 20%, respectively, with a slight downward trend. On the other hand, but also entirely in line with this, it is obvious that the CR8 index has little informative applicability in terms of our environment (its value being only slightly less than 90% in all years), which can be expected due to the relatively small number of participants (insurance companies) and significant market shares of the largest ones. One more observation based on the results presented in the Table 1, which should be particularly emphasized, is the fact that there was no clear tendency in movement of the values of the concentration indexes used throughout the entire observed period. This could suggest that the "core" of the market was quite stable during that period, and changes within the "core" (considering the values of the CR3, CR4, CR5 indexes) were not particularly highlighted.

A somewhat different picture emerges based on the values of the Hirschman-Herfindahl Index (see Figure 1). If the threshold between moderately and highly concentrated markets is accepted as the value of this index of 1,800, as prescribed in the 1982 Guidelines, the insurance market in Serbia during the observed period of 2011–2022 would have to be classified as moderately concentrated. Obviously,

this is, at least to some extent, contrary to the information derived from the values of CRn concentration indexes, especially CR4 and CR5. Based on this, we can reiterate that for the market classification, or their structures, it is not sufficient to use a single indicator (index), but rather a combination of multiple indexes or methodological procedures.

Figure 1. Insurance market concentration in Serbia*: Hirschman-Herfindahl and normalized Hirschman-Herfindahl Indexes 2011–2022.



* Central Serbia
Source: Composed based on the data of the National Bank of Serbia.

The stated values of the Hirschman-Herfindahl Index are presented in Figure 1. As already highlighted, the values of this index are greatly affected by the number N (number of participants in the market). The figure illustrates such a conclusion - as can be seen, there is a significantly lower level of concentration expressed through the normalized index, calculated according to formula (6). For a country like Serbia, where the majority of markets are characterized by a small number of participants, such a conclusion must be constantly kept in mind, whereas any research in the future should focus more on the use of that index.

The values of the indexes presented in the Table 1 above, indicate that there might be an oligopolistic structure, with the concentration of high market shares within a smaller group of companies. To verify this possibility, we applied a different methodological approach, common in the practice of a relevant antitrust body in the European Union (European Commission for Competition). It is about the index (more precisely - system of indexes) developed by the Commission's collaborator in Brussels, Remo Linda[35]. Linda proposed an index with the following general pattern:

[35] R. Linda, *Methodology of concentration analysis applied to the study of industries and markets*, Brussels: Commission of the European Communities, 1976.

$$IL_m = \frac{1}{m(m-1)} \sum_{i=1}^{m-1} \frac{m-i}{i} \cdot \frac{CRi}{CRm-CRi} \quad (10)$$

from where, for each value of m, a separate expression (formula) is obtained, or a separate index, whereas the resulting indexes form a range, as a starting point for analysing the deviation of markets from perfect competition. The indices given by expression (10) are intended precisely for testing the existence of oligopolistic structures, without using any arbitrarily set boundaries for this purpose, as is otherwise done when using other concentration indicators. The values of the indices themselves indicate whether an oligopoly exists in the given market in both perfect competition markets, where the values of the indexes will constantly decrease (ILm+1 > ILm for all m), and in the oligopolist market, contrary to this, the violation of that regularity. According to theoretical considerations, an oligopoly can be either firm (with 3–5) or loose (with 7–8 market actors).

The values of the Linda indices in the observed period are given in the Table 2. As can be seen, these values precisely illustrate, for each year, the interruption of the decreasing tendency of the range, thus indicating the existence of a (firm) oligopoly, although there are certain variations amongst individual years. The series of decreasing values of these indexes, namely, are interrupted in each of the observed years, however, not in the same order. In most cases, this occurs with the fifth consecutive index (IL5 > IL4) – sometimes even earlier - and in the last two years, with the sixth. All of this leads to the aforementioned conclusion about the existence of an oligopolistic structure. Therefore, in most years, an oligopoly has been formed by four companies, and in two years (2015 and 2016), the structure suggested a duopoly. Finally, in the last two years, the oligopoly has expanded (IL6 > IL5), and it consisted of five companies, but still remained within the bounds of a firm oligopoly.

Table 2. Values of Linda index in Serbian insurance sector * 2011–2020.

IL	Year											
	2011.	2012.	2013.	2014.	2015.	2016.	2017.	2018.	2019.	2020.	2021.	2022.
IL2	0,7089	0,7272	0,7011	0,5840	0,5759	0,5772	0,6302	0,6434	0,6150	0,6723	0,6748	0,7092
IL3	0,4703	0,5966	0,5828	0,5240	0,6102	0,5977	0,6107	0,6175	0,6042	0,6056	0,6103	0,6089
IL4	0,4911	0,5403	0,4840	0,4692			0,4620	0,4718	0,4586	0,4548	0,4636	0,4570
IL5		0,5488	0,5189	0,4997			0,5009	0,5066	0,4736	0,4661	0,4553	0,4435
IL6											0,4921	0,4759

* Central Serbia

Source: Composed based on the data of the National Bank of Serbia in the publications titled „*Total premium and premium distribution of insurance companies*" for the relevant years.

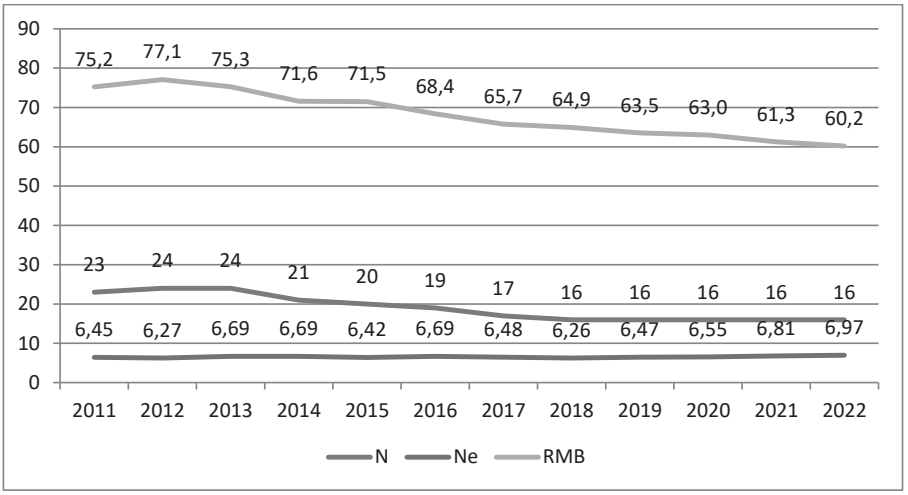
IV. Assessing the degree of monopolization in insurance sector

As previously mentioned, this part of the paper will focus on assessing the degree of monopolization in the insurance sector during the observed period of 2011–2022. Section II provides necessary theoretical and methodological notes, while Section III offers a general overview of the concentration level. Here, based on what has been already presented, empirical analysis is conducted, along with an assessment of the degree of monopolization based on the proposed methodology, namely the RMB indicator.

Let us first take a glance at the summarized results (Figure 2). We shall notice that the values of the equivalent number are quite stable, even though the number of participants (insurance companies) decreased until 2018. In the last two years, the values of the equivalent number have reached their maximum for the entire period. Albeit in some years (2012, 2015, 2017, and 2018) these values may have even recorded a decline, this has not affected the general growth tendency. This already indicates that the insurance market in Serbia (central part) has been gradually moving towards tightening the market conditions, or greater impact of competition.

The values of the calculated RMB index more than confirm such a conclusion. Starting at 75.2 in the starting year 2011, it decreased to 60.2 in the final year of 2022, with a steady downward tendency (with the only exception in 2012, when a slight increase was observed). Such movement of the index indicates that the insurance market in Serbia (central part) has become increasingly competitive during the given period, despite a significant decrease in the number of insurance companies (until 2018) and their subsequent unchanged number. Considering the pronounced fluctuations of the number of insurance companies, it is obvious that the values of dispersion of market shares of these companies contributed more to the movement of the proposed RMB index, resulting in a reduction of market share concentration. Based on the values of concentration indexes used in this study, such an unequivocal conclusion could not have been derived, and therein lies one of the key values of the research conducted here.

Figure 2. Number of participants in market (N), equivalent number (Ne), and monopoly power index (RMB) in insurance market in Serbia* 2011–2022.



* Central Serbia
Source: Composed based on the data of the National Bank of Serbia.

As a conclusion, we can state that the obtained results appear logical. Although the Hirschman-Herfindahl Index represents the basis for the RMB index, there is a relatively low correlation between them (0.42), indicating that the calculated RMB index brings new information to a significant extent, which has not been present in the Hirschman-Herfindahl Index. It should be noted that the time frame used in the conducted research (12 years) is too short for the calculated correlation to be deemed reliable, but its value is still indicative. Nevertheless, certain caveats should be considered, primarily regarding the influence of the number of participants in the market on its structure. This has been emphasized several times in the foregoing text and certainly requires further investigation and verification. However, this put aside, it would still be desirable to conduct similar research based on the concept of the equivalent number and other concentration indexes.

V. Final remarks

Contemporary economic theory observes the concept of competition as an essential factor for increasing competitiveness and efficiency in business, not only in the real sector but also in infrastructure activities, including the financial sector and, within it, the insurance sector. This approach to competition in the financial sector

has become increasingly evident in the papers composed by our researchers, who have analysed the concentration and competition using both standard and newer methods. The number of such research papers and the applied methodological procedures, has been slightly greater in the banking sector than in the insurance sector so far, but the latter has received increasing attention. All of this can be positively evaluated.

The presented paper first provides an overview of the degree and changes in concentration in the insurance sector using standard indicators (market concentration index and Hirschman-Herfindahl index). The main findings are supported by the values of the Linda index, confirming the assumption of an oligopolistic market structure in all years considered. In the next section of the paper, an assessment of the degree of monopolization in the insurance sector in Serbia (Central part only) during the period 2011–2022 was carried out based on a proposed new procedure.

The research results in this paper indicated a relatively high level of concentration, suggesting the existence of an oligopolistic market structure, specifically a "firm" oligopoly. There were no significant changes in the level of concentration (and competition) during the observed period, but certain minor changes in the values of calculated indexes and a slight tendency of their decline have been spotted. It should be emphasized that during the observed period, the number of insurance companies significantly decreased (from 23 in 2011, and 24 in 2012 and 2013, to 16 in the last five years), which theoretically might not be considered positive in terms of competition. Namely, the assumption is that a decrease in the number of participants by definition leads to a reduction in market competition. However, the decrease in the number of companies in the insurance sector during the analysed period did not have a significant impact on the level of concentration; on the contrary, the structure, i.e., the distribution of market shares among insurance companies, primarily affected its magnitude. Therefore, the relatively significant decrease in the number of companies did not result in an increase in the level of concentration.

All the above confirms the fluctuations of the proposed monopolization degree coefficient of the market, which was relatively high throughout the period but constantly declining. The decline of this coefficient in the period observed has even been more pronounced than the (slight) decrease in the concentration index. This fact clearly neutralized the effects of the decrease in the number of insurance companies, simultaneously creating the environment for a more significant impact of competition amongst the insurance companies – and this certainly can be deemed a positive tendency.

Given the fact that there still is a relatively small number of studies devoted to concentration and competition in the insurance sector in Serbia, it is necessary to reiterate that we recommend further research, like that conducted in previous papers of the authors hereof,. Of course, it is desirable to use different methodo-

logical approaches while conducting such kind of research. This is necessary for a more comprehensive understanding of this complex phenomenon, especially since it has been shown that the most commonly used methods have certain, greater or lesser, shortcomings, and that attempts to overcome them constantly lead to new methodological solutions. Such new solutions are always worth testing in our conditions, especially when it comes to a complex problem like market competition.

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IZAZOVI TRŽIŠTA OSIGURANJA U SRBIJI NA PUTU KA SOLVENTNOSTI II

ORIGINALNI NAUČNI RAD

Apstrakt

Društva za osiguranje/reosiguranje, kao finansijske institucije koje se profesionalno bave preuzimanjem rizika i formiranjem zajednica rizika, nisu izložena samo uticaju rizika osiguranja. Iskustvo tržišta osiguranja evropskih zemalja pokazalo je da je niz problema sa solventnošću kod društava za osiguranje uzrokovan rizicima koji nisu direktno povezani s rizicima osiguranja, već svoj koren imaju na tržištu i u vezi su sa problemima druge ugovorne strane, ili se čak tiču internih propusta, loše organizovanih procesa, grešaka zaposlenih i sl. Spoznaja da na solventnost, kao pokazatelj za koji je zainteresovana većina stejkholdera, utiče širok dijapazon rizika bila je pokretač transfera regulative sa okvira Solventnost I na Solventnost II. U fokusu tog procesa bilo je unapređenje stepena zaštite interesa korisnika usluge osiguranja u najširem smislu. U radu su predstavljene osnovne prednosti novog regulatornog okvira za obračun solventnosti iz aspekta sveobuhvatnije procene i individualizacije rizika. Rizični profil entiteta više nije opredeljen isključivo volumenom premije osiguranja, likvidiranih šteta i tehničkih rezervi, već je pod uticajem niza faktora: segmentacije poslovanja, trajanja ugovora, dinamike dospeća premije osiguranja, suma osiguranja, strukture ulaganja, nivoa kreditnog kvaliteta poverilaca, internih statistika i iskustava, korelacija rizika i dr. Predstavljeni su efekti primene Direktive Solventnost II na tržištu EU nakon osam godina od njenog stupanja na snagu, sa ispoljenim nedostacima i očekivanim pravcima daljeg razvoja odredaba zakonskog okvira. Rad sadrži komparativnu i „gep" analizu regulatornih okvira Republike Srbije u odnosu na tržište EU. Istaknuta su ključna područja koja će na osnovu evropskog

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iskustva usvajanja tekovina Direktive, odnosno na osnovu specifičnosti tržišta osiguranja Republike Srbije, predstavljati glavne izazove prilikom harmonizacije i prelaska na nov okvir za obračun potrebnog solventnog kapitala i racija solventnosti. Domaće tržište osiguranja treba da već široki vremenski okvir koji je na raspolaganju za usvajanje tekovina Direktive Solventnost II efikasno iskoristi da sistemske izazove rešava kroz postepeno prilagođavanje zakonskih rešenja, pripreme kroz kvantitativne studije uticaja, optimizaciju poslovanja, učenje na iskustvu zemalja regiona koje su već prošle kroz predmetni proces, odnosno putem razvoja i transfera znanja.

Ključne reči: *solventnost, moduli rizika, SCR, MCR, tehničke rezerve, QIS studije.*

I. Uvodna razmatranja i osnovni principi okvira Solventnost II

Direktiva Solventnost II predstavlja zakonodavni standard EU za sveobuhvatnu procenu rizičnog profila društava za osiguranje/reosiguranje i potreba za solventnošću.[2] Direktivom Solventnost II zamenjuje se ukupno 14 direktiva okvira Solventnosti I, sa ciljem da se pruži bolja zaštita svim korisnicima usluge osiguranja u širem smislu, odnosno da se obezbedi jasnija slika solventnosti svim zainteresovanim licima za poslovanje društva za osiguranje/reosiguranje.[3] To se postiže sveobuhvatnim merenjem rizika, koji podrazumeva širi pristup identifikacije i ocene rizika i prelazak sa dominantnog posmatranja rizika osiguranja, kao opredeljenja direktiva iz delokruga okvira Solventnosti I, na pristup koji, pored rizika osiguranja, u sebi obuhvata rizik neživotnog, rizik životnog i rizik zdravstvenog osiguranja, u obzir uzima i rizik neizmirenja obaveza druge ugovorne strane, tržišni rizik, operativni rizik i rizik nematerijalne imovine, odnosno njihovu korelaciju.[4] Takvo opredeljenje, zasnovano na *principu procene individualnog rizičnog profila društva za osiguranje/reosiguranje*, omogućeno je i zasnovano na dubokoj vertikalnoj segmentaciji pomenutih modula rizika na sitnije podmodule rizika, prilikom čega na ukupan riziko profil, pored već standardne ukupne premije i tehničkih rezervi, koje posmatra i raniji regulatorni okvir, utiču: segmentacija poslovanja, trajanje ugovora, dinamika dospeća premije osiguranja, sume osiguranja, struktura ulaganja, nivo kreditnog kvaliteta poverilaca, uticaj stres testova na rezultat, interne statistike i iskustvene realizacije parametara od značaja za obračun, parametrizovani koeficijenti obračuna,

[2] Directive 2009/138/EC of the European Parliament and of the Council of 25 November 2009 on taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II), OJ L 335, str. 1–155.

[3] Direktiva je usvojena 2009. godine, ali je puna primena na tržištu EU usledila tek počev od 1. 1. 2016. godine, što govori o njenoj kompleksnosti, intenzitetu regulatornog iskoraka i obimu potrebnog prilagođavanja učesnika na tržištu osiguranja.

[4] Detaljnije o Solventnosti I: Vladimir Čolović, *Osiguravajuća društva, Zakonodavstvo Srbije, pravo EU, uporedno pravo*, Institut za uporedno pravo, Beograd, 2010, str. 201–202.

korelacija rizika i drugi činioci.[5] Sve to rezultira time da društva za osiguranje/reosiguranje koja imaju isti ili sličan nivo premije osiguranja i tehničkih rezervi mogu beležiti materijalno značajne razlike u potrebnom i dostignutom nivou solventnosti. Pored segmentacije i individualizacije procene rizika, zadatak koji je postavljen pred novi okvir Solventnosti II jeste i adekvatnija alokacija kapitala, odnosno unapređenje nadzora u pravcu supervizije grupe.

Zadaci koji su postavljeni pred novi regulatorni okvir ispunjavaju se kroz tri stuba na kojima Solventnost II počiva:[6]

1) kvantitativni zahtevi;
2) kvalitativni zahtevi;
3) transparentnost.

Kvantitativni zahtevi podrazumevaju tržišno konzistentnu procenu sredstava i obaveza.[7] To podrazumeva da se imovina vrednuje u iznosu po kome bi mogla da se razmeni između obaveštenih zainteresovanih strana u transakciji po tržišnim uslovima, odnosno da se obaveze vrednuju u iznosu po kome bi mogle da se prenesu ili izmire između obaveštenih strana u transakciji po tržišnim uslovima.[8] Kao osnovni metod vrednovanja koji treba da obezbedi tržišno konzistentnu procenu imovine i obaveza, društvo za osiguranje/reosiguranje treba da upotrebi kotirane tržišne cene za istu imovinu i obaveze, odnosno, ukoliko one ne postoje, tada se alternativno mogu koristiti tržišne cene za sličnu imovinu i obaveze. U okviru kvantitativnog stuba uspostavljaju se dva nivoa kapitalnih zahteva, SCR (*Solvency capital requirement*) i MCR (*Minimum capital requirement*).[9] SCR ili potreban kapital za solventnost obezbeđuje da društvo za osiguranje/reosiguranje, uzimajući u obzir sve rizike, može podneti nepovoljne događaje koji se javljaju jednom u 200 godina, tj. odgovara intervalu poverenja od 99,5% na period od jedne godine. Potreban kapital za solventnost može se obračunati primenom standardnog modela ili alternativno, primenom internog modela koji razvija entitet čije odobrenje za primenu daje regulator u sklopu složene procedure validacije tog modela. Minimalni kapitalni zahtev obezbeđuje interval poverenja od 85% na vremenski horizont od jedne godine. U cilju obračuna raspoloživog kapitala, okvir Solventnost II uvodi principe obračuna aktive, odnosno obaveza, tehničkih rezervi, pri čemu se tehničke rezerve sastoje od najbolje procene i dodatka za sigurnost. To rezultira drugačijom strukturom bilansa,

[5] Mirjana Ilić, *Uticaj primene Direktive Evropske unije Solventnost II na sektor osiguranja u Srbiji*, doktorska disertacija, Ekonomski fakultet Univerziteta u Nišu, Niš, 2014, str. 25–26.

[6] Nataša Petrović Tomić, *Pravo osiguranja, Sistem*, Knjiga I, *Službeni glasnik*, Beograd, 2019, str. 278–280.

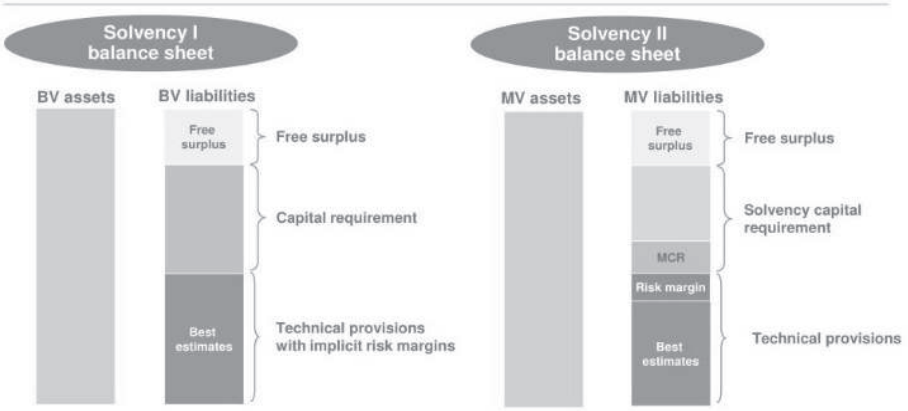
[7] R. A. Rae, A. Barrett, D. Brooks, M. A. Chotai, J. Pelkiewicz, C. Wang, C., *„A review of Solvency II: Has it met its objectives?"*, 2017, str. 11–15.

[8] Narodna banka Srbije, „Okvir za sprovođenje treće kvantitativne studije uticaja zahteva Solventnosti 2 na Sektor osiguranja u Republici Srbiji", 2023, str. 7.

[9] Lidija Jauković, Vladimir Kaščeljan, „Nova regulativa solventnosti osiguravajućih kompanija u EU – Projekta Solvenost II", *Montenegrin Journal of Economics*, No. 5/2007, str. 80.

ali isključivo za potrebe obračuna solventnosti, dok su za finansijsko izveštavanje i dalje u primeni međunarodni računovodstveni standardi.

Slika 1. Struktura bilansa stanja po Solventnosti I i Solventnosti II



Izvor: Ernst & Young

Kvalitativni zahtevi, u okviru drugog stuba Solventnosti II, propisuju uslove koje moraju ispuniti lica na ključnim funkcijama u društvima za osiguranje/reosiguranje.[10] Identifikuju se četiri ključne upravljačke funkcije: interna revizija, interna kontrola, upravljanje rizikom i aktuarstvo.[11] Kao deo kvalitativnih zahteva uvodi se i obaveza redovnog sprovođenja sopstvene procene rizika i solventnosti (*ORSA – Own risk and solvency assessment*), čija je svrha predikcija ukupne potrebe za solventnošću, sagledavanje usklađenosti rizičnog profila društva s potrebama za solventnošću i ispunjenost uslova u delu adekvatnosti kapitala i tehničkih rezervi. Posebna pažnja posvećena je procesu poveravanja poslova trećim licima.

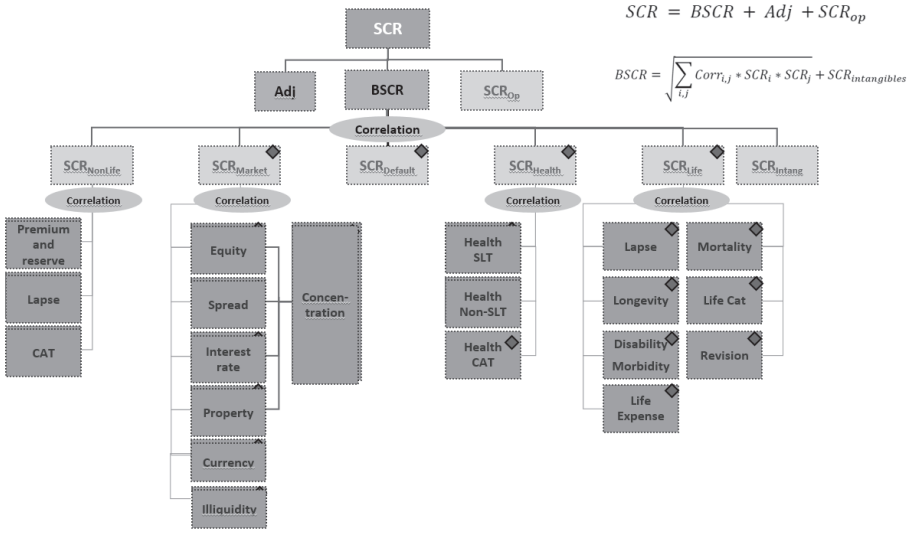
Transparentnost u skladu s predmetnim Okvirom postiže se na dva načina: setom propisa za dostavljanje informacija supervizoru, odnosno pravilima koja regulišu koje informacije i na koji način se javno objavljuju.[12] Kao i u skladu s praksom prethodnog zakonodavnog okvira, pored redovnog procesa izveštavanja, na zahtev supervizora društva su u obavezi da sprovode i vanredno izveštavanje, ali pored kvantitativnih podataka, značajno je proširen opseg kvalitativnih podataka koji su predmet interesovanja supervizije. Novinu predstavlja obaveza objavljivanja Izveštaja

[10] A. Borseli, „Nadzor sistema uprave u osiguravajućim grupama prema Solventnosti II", *Moderno pravo osiguranja: tekuća pitanja i trendovi*, Palić, 2014, str. 28–43.
[11] Ljiljana Stojković, „Pravni aspekti upravljanja rizikom i sistem internih kontrola kao integralni deo korporativnog upravljanja u društvu za osiguranje", *Evropska revija za pravo osiguranja*, br. 3/2013, str. 138.
[12] M. Dreher, *Treaties on Solvency II*, Springer Verlag, Berlin, 2015, str. 345–424.

o solventnosti i finansijskom stanju (*SFCR – Solvency and Financial Condition Report*). Akcenat je stavljen na superviziju grupe, gde je grupa u fokusu kao jedan entitet, pri čemu je bilo potrebno propisati posebna pravila za nadležnosti, koordinaciju i razmenu podataka između supervizija.

Ključna prednost okvira Solventnost II i istovremeno nedostatak prethodnog zakonodavnog okvira za procenu solventnosti, koji je trebalo da se reši uvođenjem nove direktive, jeste *sveobuhvatna procena rizika, implementacija njihove međuzavisnosti i individualizacija rizičnog profila entiteta u zavisnosti od karakteristika portfelja na nivou sitne granulacije parametara od značaja za procenu rizika.*[13]

Slika 2. Dijagram modula rizika prema standardnoj formuli



Izvor: EIOPA

Za razliku od skupa direktiva pod okriljem koncepta Solventnosti I, Direktiva Solventnost II, pored rizika osiguranja, koji se do uvođenja novog koncepta merenja rizika određivao pojednostavljeno i dominantno opredeljeno premijom i štetama entiteta, vrši njegovu dublju segmentaciju, ali istovremeno uvodi i nove module rizika: tržišni rizik, rizik neizmirenja obaveza druge ugovorne strane, operativni rizik i rizik nematerijalne imovine.[14] Sam rizik osiguranja podeljen je na tri modula, i to rizik

[13] B. Kordanuli, Značaj regulatornog okvira Solventnost II na poslovanje društava za osiguranje u Republici Srbiji, doktorski rad, Univerzitet Singidunum, Beograd, 2017, str. 67–76.

[14] P. G. Marly, V. Ruol, *Droit des entreprises d'assurance,* RB édition, Paris, 2011, str. 201.

neživotnog osiguranja, rizik životnog osiguranja i rizik zdravstvenog osiguranja. Da bi se izračunao taj rizik, pored premije i šteta, potrebno je poznavati i njihovu strukturu, dinamiku dospeća, ali i ispitati uticaj prekida osiguranja, odnosno katastrofalnih šteta, kao i drugih parametara od značaja za obračun na gubitak osnovnih sopstvenih sredstava. Jedan od ključnih elemenata na kojima počiva obračun po Solventnosti II jesu korelacione matrice između modula i podmodula rizika. Svrha tih matrica je da valorizuju i u obračunu primene činjenicu da do realizacije svih rizika neće simultano doći, odnosno da će realizacija jednog modula ili podmodula rizika opredeliti verovatnoću javljanja drugih modula i podmodula rizika. U praksi se to manifestuje kroz efekat diverzifikacije, koji utiče na to da ukupan potrebni kapital za solventnost bude niži od kapitala koji bi se dobio kao zbir potrebnog kapitala po svim modulima rizika.

U središtu svih ciljeva koji se žele postići uvođenjem Solventnosti II je *unapređena zaštita korisnika usluge osiguranja u širem smislu*.[15] Delatnost osiguranja predstavlja prodaju usluge osiguranja unapred, u razmenu za obećanje da će njihova prava biti adekvatno i ažurno ispunjena u slučaju nastanka osiguranog slučaja, što je u krajnjoj instanci garantovano solventnošću društva za osiguranje/reosiguranje. Odatle potiče i potreba da se solventnost adekvatno izmeri. Pored poverilaca za solventnost zainteresovani su i investitori, vlasnici kapitala, budući da je njihov interes direktno povezan sa solventnošću entiteta, odnosno njegovom sposobnošću da u dugom roku izmiri sve svoje obaveze. Svi ostali ciljevi koji se stavljaju pred novu direktivu, kao i alat za njeno sprovođenje, u funkciji su obezbeđenja veće zaštite korisnika usluga, odnosno jasnije slike garancija koje im entitet pruža. Tako se kao jedan od ciljeva koji treba da podrži krovni cilj zaštite interesa korisnika usluge postavlja i modernizacija supervizije osiguranja, na način da se fokus pomera sa posmatranja kvantitativnih pokazatelja i na kvalitativnu komponentu poslovanja, rizični profil i kvalitet upravljanja rizikom, zatim se vrši harmonizacija supervizije na nivou EU i, konačno, da se grupa posmatra kao jedinstven subjekt nadzora.[16] Jedna od intencija okvira je da se društva za osiguranje/reosiguranje motivišu da upravljaju rizikom, budući da potreban solventni kapital direktno zavisi od efikasnosti ovog procesa. To treba da doprinese i racionalnijoj i efikasnijoj alokaciji ograničenog kapitala. Poslednji cilj, koji je i produkt prethodno navedenih, i čija će uspešnost zavisiti od realizacije prethodnih, jeste unapređenje konkurentnosti EU društava za osiguranje/reosiguranje na globalnom tržištu.[17]

[15] Iva Tošić, „Izazovi u implementaciji Direktive Solventnost II u Srbiji", *Pravo i privreda*, br. 7-9/2017, str. 527.

[16] P. Marano, „Nova nadzorna paradigma: kultura nošenja rizika i etički kodeks", *Pravo osiguranja, uprava i transparentnost – osnove pravne sigurnosti*, Palić, 2015, str. 171–175.

[17] Osnovni alat pomoću koga se ispunjavaju postavljeni ciljevi jeste tržišno konzistentno vrednovanje aktive i obaveza. Napušta se koncept vrednovanja po nabavnoj vrednosti i amortizovanoj vrednosti, odnosno prema statičkoj vrednosti parametara od značaja za obračun važećih u momentu sklapanja ugovora. Taj koncept se zamenjuje tržišnim vrednovanjem prema aktuelnoj vrednosti parametara od značaja za

Predstojeći proces harmonizacije sa pravnim tekovinama EU, uključujući i Direktivu Solventnost II, koji čeka sve zemlje koje teže prijemu u ovu zajednicu, i pored toga što je prožet brojnim izazovima i dodatnim troškovima, ne treba posmatrati kao proces urušavanja postojećeg zakonodavnog okvira i njegovih dobrobiti koje crpimo iz već uspostavljene usklađenosti, već kao **izgradnju nove zakonodavne infrastrukture koja svim učesnicima na tržištu treba da pomogne da obezbede dugoročnu stabilnost sopstvenih, ali i istovremeno ispunjenje opštih interesa**. Društva za osiguranje/reosiguranje treba da u procesu harmonizacije budu subjekti koji će identifikovati svoje šanse i iskoristiti ih, na način što će se prvi prilagoditi i što će adekvatnije uskladiti svoje poslovanje, rizične profile i kapital. Proces harmonizacije s tekovinama EU je transparentan i neizbežan, i ukoliko se posmatra iskustvo zemalja EU, neminovno će dovesti do izmena u strukturi portfelja proizvoda, načinu investicija, strukturi tržišta, pozicioniranosti društava za osiguranje/reosiguranje i izmenjenoj alokaciji kapitala.

II. Razvoj i rezultati primene Solventnosti II na tržištu EU

Preteča Direktive Solventnost II, režim Solventnost I, koji je predstavljen kroz 14 direktiva, razvijao se od početka sedamdesetih godina 20. veka. Već u tom razdoblju primećeno je da do insolventnosti društava za osiguranje u više od polovine zabeleženih slučajeva dolazi iz razloga koji nisu direktno vezani za rizike osiguranja. U periodu od 1996. do 2004. godine na području EU došlo je do zatvaranja 76 društava za osiguranje usled problema sa solventnošću, a veći broj njih pretrpeo je poteškoće u delu solventnosti koje su sanirane.[18] Nedostaci tog sistema postali su naročito očigledni tokom finansijske krize iz 2008. godine. Tada je postalo jasno da postojeći model procene rizika nije dovoljno precizan i osetljiv na rizik pojedinačnih entiteta, odnosno da ne uključuje bitne komponente rizika: tržišni rizik, rizik neizmirenja obaveza druge ugovorne strane i operativni rizik.[19] To je u značajnoj meri sprečavalo sprovođenje ažurne i adekvatne intervencije supervizora,[20] te ograničavalo optimalnu alokaciju kapitala investitora. Međutim, o novom okviru za procenu rizika počelo je da se razmišlja već početkom 21. veka. Tada je konstatovano da nacionalne regula-

obračun, pri čemu sredstva i obaveze vrede onoliko koliko ih procenjuje tržište. Konačno, uvode se stres testovi u smeru negativnih odstupanja pojedinih parametara, a u cilju procene potencijalnog gubitka sopstvenih sredstava i posledično potreba za kapitalom koji ih može amortizovati radi obezbeđenja ispunjenja obaveza i kontinuiteta poslovanja.

[18] Vladimir Čolović, „Primena projekta Solventnost II i mere koje su predviđene u Zakonu o osiguranju Srbije u slučaju neprimene pravila o upravljanju rizikom", Zlatibor, 2013, str. 28-43.

[19] N. Petrović Tomić, *Pravo osiguranja*, *Sistem*, Knjiga prva, Službeni glasnik, Beograd, 2019, str. 277–278.

[20] Vladimir Čolović, „Uticaj primene projekta Solventnost II na osiguravajuća društva u Srbiji", Zbornik radova *Harmonizacija zakonodavstva Republike Srbije sa pravom Evropske unije* (II), Institut za međunarodnu politiku i privredu, Institut za uporedno pravo, Hans Zajdel Fondacija, Beograd 2012, str. 368–369

tive u okviru zemalja EU imaju značajnu slobodu u oblikovanju pravila za procenu solventnosti, čime su generisani nejednaki uslovi za poslovanje entiteta iz različitih nacionalnih sistema na jedinstvenom tržištu EU. Kao osnovni cilj u tom trenutku postavila se harmonizacija i definisanje jedinstvenih pravila za poslovanje društava za osiguranje na tržištu zajednice evropskih naroda. Trebalo je gotovo petnaest godina da se izgradi nov sistem, koji je počeo da funkcioniše 1. 1. 2016. godine.[21]

Međutim, i pored toga što je Direktiva uhvatila korena početkom 2016. godine, zbog intenziteta promena i očekivanih finansijskih i infrastrukturnih poteškoća da se odmah prilagode novom okviru, predviđen je prelazni period u kome je ostavljen prostor društvima za osiguranje/reosiguranje da u pojedinim segmentima izvrše postepeno usklađivanje svog poslovanja:[22]

- mere za vrednovanje tehničkih rezervi koje omogućavaju postepen prelazak na potpuno tržišno konzistentan pristup vrednovanju tokom perioda od 16 godina, ali isključivo za ugovore zaključene pre 1. 1. 2016. godine; mere se sastoje u obračunu tehničkih rezervi prema diskontnim stopama iz okvira Solventnosti I ili obračunu tehničkih rezervi prema odredbama ovog okvira;
- tolerantnost prema entitetima koji krše ispunjenost zahteva u delu potrebnog solventnog kapitala tokom perioda od prve dve godine;
- zadržavanje postojećih hibridnih stavki sopstvenog kapitala pod okvirom Solventnosti I tokom perioda od 10 godina u okviru kojih se struktura kapitala mora usaglasiti sa zahtevima direktive Solventnost II;
- duži rokovi za dostavljanje kvartalnih i godišnjih izveštaja supervizoru i za informisanje javnosti, koji se postepeno skraćuju sa 20 nedelja na 14 nedelja nakon završetka finansijskog izveštavanja za prve tri godine.

Procene su da je jednokratni trošak uvođenja Solventnosti II za sva društva za osiguranje/reosiguranje na tržištu EU iznosio između tri i četiri milijarde EUR. Takođe, utvrđeno je da je ukupan višak kapitala iznad potrebnog solventnog kapitala na nivou celokupnog tržišta gotovo na istom nivou kao tokom perioda neposredno pre uvođenja nove direktive, tj. tokom važenja okvira Solventnost I, samo što je alokacija kapitala posmatrana po pojedinačnim entitetima, a usled preciznijeg i sveobuhvatnijeg merenja rizika, značajno efikasnija.[23]

Prema poslednjim podacima ostvarena medijana SCR racija, kao odnos raspoloživog i potrebnog kapitala za solventnost, na tržištu EU iznosi preko 215%,

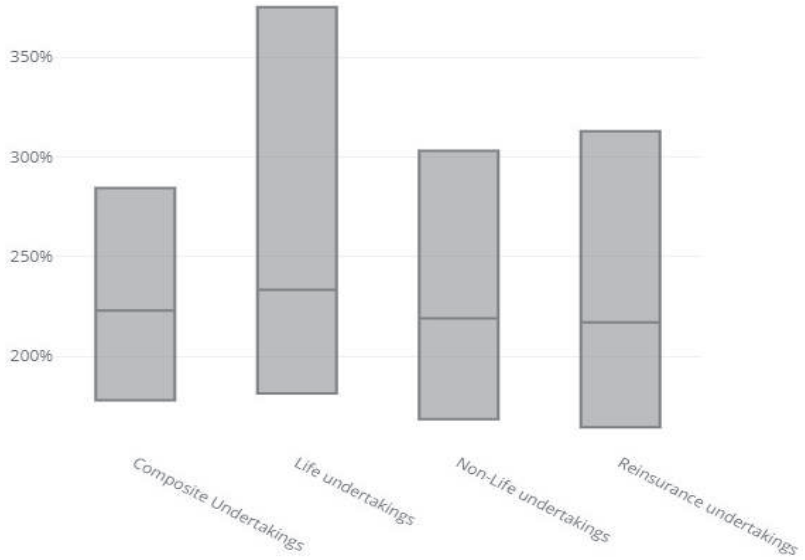
[21] O koliko se složenom procesu radi svedoči čak šest sprovedenih kvantitativnih studija uticaja tokom perioda pripreme za implementaciju (pripremna studija i pet studija uticaja), čiji je zadatak bio da sagleda efekat primene nove direktive, da omogući njenu kalibraciju, odnosno da pruži priliku društvima za osiguranje/reosiguranje da priprema resurse za sprovođenje novog zakonodavnog okvira u svom poslovanju. Nakon intenzivnog rada, Direktiva Solventnost II je usvojena u novembru 2009.

[22] Iva Tošić, „Nadzor osiguranja – Direktiva Solventnost II", *Strani pravni život*, br. 2/2017, str. 147–162.

[23] Solvency II Overview (europa.eu)

dok čak 75% entiteta beleži ovaj racio iznad 160%.[24] Posmatrano po tipu entiteta, raspodela SCR racija je slična, pri čemu društva koja se bave isključivo životnim osiguranjem imaju medijanu racija solventnosti na nivou od 233%, dok kompozitna društva, društva za neživotna osiguranja i društva za reosiguranje respektivno beleže medijanu od 223%, 219% i 217%.

Slika 3. SCR racio, distribucija po tipu entiteta na tržištu EU i EEA[25]



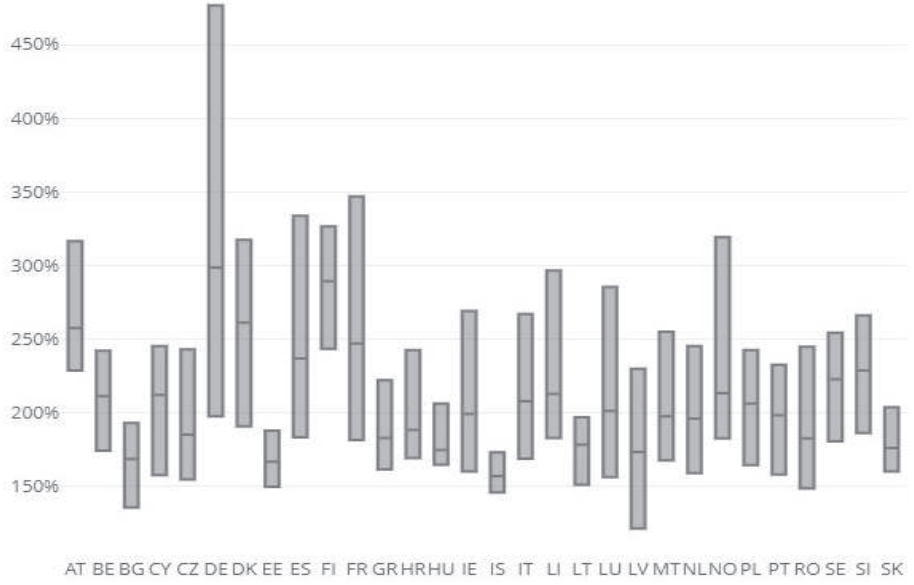
Izvor: EIOPA, Insurance Overview Report 2023.

Posmatrano po zemljama članicama EU, najviše nivoa racija solventnosti beleže društva u Nemačkoj, gde je zabeležena medijana racija od 299%, dok je ovaj pokazatelj najniži na Islandu, gde je na nivou od 157%. Zemlje bivše Jugoslavije, danas članice EU, Slovenija i Hrvatska, ostvarile su medijanu racija od respektivno 229% i 170%. S druge strane, zemlje iz našeg okruženja Rumunija, Mađarska i Bugarska redom beleže predmetni pokazatelj na nivou od 183%, 175% i 169%. Imajući u vidu strukturu njihovog tržišta, stepen razvoja delatnosti osiguranja, kao i ostvareni nivo privrednog razvoja, ostvareni pokazatelji racija solventnosti u tim zemljama treba da budu ciljani i očekivani i za naše tržište nakon primene Direktive Solventnost II. To je značajno niže od ostvarenog nivoa solventnosti za našu zemlju po okviru

[24] European Insurance Overview report 2023 - European Union (europa.eu).
[25] Studija pored država članica EU, uključuje i Island, Lihtenštajn i Norvešku (nap. aut.). Napomena se odnosi na slike 3, 4, 5 i 6.

Solventnost I, prema kome je prema poslednjim podacima ukupan racio solventnosti tržišta za društva koja se pretežno bave neživotnim osiguranjem 206,4%, kod društava koja se pretežno bave životnim osiguranjem 210,6%, dok je kod društava za reosiguranje 231,1%.[26]

Slika 4. SCR racio, distribucija po zemljama članicama EU i EEA



Izvor: EIOPA, Insurance Overview Report 2023.

Koliko je prelazak sa okvira Solventnost I na Solventnost II u značajnoj meri promenio način identifikacije, ocene i upravljanja rizikom, proširenjem opsega posmatranja sa isključivo rizika osiguranja i na druge module rizika, svedoči podatak da je prema rezultatima za sve zemlje članice EU, tržišni rizik, koji se po prethodnoj regulativi nije ni merio, pojedinačno najdominantnija stavka, modul rizika, u ukupno potrebnom osnovnom kapitalu za solventnost.[27] Učešće predmetnog modula se kreće počev od 56% kod društava koja se bave neživotnim osiguranjem do preko 70% kod kompozitnih društava, odnosno društava za reosiguranje. S druge strane, rizik osiguranja, koji obuhvata module rizika životnog, rizika neživotnog i rizika zdrav-

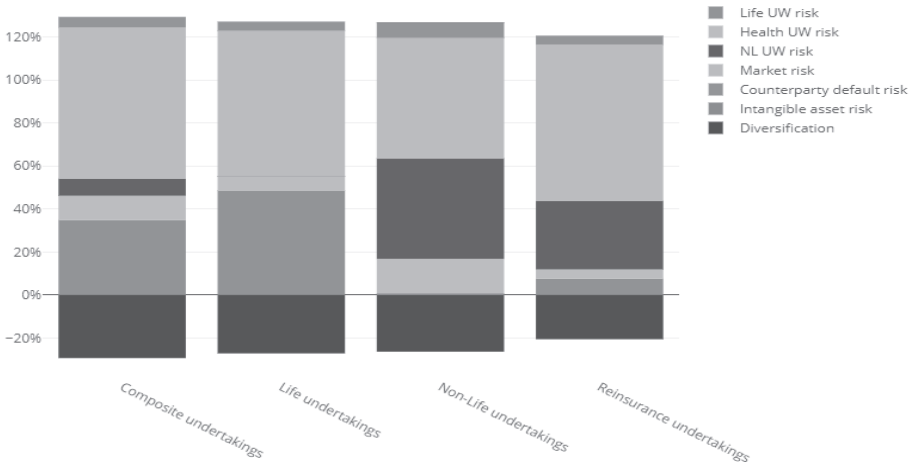
[26] Narodna banka Srbije, Sektor osiguranja u Republici Srbiji, *Izveštaj za 2022. godinu.*
[27] N. Gatzert, M. Martin, „Quantifying Credit and Market Risk under Solvency II: Standard Approach versus Internal Model", 2012, str. 5–21.

stvenog osiguranja, kod kompozitnih društava apsorbuje 54% osnovnog potrebnog kapitala za solventnost, kod društava za životno osiguranje ovaj pokazatelj iznosi 55%, kod društava za neživotna osiguranja 64% i kod društava za reosiguranje 42%.

Značajan je i efekat korelacije rizika, odnosno efekat uzajamnog isključivanja rizika, potpunog ili delimičnog, koji utiče na to da ukupan potrebni kapital za solventnost bude niži od zbira potrebnog kapitala za solventnost po svim podmodulima, odnosno modulima rizika. Uticaj navedenog fenomena se kreće između -20% i -30% na osnovni potreban kapital za solventnost, u zavisnosti od tipa entiteta.

Rizik od neizmirenja obaveza druge ugovorne strane, za razliku od naše zemlje i prvih kvantitativnih studija uticaja kroz koje se pokazao kao materijalno značajan, na tržištu EU nema tako istaknut uticaj, budući da mu se učešće u osnovnom potrebnom solventnom kapitalu kreće između 4% i 7%, u zavisnosti od vrste poslova osiguranja kojima se entitet bavi.[28]

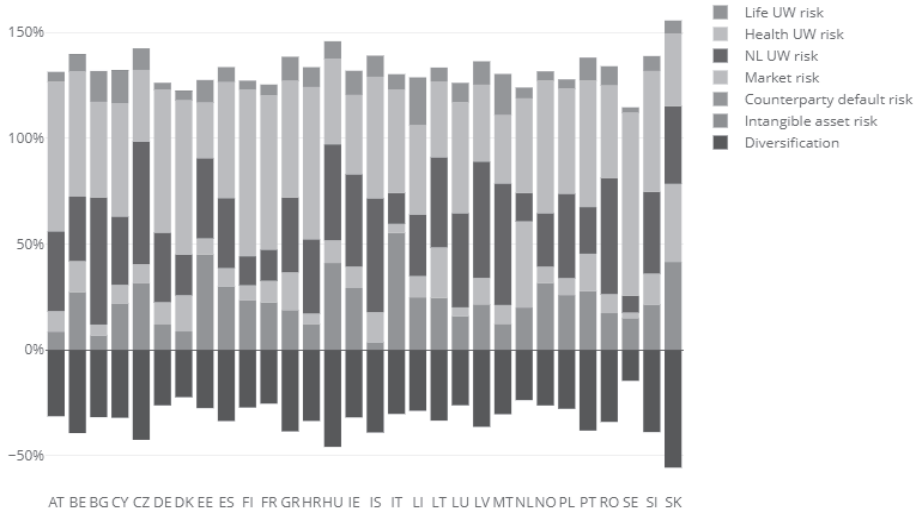
Slika 5. Struktura BSCR prema standardnoj formuli



Izvor: EIOPA, Insurance Overview Report 2023.

[28] Branko Pavlović, „Koji je rizik najveći za osiguravače?", *Svet osiguranja*, 2019.

Slika 6. Struktura BSCR prema standardnoj formuli po zemljama članicama EU i EEA

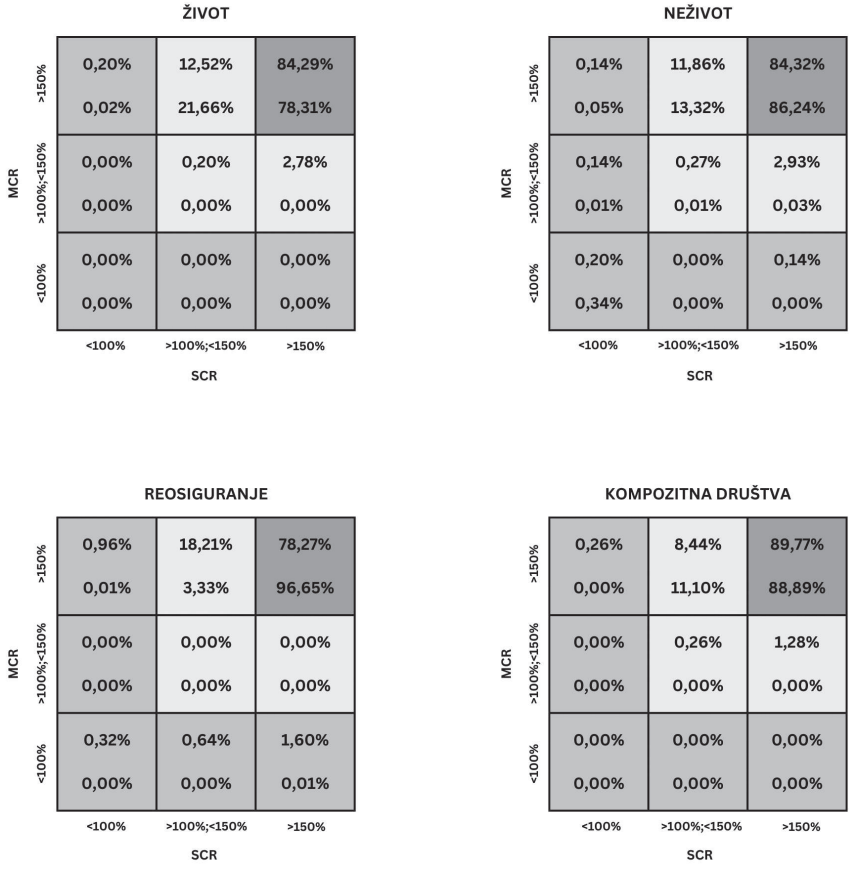


Izvor: EIOPA, Insurance Overview Report 2023.

Posmatrano po zemljama članicama, postoji grupa zemalja gde je učešće tržišnog rizika u ukupno potrebnom kapitalu za solventnost preko 70%. Radi se uglavnom o državama van evrozone, kao što su Švedska, u kojoj je učešće tržišnog rizika čak 87%, zatim Finska (79%) i Danska (73%). Visoko učešće tržišnog rizika beleži i Francuska (73%), Hrvatska (72%) i Austrija (71%).

Efekat diverzifikacije je naročito izražen u Slovačkoj, gde korelacija rizika smanjuje potreban solventni kapital za 56%, zatim u Mađarskoj, u kojoj je ovaj efekat -46%, odnosno Češkoj, gde je uticaj diversifikacije -42%.

Slika 7. Struktura tržišta EU prema ostvarenom SCR i MCR racio pokazatelju



Izvor: EIOPA, Insurance Overview Report 2021.

Sa Slike br. 7, zasnovane na podacima za 2020. godinu, jasno se uočava da velika većina entiteta na jedinstvenom tržištu EU beleži visoke pokazatelje SCR i MCR. To su polja označena zelenom bojom, gde su oba racija iznad 150%. Ukoliko gornji pokazatelj predstavlja učešće mereno brojem entiteta, a donji pokazatelj učešće mereno aktivom, vrlo visoke racio brojeve solventnosti beleži između 78,27% društava i 89,77% društava, u zavisnosti od vrste posla kojima se bave. Zakonske uslove u pogledu solventnosti ispunjavaju i entiteti koji su svoje mesto našli u žutim poljima, dok neznatan broj entiteta beleži poteškoće u ispunjenju zakonskih odredaba

vezanih za solventnost (polja označena sivom bojom). Kod njih je jedan od dva racija solventnosti ispod 100%, a njihovo učešće se kreće od 0,22% entiteta do 3,54%, u zavisnosti od vrste poslova za koje imaju dozvolu za obavljanje delatnosti.

Tržištu osiguranja EU predstoji reforma Direktive Solventnost II.[29] Već prilikom uvođenja Direktive plan je bio da se nakon pet godina i sagledavanja efekata njene primene pristupi reviziji pojedinih segmenata.[30] Taj proces je odložen i usporen usled globalne pandemije, ali očekuje se da tokom 2025. godine reformisane odredbe stupe na snagu. Snažan uticaj na izgled budućeg zakonodavnog okvira imaće klimatske promene, zelena agenda, iskustva s nedavnom pandemijom i intencija regulatora da se dâ impuls dugoročnim investicijama.[31] Poseban izazov će biti kako pomiriti potrebe i ciljeve reforme oblikovane u uslovima niskih kamatnih stopa kada u momentu njihovog usvajanja i stupanja na snagu kamatne stope budu na znatno višem nivou.[32]

Očekuje se da će evropska regulatorna i zakonodavna tela u narednom periodu, a poučena prethodnim iskustvom da se sektor osiguranja pokazao izuzetno otpornim na uslove sistemskih kriza, ići u pravcu oslobađanja kapitala. Jedan od planiranih delova reformi koja se razmatra odnosi se na smanjenje troška kapitala prilikom obračuna riziko margine, i spuštanja stope sa 6% na 4,5%, što će, prema prognozama, umanjiti riziko marginu između 30% i 40% kod pojedinih entiteta, odnosno osloboditi više od 50 mlrd EUR kapitala, koji će postati slobodan za druge projekte i ciljeve. Navedeni iznos predstavlja značajnu relaksaciju budući da je ukupna riziko margina na tržištu EU okvirno 140 mlrd EUR.[33]

Reforme Direktive idu i u pravcu preferencijalnog tretmana dugoročnih kapitalnih ulaganja koja služe za pokriće dugoročnih obaveza. Pošto se radi o namenskim sredstvima, pri čemu se mora dokazati da su namenjene pokriću dugoročnih obaveza, kao takva nisu namenjena prodaji i predmet su samo 22% kapitalnih troškova. Očekivanja su da će predmetna izmena osloboditi preko 10 mlrd EUR kapitala na nivou EU.

Značajan segment reformi biće posvećen i konstrukciji krive prinosa, naročito u segmentu iznad 20 godina dospeća, gde se u praksi pokazalo da je bezrizična kamatna stopa dobijena ekstrapolacijom, a koja se koristi za diskont po Solventnosti II, bila značajno viša od tržišnih stopa, naročito u uslovima niskih kamatnih stopa

[29] Insurance Europe, „Solvency II Review and Insurence Recovery & Resolution Directive", 2022, str. 1–8.
[30] EIOPA, „Opinion on the 2020 review of Solvency II", 2020, str. 14–99.
[31] Nataša Petrović Tomić, „Usklađenost poslovanja sa ESG standardima – osnove održivog poslovanja", u V. Radović (ured.), *Usklađivanje poslovnog prava Srbije sa pravom EU*, Pravni fakultet u Beogradu, Beograd 2023, str. 69–95.
[32] G. Berbardino, G., „Keynote speech: 2020 Solvency II review: Opportunities and Challenges", EIOPA, 2020. Dostupno na: https://www.eiopa.europa.eu/system/files/2020-02/2020-01-29-gbe-solvency-ii-opportunities-and-challenges.pdf. Posećeno: 10.4. 2024.
[33] Insurance Europe, „Solvency II Review key messages ahead of trilogues", September 2023.

kada je reforma započeta. Očekivanja su da će ta izmena izvršiti pritisak na rast tehničkih rezervi entiteta.[34]

Planirana je i izmena u delu prilagođavanja za volatilnost, kako bi ovaj mehanizam postao još efikasniji, a na način da se procenat raspona korigovanog rizikom poveća sa sadašnjih 65% na 85%, odnosno da se time entiteti motivišu da ostvare dodatne benefite u delu kapitalnih zahteva kroz upravljanje aktivnom i pasivom. To će omogućiti entitetima sa dobrom praksom u delu ALM da dodatno uvećaju svoje diskontne stope i time smanje obaveze.

Izmene će pretrpeti i ORSA izveštaj, čiji će sastavni deo vrlo izvesno postati ispitivanje uticaja scenarija klimatskih promena u delu rasta prosečne temperature. Planirano je sagledavanje efekata dva scenarija, pri čemu bi se prvi scenario odnosio na rast globalne temperature ispod 2 stepena Celzijusa, dok bi drugi scenario podrazumevao značajno veći rast prosečnih temperatura.

Opšti utisak je da je prethodni period pokazao da je tržište osiguranja EU više nego kapitalizovano i da pored potrebe za daljim unapređenjem alokacije kapitala među učesnicima na tržištu postoji prostor da se deo kapitala oslobodi. Procene su da postoji „višak" od gotovo 100 mlrd EUR, koji može biti upotrebljen za finansiranje obnove ekonomije EU nakon pandemije i razvoj tržišta kapitala, te usmeren u „zelene" projekte.

III. Implementacija Solventnosti II na tržištu osiguranja Srbije

Zakonski okvir koji reguliše delatnost osiguranja u Republici Srbiji, a čija je baza Zakon o osiguranju,[35] predstavlja hibridni sistem koji u sebi sadrži i implementira većim delom odredbe okvira Solventnost I, ali jednim delom, pre svega u segmentu kvalitativnih zahteva, uvodi i zahteve Direktive Solventnost II. Budući da sadrži kolaž odredaba iz dve generacije zakonskih propisa iz dela solventnosti, kolokvijalno se često upotrebljava i naglašava da je kod nas na snazi režim Solventnosti 1,5.

Zahtevana margina solventnosti, tj. zahtevani kapital se shodno sadašnjem pravnom okviru računaju prema odredbama okvira Solventnosti I,[36] ali je u primenu uveden niz kvalitativnih zahteva nove evropske direktive, pre svega: uslovi za osnivanje društva, osnovne upravljačke funkcije,[37] sadržina mišljenja ovlašćenog aktuara, kriterijumi za podobnost članova uprave, predugovorno informisanje, poveravanje

[34] Milliman, „EIOPA Consultation Paper on the Opinion on the 2020 review of Solvency II: Standard Formula Solvency Capital Requirement", 2019, str. 17–19. Dostupno na: https://assets.milliman.com/ektron/Solvency_II_2020_Review_SCR_Standard_Formula.pdf. Posećeno: 10. 4. 2024.

[35] *Službeni glasnik RS*, br. 139.2014 i 44/2021.

[36] Narodna banka Srbije, „Odluka o adekvatnosti kapitala društava za osiguranje/reosiguranje", *Sl. glasnik,* br. 51/2015.

[37] Narodna banka Srbije, „Odluka o sistemu upravljanja u društavu za osiguranje/reosiguranje", *Sl. glasnik,* br. 51/2015, 29/2018, 84/2020 i 94/2022.

poslova trećim licima i jednim delom ORSA izveštaj.[38] U pomenutim segmentima preuzetim iz Solventnosti II domaći entiteti gotovo ne zaostaju za standardima koji važe za društva za osiguranje na jedinstvenom tržištu EU. Pored kvalitativnih zahteva, u domaću regulativu je uveden i jedan, manji deo kvantitativnih zahteva aktuelne direktive na tržištu EU, kao što su kvalitet podataka, segmentacija, obaveza sprovođenja testova poređenja sa iskustvom i adekvatnosti obračuna tehničkih rezervi. Imperativ potpunog usvajanja i usaglašavanja sa Direktivom Solventnost II postoji najkasnije do ulaska zemlje u EU.[39]

Proces uvođenja Direktive Solventnost II na domaćem tržištu oblikovan je i usmeravan od strane regulatora, Narodne banke Srbije, koja je osnovne principe i faze primene predmetne Direktive formulisala kroz dokument „Strategija za implementaciju Solventnosti II u Republici Srbiji",[40] a koja je poslednji put ažurirana u maju 2021. godine. Ažuriranje strategije uslovljeno je dominantno pandemijskom krizom i posledičnom nemogućnošću da se u uslovima globalne krize sprovedu aktivnosti na planu fazne implementacije evropske direktive. Istovremeno, kriza je i u EU uslovila da se prolongira planirana revizija Direktive.

Strategija za implementaciju Solventnosti II u Republici Srbiji predviđa faznu implementaciju nove direktive, kroz pripremnu fazu i još tri etape.[41] Pripremna faza koja je obuhvatala implementaciju pojedinih odredaba Solventnosti II u domaće zakonodavstvo završena je 2014. i 2015. godine usvajanjem Zakona o osiguranju i podzakonskih akata donetih na osnovu tog zakona. Naredna etapa, faza usklađenosti, sprovedena je tokom 2017. godine i obuhvatala je analizu usklađenosti domaćeg i evropskog zakonskog okvira. Posebno je analizirana primena člana 4. Direktive, koja precizira isključenje primene predmetne Direktive na najmanja društva za osiguranje/reosiguranje. Tom prilikom je zaključeno da bi sva domaća društva bila u obavezi da primenjuju Direktivu. Faza procene efekata započela je sprovođenjem kvantitativnih studija uticaja (*Quantitative impact study – QIS),* kojima su se testirali efekti primene zahteva Solventnost II na tehničke rezerve i adekvatnost kapitala. Cilj kvantitativnih studija uticaja je ocena spremnosti tržišta u celini, odnosno pojedinih društava da implementiraju zahteve Direktive i sagledaju posledice njene primene, odnosno da se ukaže na sistemske rizike i da se oni identifikuju, kao i daju smernice društvima u kom pravcu treba da upravljaju rizicima kojima su izložena. Do početka

[38] Lj. Stojković, „Pravni aspekti sistema upravljanja u društvu za osiguranje i princip srazmernosti prema Direktivi o solventnosti II", U: *Srazmernost i pravna izvesnost u pravu osiguranja*. Palić: Udruženje za pravo osiguranja Srbije, 2017, str. 279-293

[39] I. Tošić, „Uticaj direktive Solventnost II na sektor osiguranja u Evropi", *Godišnjak fakulteta pravnih nauka*, Banja Luka, 2017, str. 306–309.

[40] Zorica Šipovac., „Solventnost II u Republici Srbiji – Realno stanje u teoriji i praksi", *Zbornik radova SORS,* 2017, str. 235-249.

[41] N. Petrović Tomić, *Osnove prava osiguranja*, Drugo, dopunjeno izdanje, Pravni fakultet Univerziteta u Beogradu, Beograd 2023, str. 53-54.

2024. godine sprovedene su ukupno tri QIS studije, a planirano je njihovo redovno, kontinuirano sprovođenje do potpune primene zahteva Direktive. Poslednja etapa podrazumeva fazu usklađivanja regulatornog okvira. Navedena faza sprovodiće se u skladu s analizama i rezultatima QIS studija, dok će vremenski okvir dominanto biti opredeljen tokom i dinamikom pregovora o pristupanju Republike Srbije Evropskoj uniji. Predmetna faza obuhvatiće prilagođavanje regulatornog okvira kroz Zakon o osiguranju, u koji će se transponovati odredbe Direktive Solventnost II, odnosno Zakona o stečaju i likvidaciji banaka i društava za osiguranje. Projekat implementacije i završetak te faze Strategije biće realizovani s postizanjem potpune usklađenosti domaćeg pravnog okvira sa Direktivom Solventnost II, a na način i u skladu s rokovima definisanim Nacionalnim programom za usvajanje pravnih tekovina Evropske unije.[42]

U samom proces implementacije Direktive, pored Narodne banke Srbije i društava za osiguranje/reosiguranje, uključeni su ili se očekuje da budu uključeni u narednom periodu: Ministarstvo finansija Republike Srbije, Agencija za osiguranje depozita, Udruženje osiguravača Srbije, Udruženje aktuara Srbije i dr. Olakšavajuća okolnost u procesu usvajanja tekovina savremene evropske regulative jeste činjenica da većina domaćih entiteta ima svoju matičnu firmu u nekoj od zemalja EU, i da zbog propisa u delu supervizije grupe, odnosno potreba za internim analizama, imaju obavezu da vrše obračune i izveštavaju matične kuće po okviru Solventnost II. Pored prilike da se u praksi upoznaju sa zahtevima Direktive, sagledaju efekte primene, domaća društva u stranom vlasništvu imaju obezbeđen transfer znanja, što će proces uvođenja Direktive na našem tržištu u velikoj meri pojednostaviti.

Posmatrano prema zahtevima važeće regulative koja odgovara okviru Solventnost I, raspoloživa margina solventnosti prema podacima za kraj 2022. godine za celo tržište iznosi 49,7 mlrd RSD, dok je zahtevana margina 23,7 mlrd RSD. Sledi da je racio solventnosti za tržište, kao odnos raspoložive i zahtevane margine solventnosti, 209,70%. Racio solventnosti za društva koja se pretežno bave neživotnim osiguranjima, društva koja se pretežno bave životnim osiguranjima i društva za reosiguranje respektivno iznosi 206,4%, 210,6% i 231,1%.[43]

Zaključujemo da je tržište osiguranja u Srbiji trenutno visoko kapitalizovano. Imajući u vidu iskustva zemalja regiona, kao i nezvanične rezultate QIS studija u našoj zemlji, možemo očekivati da sa usvajanjem tekovina Direktive u punom obimu dođe do pada racija solventnosti, ali da će se ovaj pokazatelj za ukupno tržište, kao i za većinu entiteta, održati na stabilnom nivou, koji garantuje visoku zaštićenost prava korisnika usluga osiguranja.

QIS studije su ukazale na sistemske izazove kojima domaći sektor osiguranja mora da se bavi u narednom periodu, kao i pravce poželjnog usmeravanja pojedinačnih poslovnih profila entiteta u cilju adekvatnog upravljanja rizikom i kapitalom.

[42] Narodna banka Srbije, „Strategija za implementaciju Solventnosti II u Republici Srbiji", maj 2021.
[43] Narodna banka Srbije, „Sektor osiguranja u Republici Srbiji, Izveštaj za 2022. godinu"

Očekuje se *značajna izmena strukture bilansa za potrebe obračuna solventnog kapitala*, u okviru koje će vrlo izvesno doći do pada tehničkih rezervi i rasta kapitala, uz takođe paralelni rast potrebnog kapitala za solventnost. Prvi obračuni skreću pažnju i na visoko učešće rizika modula neispunjenja obaveza druge ugovorne strane, koji na tržištu EU nema značajnu ulogu u riziko profilu, gde s druge strane dominira modul tržišnog rizika. Zajednička karakteristika je da modul rizika osiguranja apsorbuje manje od polovine kapitalnog zahteva, što ukazuje na sveobuhvatnost, značaj i prednost prelaska na novi koncept identifikacije i merenja rizika. Pored usvajanja tekovina Direktive, koja trenutno i u EU trpi reformu, kao poseban izazov za domaća društva biće poslovanje u uslovima slobode pružanja usluge, u okviru koje se u svakoj od članica jedinstvenog tržišta mogu osnivati podružnice društava iz drugih zemalja članica, čime će se pozicija domaćih entiteta učiniti dodatno složenom. Paralelno sa pomenutim procesima teći će i usvajanje MSFI 17, odnosno drugih tekovina savremene evropske regulative.

IV. Izazovi implementacije Solventnosti II

Na osnovu iskustava evropskih zemalja u procesu usvajanja tekovina Direktive Solventnosti II, pre svega zemalja okruženja i onih sličnog nivoa privredne razvijenosti, specifičnosti naše zemlje i domaćeg tržišta osiguranja, odnosno rezultata prvih kvantitativnih studija uticaja, identifikovano je niz sistemskih izazova koje treba rešiti ili im se prilagoditi u procesu harmonizacije.

1. Segmentacija u linije poslovanja i prepoznavanje granica ugovora

Početni korak u obračunima po novom okviru predstavlja segmentacija poslovanja. Međutim, umesto segmentacije portfelja na vrste i tarife osiguranja, kako propisuje sadašnja regulativa, obračuni po Direktivi Solventnost II zahtevaju podelu portfelja na unapred definisane linije poslovanja. *Izazov za domaća društva je to što se ne radi o direktnom preslikavanju vrsta osiguranja na linije poslovanja, već o različitom pogledu*. Podela na linije poslovanja u značajnoj meri odslikava duh i specifičnosti tržišta osiguranja zapadnih zemalja, gde je značajan akcenat na osiguranju života i lica. To uzrokuje da pored suštinskih poteškoća i dilema uslovljenih različitom segmentacijom portfelja po sadašnjem i novom okviru, entiteti imaju i tehničke probleme kako da u svojim bazama identifikuju pojedine tarife, odnosno tarifne grupe, i izdvoje ih na način kako propisuje Solventnost II. To je naročito složeno jer se radi o istorijski dugim serijama podataka koji su evidentirani po prethodnom okviru. Problem je i što su pojedine karakteristike proizvoda koje su ključne za njihovu segmentaciju evidentirane i prepoznate kroz doplatak, popust ili drugi faktor korekcije na nivou tarifne grupe, pa ih je čak i na najnižem nivou evidentiranja komplikovano

identifikovati.[44] Pored segmentacije portfelja, izazov predstavlja i određivanje granice ugovora. Direktiva Solventnost II jasno propisuje šta su granice ugovora, međutim, dosadašnja regulativa je na drugi način tretirala trajanje ugovora, pa kada govorimo o istorijskim podacima potrebnim za obračune, treba uzeti sa rezervom koliko su društva u stanju precizno da identifikuju stvarne granice ugovora, naročito stoga što u praksi postoji niz specifičnih ugovora kod kojih su granice ugovora uglavnom prolongirane, a sistemski se vode kao standardni ugovori. Očekuje se da će domaća društva za osiguranje u narednom periodu ući u izmene svojih proizvoda i sistema za evidentiranje poslovanja na način koji će omogućiti segmentaciju portfelja prema pravilima koja propisuje dolazeći zakonodavni okvir, odnosno podržati preciznije prepoznavanje granica ugovora.

2. Izmenjena struktura bilansa stanja za potrebe obračuna zahteva za solventnošću

Prilikom obračuna zahteva za solventnost po novom regulatornom okviru, uslediće značajne promene u strukturi bilansa stanja, kako na strani aktive tako i u okviru obaveza, odnosno kapitala. Bitno je istaći da se radi o bilansu isključivo za svrhe obračuna racija solventnosti, dok na snazi ostaju regulatorni zahtevi i postojeći principi vrednovanja i evidentiranja za svrhu finansijskog izveštavanja. To može izazvati nedoumice, promenu apetita i poslovnih odluka kod niza subjekata zainteresovanih za poslovanje društava za osiguranje/reosiguranje. Proces diskontovanja, apstrahovanje nedospele premije i troškova pribave u praksi prilikom obračuna značajno obaraju tehničke rezerve po Direktivi Solventnost II, što može biti signal pojedinim subjektima da postojeći proces finansijskog izveštavanja precenjuje stavku obaveza, odnosno potcenjuje ostvareni rezultat, i posledično dovede do selidbe kapitala. Međutim, to treba posmatrati isključivo kao proces obračuna raspoloživog kapitala za solventnost koji treba da paralelno isprati i odgovori značajno podignutim zahtevima u delu kapitala potrebnog za solventnost. Kao izazov, javiće se i tržišno konzistentno vrednovanje aktive i obaveza, naročito u uslovima ograničenog i plitkog tržišta. Novi okvir zahteva da se vrednovanje vrši po tržišnoj, fer vrednosti, a time se napušta koncept vrednovanja po novonabavnoj, amortizovanoj vrednosti ili sl. U cilju efikasnog upravljanja rizikom, na značaju će dobiti uspostavljanje ročne i valutne usklađenosti aktive i pasive,[45] čija će se uspešnost precizno kvantifikovati,

[44] Do sada su se kao izazovi koji utiču na obračun i smisao obračuna pokazali: segmentacija osiguranja od nezgode i dobrovoljnog zdravstvenog osiguranja, u smislu izdvajanja osiguranja koja se odnosi na povrede na radu i lečenje radnika, zatim zajedničko posmatranje vrste osiguranja 08 Osiguranja imovine od požara i drugih opasnosti i heterogene vrste osiguranja 09 Ostala osiguranja imovine, posmatranje rentnih šteta, koje uglavnom potiču iz auto-odgovornosti, kao sastavnog dela osiguranja života i dr.

[45] H. Grundl, M. I. Dong, & J. Gal, „The evolution of insurer portfolio investment strategies for long-term investing", *OECD Journal: Financial Market Trends*, 2016, str. 22–27.

umesto dosadašnjeg kvalitativnog cilja. Konačno, doći će do prekompozicije portfelja u pravcu napuštanja proizvoda sa garancijama na račun proizvoda kod kojih će se prava klijenata kretati u smeru promene tržišnih pokazatelja. Navedeno će iznedriti posebnu grupu profesionalaca koji će istovremeno morati da poznaju Direktivu, pravila upravljanja rizikom, karakteristike portfelja entiteta, efekat korelacije rizika. Oni će simultano da posmatraju obe strane bilansa stanja. Ta lica, ili čitave organizacione jedinice koje će obavljati tu funkciju, moraće da budu integrisana u gotovo sve poslovne procese društava za osiguranje. U fokusu će biti razvoj i zadržavanje takvih kadrova, ali i razvoj složenih IT rešenja koji će proces upravljanja rizikom učiniti ažurnijim i efikasnijim.

3. Visoki troškovi uvođenja i održavanja sistema i poslovnih procesa

Iskustva zemalja koje su već prošle kroz proces uvođenja Direktive Solventnost II ukazuju na visoke troškove uvođenja i održavanja sistema, poslovnih procesa i kadrova koji treba da podrže izmenjenu regulativu. Ukoliko to već nisu učinili, entiteti će zbog znatno složenijih obračuna i značajno obimnijeg izveštavanja gotovo sigurno imati imperativ da uvedu savremene softvere za upravljanje rizicima i aktuarske obračune. Potreba poznavanja složenih procesa upravljanja rizikom i efekata niza segmenata poslovnih procesa na obe strane bilansa stanja iznedriće posebnu grupu profesionalaca koji će poznavati principe upravljanja rizikom, aktuarstvo, ali će odlučivati i o pitanjima visine i strukture portfelja, razvoja proizvoda, strukture investiranja i dr.[46] Izazov će predstavljati zadržavanje takvog kadra, kako zbog konkurencije unutar sektora osiguranja, tako i zbog tražnje IT sektora, kome će predmetni kadrovi trebati u cilju zadovoljenja povećane tražnje za sofisticiranim IT rešenjima za obračune, evidentiranja, praćenja i analize po savremenim evropskim standardima. Sve to će da rezultira rastom troškova, koji će se jednim delom kroz uvećanu premiju preliti na ugovarače usluga, odnosno korisnike. Povećanje stepena sigurnosti korisnika usluga, koju obezbeđuje novi regulatorni okvir, učiniće proizvode osiguranja kvalitetnijim, „elitnijim", ali će to gotovo izvesno koštati kupca usluge.

Prilikom sagledavanja budućih izmena regulative, a imajući u vidu da se već nalazimo na visokim nivoima sigurnosti, nadležna zakonodavna tela treba da razmotre, kroz „cost benefit" analizu, opravdanost marginalnog povećanja stepena sigurnosti na račun marginalnog troška. Pored primene načela proporcionalnosti na kome se zasniva Direktiva, a koja uvodi to da primenjene mere treba da odgovaraju prirodi rizika, tj. da se značajno manji utrošak resursa u ovom procesu očekuje od relativno manjih entiteta, nije retkost da upravo manja društva ne mogu da sprovedu proces harmonizacije zbog visokih troškova i da se likvidiraju. Primena internih

[46] Allianz „Izvješće o solventnosti i financijskom stanju za 'Allianz Hrvatska' d.d. za poslovnu godinu 2022", 2023, str. 17–45.

modela za obračun potrebnog kapitala za solventnost, koja treba da bolje odslikava riziko profil društva i gotovo po pravilu rezultira nižim kapitalnim zahtevom, jeste privilegija rezervisana samo za velike i bogate entitete, imajući u vidu složenost izgradnje i odobravanja ovakvih modela obračuna.[47]

4. Izmene strukture portfelja društava za osiguranje

Društva koja se bave pre svega poslovima životnih osiguranja snažno su motivisana da u cilju redukcije kapitalnih zahteva upravljaju strukturom svojih osiguravajućih portfelja. Okvir predviđa kapitalne povlastice za entitete koji svoje poslovanje zasnivaju na proizvodima u kojima nisu ugrađena visoka zagarantovana prava za korisnike usluga. Tradicionalni proizvodi osiguranja života sa štednom komponentom više su penalizovani iz aspekta rizika osiguranja i pre svega tržišnog rizika u odnosu na riziko proizvode i savremene unit linked proizvode. S obzirom na to da nemaju garanciju ili su garancije vrlo male, a da vrednost proizvoda direktno zavisi od vrednosti investicione jedinice, kod unit linked proizvoda gotovo celokupan rizik je transferisan na ugovarača usluge, a društvo za osiguranje je relaksirano u pogledu obaveza i kapitalnog zahteva. Tu povlasticu prepoznali su i intenzivno je koriste osiguravači u EU, gde je prodaja tradicionalnih proizvoda gotovo prestala ili se nude sa jako niskim garantovanim tehničkim kamatnim stopama. Koliko će taj proces uslediti i na domaćem tržištu osiguranja, zavisi i od mogućnosti da produbimo i aktiviramo tržište životnih osiguranja, čija je individualna prodaja značajno smanjena, dok ekspanziju beleže grupni riziko proizvodi koji se prodaju putem poslovnih banaka. Uspešnost osiguravača u delu kapitalnih zahteva zavisiće i od sposobnosti da postignu pravi balans proizvoda sa riziko komponentom i proizvoda sa štednom komponentom, kako bi se nivelisao i negirao uticaj stresa smrtnosti i stresa dugovečnosti. Konačno, očekuje se tendencija skraćenja ugovora, budući da širi vremenski horizont povećava potencijalni negativan uticaj na neto sopstvena sredstva usled stresova i time na kapitalni zahtev.[48]

5. Osetljivost obračuna na varijacije u bezrizičnim kamatnim stopama

U zavisnosti od kretanja bezrizičnih kamatnih stopa, entiteti iz godine u godinu mogu beležiti nestabilnosti u vrednostima obračunatih racija solventnosti. Problem može naročito biti izražen u slučaju pada kamatnih stopa, kada dolazi do

[47] Dodatni pritisak stvaraju društva sa teritorija drugih članica EU, koje pod institutom „slobode pružanja usluga" osnivaju svoje podružnice u novim zemljama članicama, zaoštravajući konkurenciju. To potvrđuje i iskustvo Hrvatske, u kojoj je došlo do nekoliko gašenja, odnosno pripajanja manjih društava nakon uvođenja Solventnosti II, upravo zbog visokih troškova i nemogućnosti da se izdrži konkurentska utakmica. Analogni proces može se očekivati i na našem tržištu po usvajanju tekovina Direktive i drugih zakonskih propisa EU.

[48] A. Clapis, M. Fruzzetti, A. Mapelli, A., „Effectiveness of capital light traditional products, and how they might evolve with the arrival of IFRS 17", *Milliman White Paper,* January 2024, str. 1–10.

rasta vrednosti obaveza, aktive, ali i riziko margine, kao sastavnog dela tehničkih rezervi.[49] U makroekonomskim uslovima u kojima dolazi do pada stopa prinosa, naročito se može pokazati opterećujućom za društva za osiguranje stopa troška kapitala u obračunu riziko margine koja trenutno iznosi 6%, što je prilično visoko imajući u vidu tržišne kamatne stope, i ne može se ublažiti efektom diskontovanja bezrizičnim kamatnim stopama. Upravo to je i razlog što je aktuelna stopa troška kapitala predmet reforme odredaba Direktive. Pored postizanja ročne usklađenosti aktive i pasive, kao jedno od mogućih rešenja za ublažavanje volatilnosti racija solventnosti je i uvođenje fluktuirajuće stope troška kapitala, u zavisnosti od vrednosti i kretanja bezrizičnih stopa prinosa. U suprotnom, postoji rizik da pojedini entiteti koji su jedne godine ispunjavali zahteve u delu solventnosti usled kratkoročnih poremećaja na finansijskom tržištu padnu ispod zakonskih pragova i dođu pod mere regulatora. To može izazvati ciklični efekat gubitka poverenja javnosti i investitora, odnosno selidbe kapitala. Može se zaključiti da novi regulatorni okvir više odgovara makroekonomskom ambijentu sa višim i stabilnim kamatnim stopama,[50] čime se obezbeđuje viši nivo i kontinuitet dostignutih razmera solventnosti. Poseban izazov za naše tržište biće konstrukcija krive prinosa za dinare, u uslovima ograničene dubine i likvidnosti finansijskog tržišta. Budući da rokovi dospeća za državne obveznice imaju velike rupe, tj. nedostajuće ročnosti za pojedine godine dospeća, ovo će zahtevati značajnu interpolaciju, odnosno ekstrapolaciju u cilju konstrukcije krive prinosa, što povećava rizik odstupanja od objektivnih vrednosti, kao i značajne promene stopa iz godine u godinu.[51]

6. Uticaj mehanizma reosiguranja na potreban kapital za solventnost

Prema okviru Solventnost II, postoji višestruki i značajan uticaj zaključenih ugovora o reosiguranju na obračun solventnosti. Uticaj se pre svega manifestuje na module rizika osiguranja, gde efekat reosiguranja smanjuje rizik, odnosno na modul kreditnog rizika, gde reosiguravač u svojstvu druge ugovorne strane nosi svoju verovatnoću propasti i time doprinosi rastu rizika i ukupnog potrebnog solventnog kapitala. Kakav će biti neto efekat tih suprotstavljenih uticaja na obračun, zavisi od vrste reosiguravajućeg programa, kao i od kreditnog kvaliteta reosiguravača. Iskustva sa tržišta EU pokazuju da se pozitivan efekat mehanizma reosiguranja ostvaruje sa reosiguravačima koji u najmanju ruku poseduju A kreditni rejting. Rezultati QIS 5

[49] Jelena Kočović, Marija Koprivica, Blagoje Paunović,„Initial effects of Solvency II implementation in the European Union", *Ekonomika preduzeća*, Vol. 65, br. 7-8, 2017, str. 436–452.

[50] F. Škunca., „Analiza ulaganja osiguratelja u Solvency II svijetu", *Hrvatski časopis za osiguranje*, br. 1, 2019, str. 55-69.

[51] Jelena Kočović, Marija Koprivica., „Izvođenje krive prinosa za vrednovanje obaveza iz osiguranja u regulatornom okviru Solventnost II (Izvođenje krive prinosa za vrednovanje obaveza iz osiguranja u regulatornom okviru Solventnost II)", *Ekonomske ideje i praksa,* br. 32, 2019, str. 7–24.

studije na tržištu EU su pokazali da zamena reosiguravača kreditnog rejtinga A sa reosiguravačem kreditnog rejtinga BB podiže verovatnoću bankrotstva za čak 23 puta, dok bi u slučaju da se zamena vrši sa reosiguravačem kreditnog rejtinga BBB dovela do rasta predmetne verovatnoće za 380%.[52] Prve kvantitativne studije uticaja sprovedene u našoj zemlji pokazale su da postoji značajno učešće modula kreditnog rizika u ukupnom riziku, za razliku od tržišta EU. Jedan od razloga za značajno učešće modula kreditnog rizika je specifičnost domaće regulacije procesa reosiguranja, broj i kreditni kvalitet domaćih društava za reosiguranje, odnosno intencija regulatora da kroz zabranu „look-through" pristupa, tj. posmatranja kreditnog kvaliteta ino-reosiguravača, koji je suštinski nosilac transferisanog rizika, sagleda kapacitet potencijalnog problema u delu kreditnog rizika. Naime, Zakon o osiguranju Republike Srbije propisuje da se reosiguranje, osim u izuzetnim slučajevima, mora vršiti preko domaćeg društva za reosiguranje. U praksi to znači da zbog ograničenog kapaciteta za nošenje rizika domaćih reosiguravača, koji je čak ispod kapaciteta cedenata, domaći reosiguravač zadržava uglavnom mali deo rizika, dok se dominantni rizik transferiše u inostranstvo na jednog ili više reosiguravača. Postojeća regulacija u delu odredaba za reosiguranje ukoliko ostane na snazi u trenutku uvođenja Direktive Solventnost II može uticati na značajno veće učešće kreditnog rizika u ukupnom rizičnom profilu u odnosu na standarde tržišta EU, budući da će čak i u perspektivi na našem tržištu biti teško naći domaćeg reosiguravača kreditnog rejtinga A ili više, koji obezbeđuje pozitivan neto uticaj mehanizma reosiguranja. Neka od mogućih rešenja su liberalizacija odredaba u delu reosiguranja i dopuštanje mogućnosti direktnog reosiguranja u inostranstvu, mogućnost posmatranja boniteta ino-reosiguravača, ili reosiguranje putem podružnica stranih društava osnovanih na našoj teritoriji. Nesumnjivo se u ovom trenutku radi o sistemskom izazovu, čije će rešenje zavisiti od strateškog pravca razvoja koji opredeli regulator. Pojedinačna društva baviće se optimizacijom portfelja ugovora reosiguranja, odnosno izborom adekvatne kombinacije ovih ugovora, koji će istovremeno biti u skladu sa apetitima za rizik i obezbediti optimalan uticaj na pokazatelje solventnosti.

7. Tretman državnih obveznica denominovanih u evrima ili sa valutnom klauzulom

U želji da ostvare valutnu usklađenost aktive i pasive, osiguravači, a s obzirom na to da je značajan iznos obaveza vezan za valutu evra, veliki deo svojih sredstava plasiraju u državne obveznice u evrima ili s valutnom klauzulom vezanom za evro. To je specifičnost i odlika poslovanja naročito društava van evrozone, pogotovo sa područja Balkana, na kome je stanovništvo naviklo i preferira da svoja prava vezuje za vrednost strane valute, čime se u krajnjoj instanci dovodi u pitanje primenljivost

[52] SCOR, „Life (re)insurance under Solvency II", April 2012.

pojedinih odredaba okvira Solventnost II u ovim zemljama, budući da zbog strogih kapitalnih zahteva društva sa ovog područja dovode u nepovoljniji položaj. Prema originalnom smislu nove regulative koja se odnosi na solventnost državne obveznice denominovane u evrima ili sa valutnom klauzulom imaju nepovoljniji tretman od državnih obveznica u domicilnoj valuti i izjednačavaju se s tretmanom koji imaju korporativne obveznice kod kojih se posmatra kreditni rejting. Kod državnih obveznica to implicira da se koristi kreditni rejting države, što može predstavljati problem kod država koje nemaju visok kreditni rejting, što bi važilo i za Republiku Srbiju koja trenutno ima kreditni rejting BB+. Ilustracije radi, na primeru Hrvatske koja je imala kreditni rejting BB, to je značilo da je na svakih 100 novčanih jedinica ulaganja u državne obveznice u evrima, odnosno sa valutnom klauzulom vezanom za evro, bilo potrebno da se izdvoje 73 jedinice dodatnog kapitala, što predstavlja izuzetno visok kapitalni zahtev. Kako bi se ublažio efekat navedenih mera na kapitalni zahtev, Republika Hrvatska je sa EU dogovorila da se u prelaznom razdoblju od 2015. do 2019. primena predmetnog kapitalnog zahteva postepeno podiže sa 0% na 100% u 2019. godini.[53] Budući da je smisao ulaganja u obveznice vezane za valutu evra želja da se postigne valutna usklađenost s obavezama, a ne špekulacija, zahtev da ovakav oblik ulaganja ima preferencijalni tretman u potpunosti je opravdan. Budući da domaća društva za osiguranje značajan deo svoje investicione aktive drže u državnim obveznicama, prema poslednjim podacima, 57,4% sredstava tehničkih rezervi neživotnih osiguranja, odnosno čak 89,5% sredstava tehničkih rezervi životnih osiguranja,[54] od čega je značajan deo vezan za evro – od velikog je značaja na koji način ćemo dogovoriti primenu odredaba Direktive Solventnost II, odnosno da kroz pregovore nastojimo da analogno putu harmonizacije koji je prošla Hrvatska, dogovorimo prelazni period za primenu propisa koji regulišu tretman državnih obveznica vezanih za stranu valutu.

V. Zaključak

Spoznaja da društva za osiguranje kao finansijske institucije koje se bave preuzimanjem rizika nisu izložene isključivo riziku osiguranja, već da na njihovo poslovanje i solventnost utiču, čak i dominantnije, tržišni rizici, kreditni rizici, odnosno operativni rizici, uticala je na to da se počev od 1. 1. 2016. godine na tržištu EU primenjuje Direktiva Solventnost II, koja uvodi nova pravila za obračun solventnosti društava za osiguranje/reosiguranje. Tom direktivom zamenjuje se dotadašnji skup pravila koji se razvijao počev od sedamdesetih godina prošlog veka, oličen u ukupno 14 direktiva, koje su zajedno činile okvir poznat pod nazivom Solventnost I. Pored sveobuhvatnijeg sagledavanja ukupnog rizika, novi regulatorni okvir uvodi njegovu

[53] Tatjana Račić Žlibar, „Solventnost II je i sklizak pod", *Svijet osiguranja*, br. 7, 2015.

[54] Народна банка Србије, „Сектор осигурања у Републици Србији, Извештај за треће тромесечје 2023."

individualizaciju na nivou entiteta, vezujući ga za niz parametara koji karakterišu njegovo poslovanje i time stvarajući motiv za upravljanje rizikom u cilju smanjenja ukupnog rizičnog profila i posledično kapitalnog zahteva. Naime, umesto posmatranja premije i šteta, odnosno matematičke rezerve kod životnih osiguranja kao mere rizika, novi okvir posmatra niz činilaca, kao što su: segmentacija poslovanja, trajanje ugovora, dinamika dospeća premije osiguranja, sume osiguranja, struktura ulaganja, nivo kreditnog kvaliteta poverilaca, uticaj stres testova na rezultat, interne statistike i iskustvene realizacije parametara od značaja za obračun, i drugo. To rezultira time da dva društva za osiguranje koja beleže gotovo identičan obim poslovanja meren premijom osiguranja, za razliku od prethodnog zakonodavnog okvira, mogu imati znatno različite nivoe solventnosti, a zasnovano na uspešnosti upravljanja rizikom, kroz efikasno korišćenje elemenata koje preferencijalno posmatra novi okvir, odnosno efekat diverzifikacije. U fokusu nove regulative stoji cilj unapređenja zaštite korisnika usluge osiguranja u najširem smislu.

Prelazak društava u EU na Solventnost II praćen je značajnim troškovima implementacije i održavanja. Novu regulativu prate značajno složeniji obračuni, kao i zahtevi u delu kvantiteta i kvaliteta izveštavanja. To zahteva velika ulaganja u IT sisteme, razvoj novih poslovnih procesa, i izgradnju i zadržavanje kadrova. I pored primene načela proporcionalnosti, koje definiše da obim napora na primeni zakonskih odredaba treba da odgovara volumenu i prirodi rizika, uz obavezu obezbeđenja minimuma standarda, došlo je do prekompozicije tržišta, odnosno spajanja i pripajanja manjih entiteta finansijski moćnijima. Racio solventnosti je zadržan na visokom nivou i nakon prelaska na novu regulativu, pa tako velika većina entiteta beleži racio solventnosti iznad 150%, a od toga značajan broj je iznad 200%. Najviše nivoe racija solventnosti beleže društva u Nemačkoj, gde je zabeležena medijana racija od 299%, dok je ovaj pokazatelj najniži na Islandu, gde je na nivou od 157%. Zemlje bivše Jugoslavije, danas članice EU, Slovenija i Hrvatska, ostvarile su medijanu racija od respektivno 229% odnosno 170%. Koliko je prelazak sa okvira Solventnost I na Solventnost II u značajnoj meri promenio način merenja rizika, proširenjem opsega posmatranja sa isključivo rizika osiguranja i na druge module rizika, svedoči podatak da je prema rezultatima za sve zemlje članice EU tržišni rizik, koji se po prethodnoj regulativi nije ni merio, pojedinačno najdominantnija stavka, modul rizika, u ukupno potrebnom osnovnom kapitalu za solventnost sa učešćem od 56% kod društava koja se bave neživotnim osiguranjem, do preko 70% kod kompozitnih društava, odnosno društava za reosiguranje. Ono što predstoji tržištu osiguranja EU je reforma Direktive Solventnost II. Već prilikom uvođenja Direktive plan je bio da se nakon pet godina i sagledavanja efekata njene primene pristupi reviziji pojedinih segmenata. Taj proces je odložen i usporen usled globalne pandemije, ali očekuje se da tokom 2025. godine reformisane odredbe stupe na snagu. Značajna pažnja u reformi, između ostalog, biće posvećena smanjenju troška kapitala za obračun

margine rizika, konstrukciji krive prinosa, preferencijalnom tretmanu dugoročnih kapitalnih ulaganja koja pokrivaju dugoročne obaveze, zatim prilagođavanju za volatilnost i sagledavanju efekta klimatskih promena kroz ORSA izveštaj.

Zakonski okvir koji reguliše delatnost osiguranja u Republici Srbiji, a čija je baza Zakon o osiguranju, predstavlja hibridni sistem koji u sebi sadrži i implementira većim delom odredbe okvira Solventnost I, ali jednim delom, pre svega u segmentu kvalitativnih zahteva, uvodi i zahteve Direktive Solventnost II, pa se kolokvijalno često navodi da je kod nas na snazi režim Solventnosti 1,5. Proces uvođenja Solventnosti II u našoj zemlji, čiji je krajnji rok za primenu prijem zemlje u EU, uokviren je i odvija se prema dokumentu „Strategija za implementaciju Solventnosti II u Republici Srbiji", koju je donela Narodna banka Srbije. Tržište osiguranja Republike Srbije uspešno je prošlo do sada predviđene faze, dok se još uvek odvijaju kvantitativne studije uticaja, koje regulatoru i društvima za osiguranje/reosiguranje treba da ukažu na obim i vrstu zahteva nove regulative, kao i na izazove koje nosi harmonizacija, kako bi se blagovremeno prilagodili. Poslednja faza Strategije odnosi se na usklađivanje zakona, ali ono što je vrlo bitno u tom procesu, a naučeno iz iskustva zemalja koje su prošle kroz harmonizaciju, jeste imperativ pregovaranja postepene, fazne primene pojedinih odredaba novog regulatornog okvira.

Racio solventnosti na tržištu osiguranja Srbije, meren odnosom raspoložive i zahtevane margine solventnosti prema poslednjim podacima, obračunat prema okviru Solventnost I, iznosi 209,70%. To se smatra pokazateljem visoko kapitalizovanog sektora, ali prve kvantitativne studije pokazale su da će doći do pada ovog racija prema novom zakonodavnom standardu za obračun solventnosti, ali da će se zadržati u proseku na zadovoljavajućem nivou. Kako bi se domaća delatnost osiguranja adekvatno pripremila za potpuno usvajanje pravnih tekovina EU, a koje nisu isključivo sadržane u Direktivi Solventnost II, već se odnose i na IDD, GDPR, MSFI, odnosno slobodu pružanja usluga u svim članicama sistema, država, regulator i društva za osiguranje zajednički, sinhronizovano moraju raditi na jačanju sektora. To podrazumeva jačanje entiteta ne samo do nivoa koji će obezbediti ispunjenje minimalnih zahteva, već u meri koja će omogućiti da izdrže intenzivirani konkurentski pritisak. Preduslov za to je rešavanje niza sistemskih izazova: tretman državnih obveznica denominovanih u evrima ili sa valutnom klauzulom, optimizacija mehanizma reosiguranja, prilagođavanje poslovanja na način koji omogućava segmentaciju u linije poslovanja prema novoj regulativi i jasno određivanje granica ugovora, izmena strukture portfelja na način povećanja učešća proizvoda sa preferencijalnim tretmanom i maksimiziranje efekta diverzifikacije, kao i niz drugih procesa.

Direktiva Solventnost II propisuje jasna pravila. Period koji nam je ostavljen za implementaciju, a koji je znatno duži od perioda koji su imale druge zemlje, pre svega pojedine zemlje iz okruženja koje su na sličnom nivou privrednog razvoja, treba iskoristiti efikasno i baštiniti iskustva koja su predmetne zemlje imale.

Uspešnost tržišta osiguranja Republike Srbije u bliskoj budućnosti zavisiće od toga koliko se uspešno u godinama koje dolaze prilagodimo zahtevima dolazeće regulative, odnosno rešimo navedene sistemske izazove.

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Milo Marković1

CHALLENGES FOR SERBIA'S INSURANCE MARKET ON THE PATH TO SOLVENCY II

SCIENTIFIC PAPER

Abstract

Insurance and reinsurance companies face a wider range of risks than just those associated with insurance itself. The experience of the European insurance market reveals that several solvency issues in insurance companies stem from risks not directly related to insurance, but rather from market-related factors such as counterparty problems or internal failures like poorly organized processes and employee errors. The realization that solvency, a crucial indicator in which the majority of stakeholders are interested, is influenced by a wide array of risks prompted the transition from Solvency I to Solvency II regulation. The primary focus of this process was to enhance the level of protection for the interests of insurance beneficiaries in the broadest sense. This paper highlights the key advantages of the new solvency calculation regulatory framework, particularly in terms of facilitating more comprehensive risk assessment and individualization. Under this framework, an entity's risk profile is no longer solely determined by factors such as the volume of insurance premiums, settled claims, and technical provisions. Instead, it is influenced by a multitude of factors including business segmentation, contract term, maturity of insurance premiums, sums insured, investment structure, creditworthiness of creditors, internal statistics and experiences, and risk correlation, among others. Additionally, this paper assesses the effects of the Solvency II Directive on the EU market, eight years since its implementation, highlighting both its successes and areas for improvement. Furthermore, it examines the comparative and gap analysis of regulatory frameworks between the Republic of Serbia and the EU market. Drawing on the experience of European countries that adopted Solvency II, this section identifies key areas that will pose challenges for Serbia's insurance market in harmonizing with the Directive's new

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framework for calculating solvency capital requirements and solvency ratios. Given the significant lead time available for Solvency II implementation, the Serbian insurance sector should utilize this opportunity to address systemic challenges through a multi-pronged approach: gradual legal adjustments, quantitative impact studies, business optimization, learning on the experience of countries of regions that have already gone through the subject process, i.e. through development and transfer of knowledge.

Keywords: *solvency, risk modules, SCR, MCR, technical provisions, QIS studies.*

I. Introductory Considerations and Basic Principles of the Solvency II Framework

The Solvency II Directive serves as the EU's legislative benchmark for conducting a thorough assessment of the risk profile of insurance/reinsurance undertakings and establishing solvency requirements.[2] This directive replaces a total of 14 directives from the Solvency I framework. Its primary aim is to offer enhanced protection to all insurance beneficiaries on a broader scale and to provide a clearer depiction of solvency to stakeholders involved in the operations of insurance/reinsurance undertakings.[3] This objective is realized through a comprehensive approach to risk measurement, which entails an expanded methodology for identifying and evaluating risks. Unlike the Solvency I framework, which predominantly focuses on insurance risk, Solvency II incorporates a broader spectrum of risks. Alongside insurance risk, encompassing non-life, life, and health insurance risk, Solvency II also encompasses counterparty risk, market risk, operational risk, and intangible asset risk, considering their interrelation.[4] Such determination, based on the *principle of assessing the individual risk profile of the insurance/reinsurance company*, is enabled and based on the deep vertical segmentation of the aforementioned risk modules into smaller risk submodules, whereby the overall risk profile, in addition to the already standard overall premium and technical provisions, which is observed by the earlier regulatory framework, is influenced by: business segmentation, duration of contracts, dynamics of maturity of insurance premiums, sums insured, investment structure, creditworthiness of creditors, impact of stress tests on the score, internal statistics and experiential realization of parameters of importance for calculation, parameterized calculation coefficients, risk correlation and other factors.[5] All this

[2] Directive 2009/138/EC of the European Parliament and of the Council of 25 November 2009 on taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II), OJ L 335, pp. 1–155.

[3] The Directive was adopted in 2009, but full implementation in the EU market only began on January 1, 2016. This timeframe reflects the complexity of the Directive, the significant regulatory shift it represents, and the extensive adjustments required by insurance market participants.

[4] For more detals on Solvency I see: Vladimir Čolović, *Osiguravajuća društva, Zakonodavstvo Srbije, pravo EU, uporedno pravo*, Institute of Comparative Law, Belgrade, 2010, pp. 201–202.

[5] Mirjana Ilić, *Uticaj primene Direktive Evropske unije Solventnost II na sektor osiguranja u Srbiji*, doctoral dissertation, Faculty of Economics of the Univesity in Niš, Niš, 2014, 25–26.

results in insurance/reinsurance undertakings having the same or similar level of insurance premium and technical provisions being able to record materially significant differences in the required and achieved level of solvency. In addition to segmentation and individualization of risk assessment, the task set before the new Solvency II framework is a more adequate allocation of capital, i.e. improving supervision in the direction of group supervision.

Solvency II is based on three pillars: [6]

1) quantitative requirements;

2) qualitative requirements;

3) transparency.

Quantitative requirements imply marked-based valuation of assets and liabilities.[7] This implies that that the assets are valued at the amount for which they could be exchanged between knowledgeable willing parties in an arm's length transaction or that liabilities shall be valued at the amount for which they could be transferred, or settled, between knowledgeable willing parties in an arm's length transaction.[8] As a basic valuation method that should provide a market-based valuation of assets and liabilities, an insurance/reinsurance undertaking should use quoted market prices for the same assets and liabilities, i.e. if they do not exist, then market prices for similar assets and liabilities can alternatively be used. Within the quantitative pillar, two tiers of capital requirements are established, Solvency Capital Requirement (SCR) and Minimum Capital Requirement (MCR).[9] Solvency capital requirement takes into account all risks and ensures that an insurance/reinsurance undertaking can withstand during one year a one-in-200-year event i.e. corresponds to a 99.5% confidence level over a one-year time horizon. The required solvency capital may be calculated using a standard model or alternatively, by applying an internal model developed by an entity whose approval to implement is given by the regulator as part of a complex validation procedure for that model. Minimum capital requirement ensures 85% confidence level over a one-year time horizon. For the purpose of calculating solvency capital, the Solvency II framework introduces principles for calculating assets, liabilities, and technical provisions. Technical provisions consist of a best estimate and a risk margin. This results in a different balance sheet structure, but only for solvency calculation purposes. International accounting standards are still used for financial reporting.

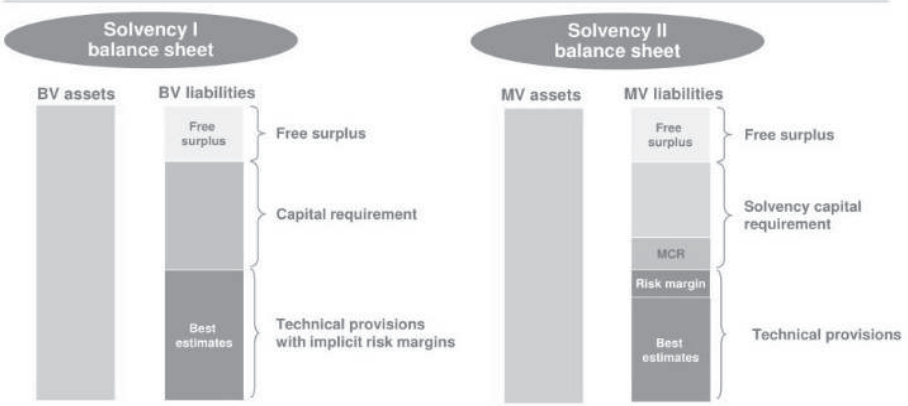
[6] N. Petrović Tomić, *Pravo osiguranja, Sistem*, Book I, *Official Gazette*, Belgrade, 2019, pp. 278–280.

[7] Rae, R. A., Barrett, A., Brooks, D., Chotai, M. A., Pelkiewicz, J., Wang, C., „A review of Solvency II: Has it met its objectives?", 2017, pp. 11–15.

[8] National Bank of Serbia, „Okvir za sprovođenje treće kvantitativne studije uticaja zahteva Solventnosti 2 na Sektor osiguranja u Republici Srbiji", 2023, p. 7.

[9] Lidija Jauković, Vladimir Kaščeljan, „Nova regulativa solventnosti osiguravajućih kompanija u EU – Projekta Solvenost II", Montenegrin Journal of Economics, No. 5/2007, p. 80.

Figure 1 Structure of Balance Sheet according to Solvency I and Solvency II



Source: Ernst & Young

Qualitative requirements, under the second pillar of Solvency II, prescribe the conditions that must be met by persons holding key functions in insurance/reinsurance companies.[10] Four key management functions are identified: internal audit, compliance, risk management and actuarial function.[11] Solvency II imposes regular own risk and solvency assessment (ORSA) as part of qualitative requirements, in order to anticipate overall solvency needs, detect any deviation of an undertaking's risk profile from SCR, and meet the requirements concerning capital adequacy and technical provisions. Particular attention is paid to outsourcing.

Aligned with the subject framework, transparency is achieved through two primary mechanisms: a set of regulations governing the provision of information to supervisory bodies, and rules dictating which information is made public and how it is disseminated.[12] Similar to practices under previous regulatory frameworks, companies are obliged to furnish regular reports and conduct extraordinary reporting upon request by supervisory bodies. However, there has been a notable expansion in the scope of qualitative data of interest to supervisors, beyond just quantitative data. A novel requirement is the publication of the Solvency and Financial Condition Report (SFCR). Group supervision receives particular emphasis, treating the group as a singular entity. This necessitated the establishment of specific rules regarding responsibilities, coordination, and data exchange among supervisory authorities.

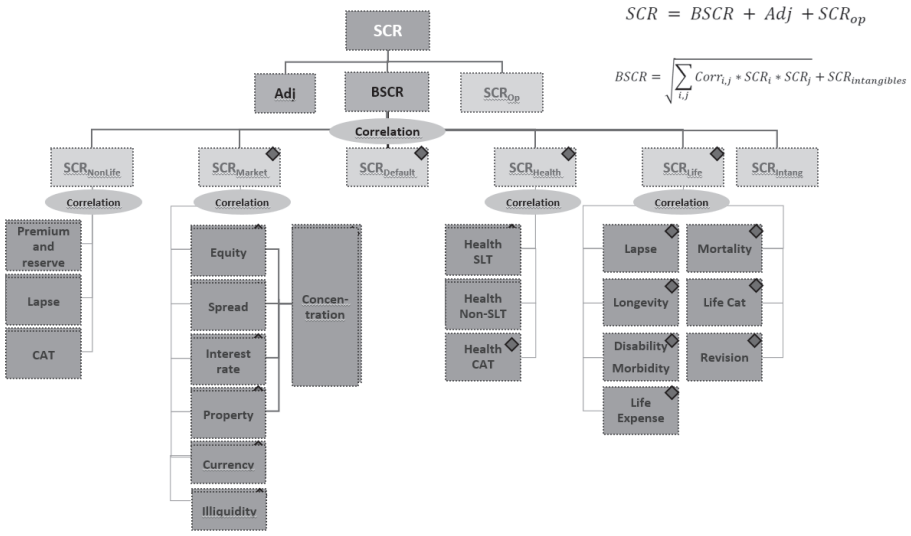
[10] A. Borseli, „Nadzor sistema uprave u osiguravajućim grupama prema Solventnosti II", Modern Insurance Law: Current Trends and Issues, Palić, 2014, pp. 28–43.

[11] Ljiljana Stojković, „Pravni aspekti upravljanja rizikom i sistem internih kontrola kao integralni deo korporativnog upravljanja u društvu za osiguranje", *European Insurance Law Review*, no. 3/2013, p. 138.

[12] M. Dreher, *Treaties on Solvency II*, Springer Verlag, Berlin, 2015, pp. 345–424.

The key advantage of the Solvency II framework, and conversely a weakness of the previous solvency assessment framework that the new directive aimed to address, is the *comprehensive risk assessment. This includes the implementation of interdependencies between risks and the individualization of an entity's risk profile based on portfolio characteristics at a granular level of risk-relevant parameters.*[13]

Figure 2. Risk Module Diagram according to the Standard Formula



Source: EIOPA

In contrast to the directives governed by Solvency I, the Solvency II Directive goes beyond assessing insurance risks solely through simplified methods predominantly based on premiums and claims. Instead, it undertakes a more thorough segmentation and introduces new risk modules. These modules include market risk, counterparty risk, operational risk, and the risk associated with intangible assets.[14] Insurance risk itself is segmented into three modules: non-life insurance risk, life insurance risk, and health insurance risk. To calculate this risk, knowledge of not only premiums and damages but also their structure, maturity, and the impact of insurance termination (such as catastrophe losses) is essential, along with other parameters crucial for equity loss calculation. A fundamental component of Solvency II calculations relies on correlation matrices between risk modules and submodules. These matrices serve

[13] Kordanuli, B., „Značaj regulatornog okvira Solventnost II na poslovanje društava za osiguranje u Republici Srbiji", 2017, pp. 67–76.

[14] P. G. Marly, V. Ruol, *Droit des entreprises d'assurance,* RB édition, Paris, 2011, 201.

to assess and incorporate the fact that not all risks will materialize simultaneously. The activation of one module or submodule of risk influences the probability of occurrence of other risk modules and submodules. In practice, this translates into a diversification effect, resulting in the total solvency capital requirement being lower than the sum of the capital required by all risk modules.

At the core of Solvency II's objectives lies the overarching aim of providing *enhanced protection to policyholders on a broader scale*.[15] The insurance industry operates on the premise of selling insurance services upfront, with a commitment to promptly and adequately fulfill policyholders' rights in the event of an occurrence. This assurance ultimately rests on the solvency of insurance/reinsurance companies, underscoring the necessity for comprehensive solvency assessment. Beyond creditors, investors with capital ownership also have a vested interest in solvency, as their stakes are directly tied to the entity's ability to meet long-term obligations. The multifaceted goals outlined by the directive, alongside its implementation tools, work collectively to bolster protection for insurance beneficiaries and offer a clearer understanding of the guarantees provided by the entity. Modernizing insurance supervision stands as a pivotal goal in support of the overarching objective of safeguarding policyholder interests. This entails a shift in focus from merely observing quantitative indicators to assessing qualitative aspects such as operational practices, risk profiles, and the quality of risk management. Additionally, efforts are made towards harmonizing supervision across the EU and treating groups as single supervisory entities.[16] The framework also aims to incentivize insurance/reinsurance companies to effectively manage risk, as the required solvency capital is directly contingent upon the efficiency of this process. This, in turn, is expected to foster a more rational and efficient allocation of limited capital resources. The final objective aims to enhance the competitiveness of EU insurance/reinsurance companies in the global market, with success hinging on the realization of the aforementioned goals.[17]

The upcoming process of harmonization with the acquis communautaire, including the Solvency II Directive, presents a challenge for countries aspiring to join the European Union. While it may involve additional costs and require adjustments

[15] Iva Tošić, „Izazovi u implementaciji Direktive Solventnost II u Srbiji", *Law and Economy*, no. 7-9/2017, 527.
[16] P. Marano, „Nova nadzorna paradigma: kultura nošenja rizika i etički kodeks", Insurance Law, Governance and Transparency – Basics of the Legal Certainty, Palić, 2015, pp. 171–175.
[17] The fundamental tool for achieving the set goals is market-consistent valuation of assets and liabilities. This approach abandons the concept of valuation based on purchase cost and depreciated value, which relies on static parameters relevant for calculation at the time the contract was signed. It replaces this concept with market valuation based on the current value of relevant parameters. Here, assets and liabilities are worth what the market estimates them to be worth. Finally, stress tests are introduced to assess the potential loss of equity capital due to negative deviations in certain parameters. These tests help determine the additional capital needed to absorb these losses and ensure fulfillment of obligations and business continuity.

to existing regulations, it should not be seen as a dismantling of current benefits. Instead, it is an **opportunity to build a new legislative infrastructure that fosters long-term stability for all market participants, while serving the general public interest**. Insurance and reinsurance companies should be proactive in this harmonization process. By identifying and capitalizing on the opportunities it presents, they can be the first to adapt their business models, risk profiles, and capital allocation to better align with the EU standards. The process of harmonization is transparent and inevitable. As shown by the experiences of EU countries, it will likely lead to changes in product portfolios, investment strategies, market structure, company positioning, and capital allocation.

II. Solvency II Development and Results of the Application in the EU Market

The forerunner of the Solvency II Directive, the Solvency I regime, represented through 14 directives, has been developing since the early 1970s. During this period, it was observed that the insolvency of insurance companies in more than half of recorded cases occurred for reasons not directly related to insurance risks. Between 1996 and 2004, 76 insurance companies in the EU were closed due to solvency problems, and several others faced solvency difficulties that were subsequently remedied.[18] The shortcomings of this system became particularly evident during the 2008 financial crisis. It became clear that the existing risk assessment model was not sufficiently precise and sensitive to the risk of individual entities. Specifically, it did not include essential components of risk: market risk, counterparty risk, and operational risk.[19] This significantly hindered the implementation of prompt and adequate supervisory interventions,[20] and limited the optimal allocation of investor capital. However, the need for a new risk assessment framework was recognized as early as the beginning of the 21st century. It was noted that national regulations within EU countries had significant freedom in shaping solvency assessment rules, generating unequal conditions for the operations of entities from different national systems in the EU single market. The main objective at that point was the harmonization and definition of uniform rules for the operations of insurance companies in the market of the European Communities. It took almost fifteen years to build a new system, which began to function on January 1, 2016.[21]

[18] V. Čolović, „Primena projekta Solventnost II i mere koje su predviđene u Zakonu o osiguranju Srbije u slučaju neprimene pravila o upravljanju rizikom", Zlatibor, 2013.

[19] N. Petrović Tomić, *Pravo osiguranja*, *Sistem*, 2019, pp. 277–278.

[20] V. Čolović, „Uticaj primene projekta Solventnost II na osiguravajuća društva u Srbiji", Zbornik radova *Harmonizacija zakonodavstva Republike Srbije sa pravom Evropske unije* (II), Institute of International Politics and Economics, Institute of Comparative Law, Hanns Seidel Foundation, Belgrade 2012., pp. 368–369

[21] The complexity of the Solvency II Directive is evident from the extensive preparatory work undertaken. As many as six quantitative impact studies were conducted during this period. These studies aimed to

Despite the Directive taking effect in early 2016, the extensive changes it entails, coupled with anticipated financial and infrastructural challenges in promptly adjusting to the new framework, necessitate a transitional period. This period allows insurance and reinsurance companies the opportunity to gradually realign their operations in specific segments:[22]

- measures for the valuation of technical provisions allow a gradual transition to a fully market-consistent regime over 16 years. This applies exclusively to contracts concluded before January 1, 2016. The measures consist of two options: calculation of technical provisions using discount rates under Solvency I or calculation of technical provisions under the provisions of this Framework;
- tolerance for entities breaching the Solvency Capital Requirement within the first two years;
- grandfathering of existing hybrid own-fund items that are eligible under Solvency I, making it easier to meet the new capital requirements and giving the industry 10 years to adapt the composition of its capital to Solvency II standards;
- longer deadlines to report quarterly and annual information to supervisors and to disclose reports to the public, decreasing gradually from 20 weeks to 14 weeks after the close of the reporting period over the first 3 financial years.

The one-off net cost of implementing Solvency II for all insurance/reinsurance undertakings has been assessed to be around EUR 3 billion to EUR 4 billion. In addition, the aggregate available surplus (free own funds above the capital requirements of each insurer) is almost identical to that before the introduction of the new directive i.e. the situation under Solvency I. However, the distribution of capital requirements across entities led to a more efficient allocation of capital.[23]

According to the latest data, the median SCR ratio, as a ratio of available and required solvency capital, in the EU market is over 215%, while as many as 75% of entities record this ratio above 160%.[24] In terms of entity type, the distribution of SCR ratio is similar, with companies dealing exclusively with life insurance having a median solvency rate of 233%, while composite companies, non-life insurance companies, and reinsurance companies record medians of 223%, 219% and 217%, respectively.

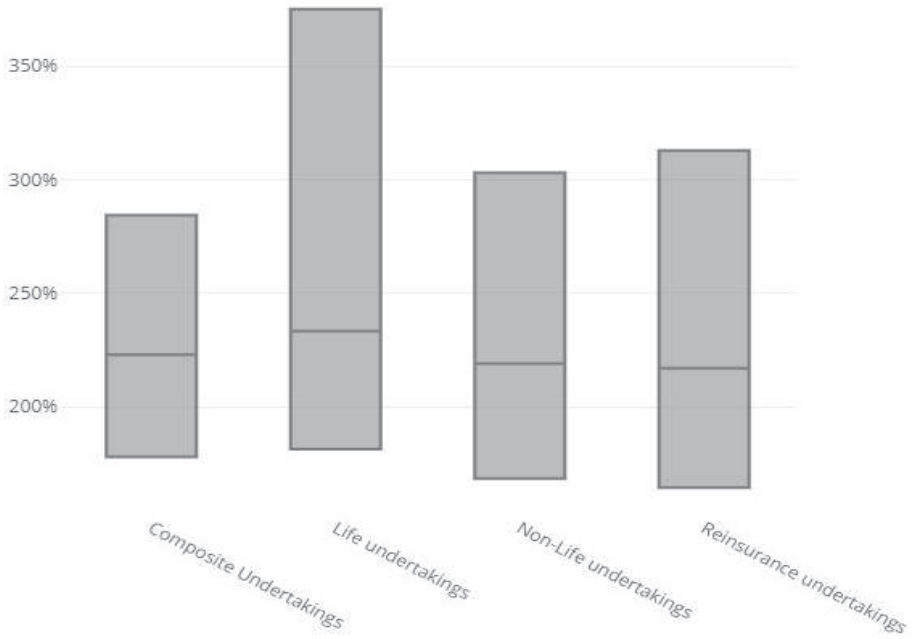
assess the effects of implementing the new directive and facilitate its calibration. In other words, they provided insurance/reinsurance undertakings with an opportunity to prepare resources for adapting their businesses to the new legislative framework. Following this intensive work, the Solvency II Directive was adopted in November 2009.

[22] Iva Tošić, „Nadzor osiguranja – Direktiva Solventnost II", *Foreign Legal Life*, no. 2/2017, pp. 147–162.

[23] Solvency II Overview (europa.eu)

[24] European Insurance Overview report 2023 - European Union (europa.eu)

Figure 3 SCR Ratio, Distribution by Type of Undertaking on EU and EEC Market[25]



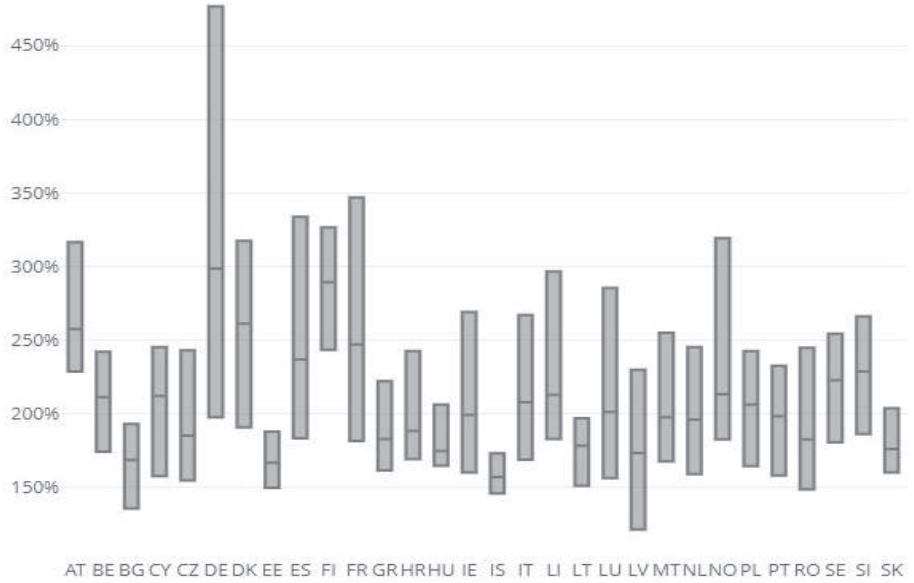
Source: EIOPA, Insurance Overview Report 2023.

Looking across EU member states, German companies boast the highest solvency ratio medians, reaching 299%. Conversely, Iceland has the lowest median at 157%. Among former Yugoslav republics that are now EU members, Slovenia and Croatia achieved medians of 229% and 170%, respectively. Our neighboring countries, Romania, Hungary, and Bulgaria, have solvency ratios of 183%, 175%, and 169%, respectively. Considering their market structure, insurance development stage, and overall economic progress, these solvency ratios should be achievable targets for our own market after implementing the Solvency II Directive. However, this is significantly lower than Serbia's current solvency levels under Solvency I. According to the latest data, the overall market solvency ratio for companies primarily engaged in non-life insurance is 206.4%. For companies mainly focused on life insurance, it is 210.6%, and for reinsurance companies, it is 231.1%.[26]

[25] In addition to EU member states, the study also includes Iceland, Liechtenstein and Norway. Note refers to Figures 3, 4, 5 and 6.

[26] National Bank of Serbia, Insurance Sector in the Republic of Serbia, Report for 2022.

Figure 4 SCR Ratio, Distribution by EU and EEA Member States



Source: EIOPA, Insurance Overview Report 2023.

The significant shift in risk identification, assessment, and management from Solvency I to Solvency II is evident. Notably, under Solvency II, market risk, which was not even measured under the previous regulation, has become the single largest component of the total required solvency capital across all EU member states.[27] Market risk participation ranges from 56% for non-life insurance undertakings to over 70% for composite and reinsurance companies. Conversely, insurance risk, encompassing life, non-life, and health categories, absorbs 54% of the required solvency capital for composite companies. This figure stands at 55% for life insurers, 64% for non-life insurers, and 42% for reinsurance undertakings.

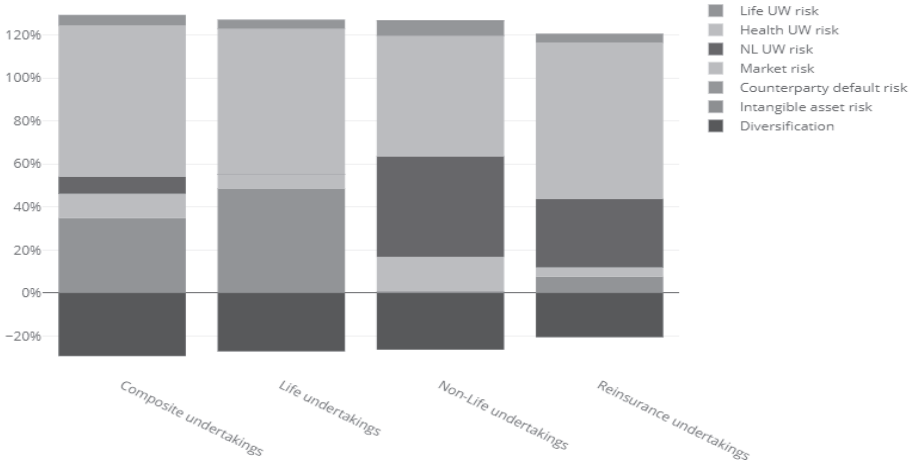
The correlation effect, or the full or partial mutual exclusion of risks, is another significant factor. It reduces the total required solvency capital compared to the sum of capital needed for each individual risk sub-module. The impact of this phenomenon varies between -20% and -30% on the required solvency capital, depending on the type of entity.

In contrast to Serbia and the initial impact studies that indicated its material significance, counterparty risk does not hold such a prominent role in the EU market.

[27] N. Gatzert, M. Martin, „Quantifying Credit and Market Risk under Solvency II: Standard Approach versus Internal Model", 2012, pp. 5–21.

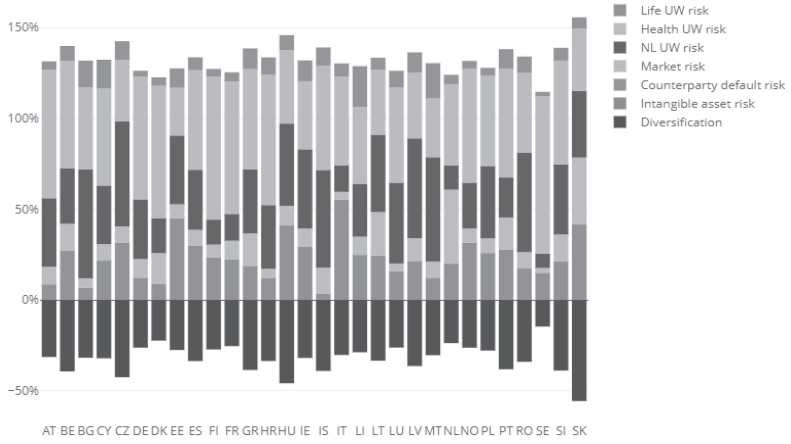
Its share in the required solvency capital ranges from 4% to 7%, depending on the specific insurance lines undertaken by the entity.[28]

Figure 5 BSCR Structure according to Standard Formula



Source: EIOPA, Insurance Overview Report 2023.

Figure 6 BSCR Structure according to Standard Formula by EU and EEA Member States



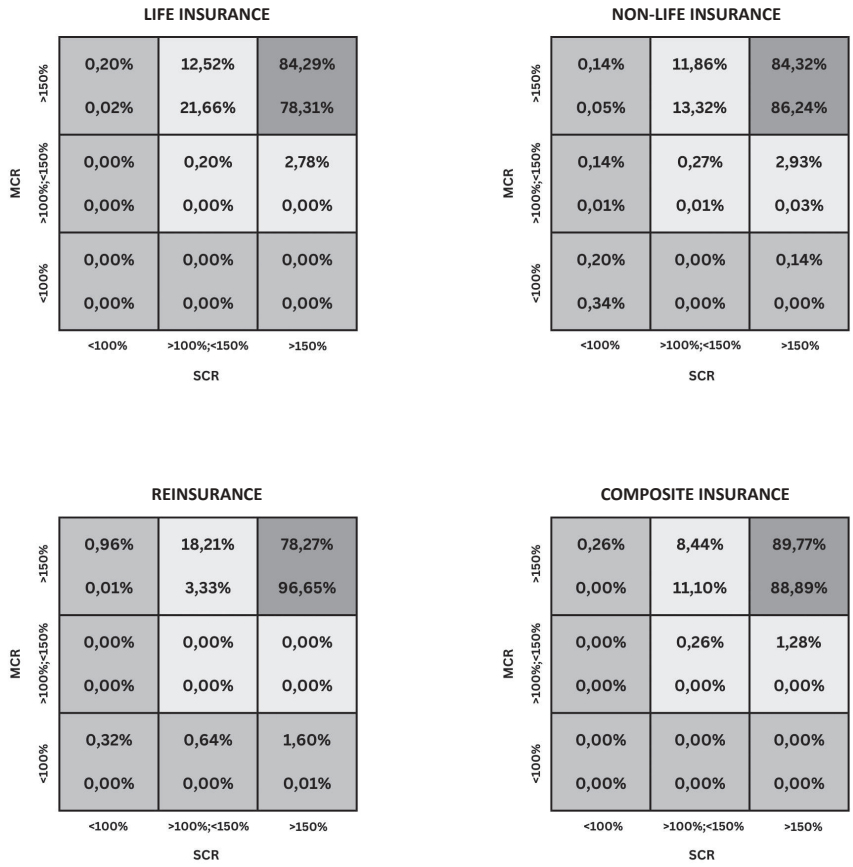
Source: EIOPA, Insurance Overview Report 2023.

[28] Branko Pavlović, „Koji je rizik najveći za osiguravače?", *Svet osiguranja*, 2019.

Across EU member states, there is a group of countries where market risk represents over 70% of the total required solvency capital. These are primarily non-eurozone countries, such as Sweden, where market risk participation reaches 87%. Finland (79%) and Denmark (73%) follow closely. France (73%), Croatia (72%), and Austria (71%) also exhibit high levels of market risk participation.

The diversification effect is particularly pronounced in Slovakia, where risk correlation reduces the required solvency capital by 56%. Hungary (-46%) and the Czech Republic (-42%) also experience a significant impact from diversification.

Figure 7 EU Market Structure according to Achieved SCR and MCR Ratio Indicator



Source: EIOPA, Insurance Overview Report 2021

Figure 7, using 2020 data, clearly shows that the vast majority of entities in the single EU market have high SCR and MCR levels. These are represented by the green fields, where both ratios are above 150%. If the top ratio represents the percentage measured by the number of entities, and the bottom ratio represents the percentage measured by assets, then a very high number of entities achieve solvency ratios between 78.27% and 89.77%, depending on the line of business they operate in. Entities falling within the yellow fields also meet the regulatory solvency requirements. However, a small number of entities (represented by the grey fields) face challenges in complying with solvency regulations. For these entities, at least one of the two solvency ratios falls below 100%. Their share ranges from 0.22% to 3.54%, depending on the types of insurance activities they are licensed for.

The EU insurance market faces a reform of the Solvency II Directive.[29] Even during the Directive's introduction, the plan was to revisit and revise specific segments after five years of observing its implementation effects.[30] This process was delayed and slowed down by the global pandemic, but the reformed provisions are expected to come into effect in 2025. Climate change, the green agenda, lessons learned from the recent pandemic, and the regulator's intention to incentivize long-term investments will heavily influence the shape of the future regulatory framework.[31] A particular challenge will be reconciling the reform's needs and goals, formulated under low-interest-rate conditions, with potentially significantly higher interest rates at the time of their adoption and implementation.[32]

Informed by past experiences where the insurance sector demonstrated exceptional resilience during systemic crises, European regulatory and legislative bodies are poised to pursue capital relief measures in the foreseeable future. One of the planned reform areas under consideration involves a reduction in the capital charge utilized for calculating the risk margin, decreasing it from 6% to 4.5%. According to forecasts, this adjustment would translate to a decrease in the risk margin by 30% to 40% for certain entities, thereby releasing over €50 billion in capital for other projects and objectives. This figure signifies a substantial easing, particularly considering that the total risk margin across the EU market stands at approximately €140 billion.[33]

The reforms also aim to provide preferential treatment to long-term capital investments intended to cover long-term liabilities. These dedicated funds, clearly earmarked for this purpose and not intended for sale, will only be subject to a 22% capital charge. This adjustment is anticipated to unlock over €10 billion in capital at the EU level.

[29] Insurance Europe, „Solvency II Review and Insurence Recovery & Resolution Directive", 2022, pp. 1–8.
[30] EIOPA, „Opinion on the 2020 review of Solvency II", 2020, pp. 14–99.
[31] N. Petrović Tomić, „Usklađenost poslovanja sa ESG standardima – osnove održivog poslovanja", u V. Radović (ured.), *Usklađivanje poslovnog prava Srbije sa pravom EU*, Pravni fakultet u Beogradu, Beograd 2023, pp. 69–95.
[32] G. Berbardino, „Keynote speech: 2020 Solvency II review: Opportunities and Challenges", EIOPA, 2020.
[33] Insurance Europe, „Solvency II Review key messages ahead of trilogues", September 2023.

A significant portion of the reform effort will be directed towards refining the construction of the yield curve, particularly for maturities exceeding 20 years. In practice, the risk-free interest rate derived through extrapolation under Solvency II has consistently been notably higher than prevailing market rates, particularly in the low-interest-rate environment present at the outset of the reform. The expectation is that this adjustment will exert upward pressure on entities' technical provisions.[34]

Another planned change concerns the volatility adjustment mechanism, with the aim of enhancing its efficiency. This would entail raising the percentage of the risk-adjusted spread from the current 65% to 85%. Such an adjustment would incentivize entities to pursue additional capital requirement benefits through both active and passive management. It would enable entities with robust Asset and Liability Management (ALM) practices to further elevate their discount rates, consequently reducing liabilities.

The ORSA report is also set to undergo changes, with a high likelihood of integrating climate change scenario testing, specifically focusing on the impact of increasing average temperatures. The plan involves analyzing two scenarios: the first involving a global temperature increase below 2 degrees Celsius, and the second assuming a significantly higher rise in average temperatures.

There is a prevailing sentiment that the EU insurance market is presently over-capitalized. While there remains a need for further enhancements in capital allocation among market participants, there appears to be leeway for releasing some capital. Estimates indicate a surplus of nearly €100 billion, which could be channeled towards financing the EU's post-pandemic economic recovery, bolstering the capital market, and supporting "green" projects.

III. Implementation of Solvency II in the Serbian Insurance Market

The legal framework governing insurance activities in the Republic of Serbia, with the Insurance Law as its foundation,[35] is a hybrid system. It incorporates and implements most of the Solvency I framework but also introduces some requirements from the Solvency II Directive, primarily in the qualitative requirements segment. Due to this mix of regulations from two generations of solvency laws, the term "Solvency 1.5 regime" is often used colloquially to describe the current system in Serbia.

The required solvency margin, or capital adequacy, is currently calculated according to Solvency I provisions.[36] However, a number of qualitative requirements

[34] Milliman, „EIOPA Consultation Paper on the Opinion on the 2020 review of Solvency II: Standard Formula Solvency Capital Requirement", 2019, pp. 17–19. Available at: https://assets.milliman.com/ektron/Solvency_II_2020_Review_SCR_Standard_Formula.pdf. Visited on: 10/04/ 2024.

[35] *Official Gazette RS*, nos. 139.2014 and 44/2021.

[36] National Bank of Serbia, Decision on Capital Adequacy of Insurance/Reinsurance Undertakings, Official Gazette No. 51/2015.

from the new European directive have been implemented, particularly those concerning: conditions for establishing a company, key management functions,[37] content of the authorized actuary's opinion, eligibility criteria for managing board members, pre-contractual information, outsourcing and to some extent, the ORSA report.[38] In these areas adopted from Solvency II, domestic entities in Serbia almost meet the standards that apply to insurance companies in the single EU market. In addition to qualitative requirements, a small portion of the current EU directive's quantitative requirements have also been introduced into domestic regulations. These include data quality, segmentation, the obligation to conduct back-testing, and the adequacy of technical provision calculations. There is a mandatory requirement for full adoption and harmonization with the Solvency II Directive by the time Serbia joins the EU.[39]

The National Bank of Serbia, the regulatory body, has designed and guided the process of introducing the Solvency II Directive in the domestic market. The core principles and implementation phases for this Directive are outlined in the document Strategy for Implementation of Solvency II in the Republic of Serbia.[40] This Strategy was last updated in May 2021. The update of the Strategy was primarily driven by the COVID-19 pandemic and the resulting difficulties in carrying out the planned phases of implementing the European directive during a global crisis. The pandemic also led to an extension of the planned revision of the Directive within the EU itself.

The Strategy for Implementation of Solvency II in the Republic of Serbia outlines a phased approach for implementing the new directive, consisting of a preparatory phase and three additional stages.[41] Preparatory Phase (completed 2014-2015): This phase involved implementing specific Solvency II provisions into domestic legislation. It was completed in 2014 and 2015 with the adoption of the Insurance Law and subordinate legal acts based on that Law. Compliance Phase (completed 2017): The following stage, the compliance phase, was carried out in 2017 and involved analyzing the compatibility between domestic and European legal frameworks. Particular attention was paid to the application of Article 4 of the Directive, which specifies the exclusion of the smallest insurance/reinsurance companies from the Directive's application. This analysis concluded that all domestic companies would be obliged to implement the Directive. Impact Assessment Phase

[37] National Bank of Serbia, Decision on the System of Governance in an Insurance/Reinsurance Undertaking Official Gazette No. 51/2015, 29/2018, 84/2020 and 94/2022.

[38] Lj. Stojković, „Pravni aspekti sistema upravljanja u društvu za osiguranje i princip srazmernosti prema Direktivi o solventnosti II", In: Proportioinality and Legal Certainty in Insurance Law. Palić: The Insurance Law Association of Serbia, 2017, pp. 279-293

[39] Iva Tošić, „Uticaj direktive Solventnost II na sektor osiguranja u Evropi", Yearbook of the Faculty of Law, Banja Luka, 2017, pp. 306–309.

[40] Zorica Šipovac., „Solventnost II u Republici Srbiji – Realno stanje u teoriji i praksi", SORS Proceedings, 2017, pp. 235-249.

[41] N. Petrović Tomić, *Osnove prava osiguranja*, second, revised addition, Faculty of Law of the University of Belgrade 2023, pp. 53-54.

(ongoing): The impact assessment phase began with the implementation of Quantitative Impact Studies (QIS). These studies tested the effects of applying Solvency II requirements on technical provisions and capital adequacy. The purpose of these studies is to assess the overall preparedness of the market and individual companies to implement the Directive's requirements. Additionally, they aim to identify potential systemic risks, provide guidance to companies on how to manage their risk exposures, and understand the consequences of implementing the Directive. As of early 2024, three QIS studies have been conducted, with plans for ongoing implementation until the full application of the Directive's requirements. The final stage involves aligning the regulatory framework. This phase will be implemented based on the analyses and results of the QIS studies. The timeframe for this phase will be largely determined by the progress and dynamics of Serbia's accession negotiations with the European Union. This stage will encompass adapting the regulatory framework through the Insurance Law, which will transpose provisions of the Solvency II Directive, and potentially the Law on Bankruptcy and Liquidation of Banks and Insurance Companies. Project implementation and the completion of this phase of the Strategy will be achieved by fully aligning the domestic legal framework with the Solvency II Directive, following the manner and deadlines defined by the National Program for Adoption of the Acquis of the European Union.[42]

Several entities are or expected to be involved in the implementation process of the Directive, alongside the National Bank of Serbia and insurance/reinsurance companies. These include the Ministry of Finance of the Republic of Serbia, the Deposit Insurance Agency, the Association of Serbian Insurers, etc. A facilitating factor in adopting the achievements of contemporary European regulations is the fact that most domestic entities have parent companies in EU countries. Due to group supervision regulations and internal analysis needs, these entities are already obligated to perform calculations and report to their parent companies under the Solvency II framework. In addition to gaining practical experience with the Directive's requirements and understanding the application effects, foreign-owned domestic companies benefit from knowledge transfer, which will greatly simplify the process of introducing the Directive in our market.

According to data for the end of 2022, the available solvency margin for the entire market, based on the requirements of the current regulations corresponding to the Solvency I framework, is 49.7 billion RSD, while the required margin is 23.7 billion RSD. This translates to a solvency ratio for the market (available solvency margin divided by required solvency margin) of 209.70%. The solvency ratios for companies primarily engaged in non-life insurance, life insurance, and reinsurance are 206.4%, 210.6%, and 231.1%, respectively.[43]

[42] National Bank of Serbia, Strategy of Implementation of Solvency II in the Republic of Serbia, May 2021.
[43] National Bank of Serbia, Insurance Sector in the Republic of Serbia. Report for 2022

We conclude that the insurance market in Serbia is presently highly capitalized. Considering the experiences of countries in the region and the unofficial results of QIS studies in Serbia, we anticipate a decrease in solvency ratios upon full adoption of the Solvency II Directive. However, this indicator is expected to remain stable for the overall market and most entities, ensuring a high level of protection for policyholders' rights.

The QIS studies have identified systemic challenges that the domestic insurance sector needs to address in the coming period. They also highlight desirable directions for individual companies' business profiles to ensure adequate risk and capital management. A significant change in the balance sheet structure is foreseen for calculating solvency capital. This will likely lead to a decrease in technical provisions and an increase in capital, accompanied by a parallel rise in the required solvency capital. Initial calculations also draw attention to the high participation of the counterparty risk module. This module does not play a significant role in the risk profile of the EU market, where market risk tends to dominate. A common characteristic is that the insurance risk module absorbs less than half of the capital requirement. This underscores the comprehensiveness, significance, and advantage of transitioning to the new concept of risk identification and measurement.

In addition to adopting the Solvency II Directive, which is currently undergoing reform even within the EU, a particular challenge for domestic companies will be operating under the freedom to provide services. This allows subsidiaries of companies from other member states to be established in any member country of the single market, further complicating the position of domestic entities. The adoption of IFRS 17 and other achievements of contemporary European regulations will occur alongside these processes.

IV. Challenges of Implementing Solvency II

Based on the experiences of European countries during the Solvency II Directive adoption process, particularly neighboring countries and those with a similar level of economic development, along with the specificities of Serbia and its domestic insurance market, and the results of the initial quantitative impact studies, a number of systemic challenges have been identified. These challenges need to be addressed or adapted during the harmonization process.

1. Segmentation into Lines of Business and Identifying Contract Boundaries

The first step in calculations under the new framework is business segmentation. However, unlike the current regulations which prescribe portfolio segmentation based on insurance types and tariffs, Solvency II Directive calculations

require dividing the portfolio into pre-defined lines of business. *The challenge for domestic companies lies in the fact that this is not a direct mapping of insurance types onto lines of business; it is a different perspective.* The division into lines of business reflects to a significant degree the nature and specificities of the insurance market in Western countries, where life and personal insurance lines are highly prominent. This, in addition to the inherent difficulties and dilemmas caused by the different portfolio segmentation approaches in the current and new frameworks, presents technical problems for entities. They need to find a way to identify individual tariffs or tariff groups within their databases and extract them according to Solvency II specifications. This is particularly complex due to dealing with historically long data series recorded under the previous framework. Another issue is that some product features crucial for segmentation are recorded and identified through loadings, discounts, or other adjustment factors at the tariff group level. Even at the lowest level of recording, identifying them becomes complicated.[44] Beyond portfolio segmentation, determining contract boundaries also poses a challenge. The Solvency II Directive provides clear definitions for contract boundaries. However, previous regulations treated contract duration differently. Consequently, there is a question of how accurately companies can identify actual contract boundaries when it comes to historical data necessary for calculations. This is especially pertinent considering the existence of specific contracts in practice where boundaries are essentially prolonged but are still systematically recorded as standard contracts. Domestic insurance companies are expected to modify their products and business recording systems in the coming period to enable portfolio segmentation according to the rules prescribed by the forthcoming legal framework and to support more accurate identification of contract boundaries.

2. Changed Balance Sheet Structure for Solvency Capital Requirement Calculations

When calculating solvency requirements under the new regulatory framework, significant changes to the balance sheet structure will occur, impacting both assets and liabilities, notably capital. It is crucial to emphasize that this balance sheet is exclusively for solvency ratio calculations, while regulatory requirements and existing financial reporting valuation and recording principles remain in force. This differentiation might cause confusion and potentially influence the risk appetite and business decisions of stakeholders involved with insurance/reinsurance

[44] Challenges identified so far that impact the calculation and meaning of the calculation include: segmentation of accident insurance and voluntary health insurance, in terms of separating insurance pertaining to work-related injuries and employee treatment, joint consideration of insurance line 08 (Property Insurance against Fire and Allied Perils) with the heterogeneous line 09 (Other Property Insurance), treatment of annuity claims, which mainly stem from automobile liability, as part of life insurance, etc.

undertakings. The process of discounting, abstracting outstanding premiums, and acquisition costs can substantially reduce technical reserves under Solvency II compared to current practices. This may lead some stakeholders to assume that the current financial reporting process overstates liabilities or underestimates realized profit, possibly triggering capital flight. However, it's essential to view this solely as a method for determining available solvency capital, crucial for meeting the significantly heightened solvency capital requirements. A market-consistent valuation of assets and liabilities will also pose a challenge, particularly in limited and shallow markets. The new framework requires valuation based on fair market value, abandoning the concept of historical cost, depreciated value, or similar methods. To effectively manage risk, establishing term and currency matching between assets and liabilities will grow increasingly important.[45] The success of this matching will be precisely quantified, replacing the previous qualitative target. Finally, there will be a portfolio shift away from products with guarantees and towards products where client entitlements fluctuate based on market indicators. This will require a distinct group of professionals who are simultaneously knowledgeable about the Directive, risk management principles, portfolio characteristics, the impact of risk correlation, and who can analyze both sides of the balance sheet concurrently. These individuals, or entire organizational units performing this function, will need to be integrated into almost all business processes of insurance companies. Developing and retaining such talent, along with sophisticated IT solutions, will be crucial for making risk management more up-to-date and efficient.

3. High Costs of Implementing and Maintaining Systems and Business Processes

The experiences of countries that have already adopted the Solvency II Directive highlight the significant costs associated with implementing and maintaining the systems, business processes, and personnel needed to comply with the revised regulations. Insurance entities will almost certainly face the need to implement modern risk management and actuarial calculation software due to the significantly more complex calculations and extensive reporting requirements, even if they haven't already done so. This demand for a new breed of professionals arises from the need to understand complex risk management processes and the impact of various business segments on both sides of the balance sheet. These individuals will require expertise in risk management principles, actuarial science, and the ability to make informed decisions on portfolio composition, product development, investment strategy, and

[45] Grundl, H., Dong, M. I., & Gal, J., „The evolution of insurer portfolio investment strategies for long-term investing", OECD Journal: Financial Market Trends, 2016, pp. 22–27.

other key areas.[46] Retaining these skilled professionals will be a challenge due to competition within the insurance sector, as well as the growing demand from the IT sector. The IT industry needs such personnel to develop sophisticated solutions for calculations, record-keeping, tracking, and analysis according to modern European standards. This increased competition is likely to drive up personnel costs, which may be partially passed on to policyholders through higher premiums. While the new regulatory framework enhances customer security and improves the overall quality of insurance products, it may come at a cost to affordability for some customers.

When considering future regulatory changes, and keeping in mind that we already have high levels of security, competent legislative bodies should use cost-benefit analysis to assess the justification for a marginal increase in security at the expense of marginal cost. The principle of proportionality, on which the Directive is based, dictates that the implemented measures should correspond to the nature of the risk. This means that relatively smaller entities are expected to require a significantly lower resource expenditure in this process. However, it is not uncommon for smaller companies to be unable to afford the high costs of harmonization and ultimately be forced to liquidate. The application of internal models for calculating solvency capital requirements, which should better reflect a company's risk profile and typically results in a lower capital requirement, is a privilege reserved only for large and well-resourced entities. This is due to the complexity of building and validating such calculation models.[47]

4. Changes in Insurance Company Portfolio Structure

Companies primarily engaged in life insurance have a strong incentive to manage their insurance portfolio structure to reduce capital requirements. The framework provides capital benefits for entities whose business is based on products that do not include high guaranteed benefits for policyholders. Traditional life insurance products with a savings component are more penalized from a risk perspective, particularly market risk compared to product risk and modern unit-linked products. Since unit-linked products have little to no guarantees, and the product value directly depends on the value of the investment unit, almost all the risk is transferred to the

[46] „Allianz", „Izvješće o solventnosti i financijskom stanju za 'Allianz Hrvatska' d.d. za poslovnu godinu 2022.", 2023, pp. 17–45.

[47] Additional pressure comes from companies from other EU member states that establish subsidiaries in new member countries under the "freedom to provide services" principle, thus intensifying competition. This is confirmed by the experience of Croatia, where several smaller companies were liquidated or merged after the introduction of Solvency II, precisely due to the high costs and the inability to withstand the competitive pressure. An analogous process can be expected in our market after the adoption of the Directive and other EU legislation.

policyholder. This relaxes the obligations and capital requirements for the insurance company. This benefit has been recognized and heavily utilized by insurers in the EU, where sales of traditional products have nearly stopped or are offered with very low guaranteed technical interest rates. The extent to which this process will follow in our domestic insurance market also depends on the ability to deepen and activate the life insurance market, where individual sales have significantly decreased. On the other hand, group risk products sold through commercial banks are experiencing expansion. The success of insurers in terms of capital requirements will also depend on their ability to achieve the right balance between risk-component products and savings-component products, in order to level out and negate the impact of mortality stress and longevity stress. Finally, a trend towards shorter contracts is expected, as a longer time horizon increases the potential negative impact on net equity due to stresses, and consequently, on the capital requirement.[48]

5. Sensitivity of Calculations to Risk-Free Interest Rate Fluctuations

Depending on the movement of risk-free interest rates, entities may experience year-to-year instability in the calculated solvency ratios. This problem can be particularly pronounced in the case of falling interest rates, which lead to an increase in the value of liabilities, assets, and also the risk margin (as part of the technical provisions).[49] In macroeconomic conditions with declining yields, the cost of capital rate used in the risk margin calculation (currently at 6%) can be particularly burdensome for insurance companies. This rate is quite high considering market interest rates and cannot be mitigated by the discounting effect of risk-free interest rates. This is precisely why the current cost of capital rate is subject to reform within the Directive's provisions. In addition to achieving maturity matching between assets and liabilities, one potential solution to mitigate the volatility of solvency ratios is the introduction of a fluctuating cost of capital rate, depending on the value and movement of risk-free yields. Otherwise, there is a risk that some entities that meet solvency requirements in one year could fall below regulatory thresholds due to short-term financial market disruptions and come under regulatory measures. This could trigger a cyclical effect of lost public and investor confidence, leading to capital flight. It can be concluded that the new regulatory framework is more suited for a macroeconomic environment with higher and stable interest rates,[50] which ensures

[48] A. Clapis, M Fruzzetti, A. Mapelli, „Effectiveness of capital light traditional products, and how they might evolve with the arrival of IFRS 17", 2024, pp. 1–10.

[49] Jelena Kočović, Marija Koprivica, Blagoje Paunović, „Initial effects of Solvency II implementation in the European Union", 2017.

[50] F. Škunca., „Analiza ulaganja osiguratelja u Solvency II svijetu", *Hrvatski časopis za osiguranje*, br. 1, 2019, pp. 55-69.

a higher level and continuity of achieved solvency levels. A particular challenge for our market will be the construction of the yield curve for the Serbian Dinar, given the limited depth and liquidity of the financial market. Since the maturities of government bonds have significant gaps (missing maturities for specific years), this will require substantial interpolation or extrapolation to construct the yield curve. This increases the risk of deviations from objective values, as well as significant changes in rates from year to year.[51]

6. Impact of Reinsurance Mechanisms on Solvency Capital Requirements

Under the Solvency II framework, reinsurance agreements have a significant and multifaceted impact on the solvency calculation. This influence is primarily felt in two modules: Insurance Risk Module where the reinsurance effect reduces risk and Credit Risk Module where the reinsurer, as the other contracting party, carries its own probability of default, thereby contributing to an increase in risk and the total solvency capital requirement. The net impact of these opposing influences on the calculation depends on the type of reinsurance program and the creditworthiness of the reinsurer. Experience from the EU market shows that the positive effect of the reinsurance mechanism is achieved with reinsurers that have at least an A credit rating. The results of the QIS 5 study in the EU market revealed that replacing a reinsurer with an A credit rating with a reinsurer with a BB credit rating increases the probability of bankruptcy by as much as 23 times. In the case of a replacement with a BBB credit rating reinsurer, the probability would rise by 380%.[52] The first quantitative impact studies conducted in our country revealed a significantly higher contribution from the credit risk module in the total risk compared to the EU market. One reason for this significant credit risk module contribution is the specific nature of domestic reinsurance regulations, the number, and creditworthiness of domestic reinsurance companies, and the regulator's intention to assess the potential credit risk problem through prohibiting the "look-through" approach. This approach disregards the creditworthiness of the foreign reinsurer, who is essentially the bearer of the transferred risk. The Serbian Law on Insurance stipulates that reinsurance, except in exceptional cases, must be conducted through a domestic reinsurance company. In practice, due to the limited risk-bearing capacity of domestic reinsurers, which is even lower than the capacity of cedants, the domestic reinsurer typically retains only a small portion of the risk. The dominant risk is then ceded abroad to one or more foreign reinsurers. If the current reinsurance regulations remain in place when the Solvency II Directive

[51] Jelena Kočović, Marija Koprivica., „Izvođenje krive prinosa za vrednovanje obaveza iz osiguranja u regulatornom okviru Solventnost II", 2019, pp. 19–21.
[52] SCOR, „Life (re)insurance under Solvency II", April 2012.

is implemented, it could lead to a significantly higher contribution from credit risk to the overall risk profile compared to EU market standards. This is because it will be difficult, even in the long term, to find a domestic reinsurer with an A credit rating or higher in our market, which is necessary for a positive net impact of the reinsurance mechanism. Some potential solutions include liberalizing the reinsurance regulations and allowing for direct reinsurance abroad, permitting consideration of the creditworthiness of foreign reinsurers, or reinsurance through subsidiaries of foreign companies established in Serbia. Undoubtedly, this is currently a systemic challenge whose solution will depend on the strategic development direction chosen by the regulator. Individual companies will focus on optimizing their reinsurance contract portfolios by choosing an appropriate combination of contracts that align with their risk appetite and ensure an optimal impact on solvency ratios.

7. Treatment of Euro-Denominated Government Bonds or Bonds with Currency Clause

In an effort to achieve currency matching between assets and liabilities, insurers invest a significant portion of their funds in Euro-denominated government bonds or bonds with a Euro-linked currency clause. This is particularly characteristic of companies outside the Eurozone, especially in the Balkans, where populations are accustomed to and prefer pegging their rights to a foreign currency value. However, this practice raises questions about the applicability of certain Solvency II provisions in these countries. The strict capital requirements under the framework could put companies in this region at a disadvantage. According to the original intent of the new solvency regulation, Euro-denominated or Euro-linked government bonds receive less favorable treatment compared to government bonds in the domestic currency. They are treated similarly to corporate bonds, where the credit rating is considered. For government bonds, this implies using the country's credit rating, which can be problematic for countries with low credit ratings, like Serbia with its current BB+ rating. For example, in the case of Croatia, which previously held a BB rating, for every 100 currency units invested in Euro-denominated or Euro-linked government bonds, an additional 73 units of capital had to be set aside. This represents an exceptionally high capital requirement. To mitigate the impact of these measures on capital requirements, Croatia negotiated with the EU for a transitional period from 2015 to 2019, gradually increasing the application of this capital requirement from 0% to 100% in 2019.[53] Since the purpose of investing in Euro-linked bonds is to achieve currency matching with liabilities, not speculation, there is a strong justification for preferential treatment of this form of investment. A significant portion of domestic insurance companies' investment assets are held in government bonds,

[53] T. Račić Žlibar, „Solventnost II je i sklizak pod", *Svijet osiguranja*, no. 7, 2015.

according to recent data: 57.4% of technical provisions for non-life insurance and a staggering 89.5% of technical provisions for life insurance.[54] A substantial portion of these bonds are Euro-linked. Therefore, it is crucial to determine how the Solvency II Directive provisions will be applied in Serbia. Through negotiations, it is important to secure a transitional period similar to Croatia's harmonization path, specifically for the regulations governing the treatment of foreign currency-linked government bonds.

V. Conclusion

The recognition that insurance companies, as financial institutions engaged in underwriting, are not solely exposed to insurance risk, but also significantly impacted by market risks, credit risks, and operational risks, has led to the implementation of the Solvency II Directive in the EU market since January 1, 2016. This directive introduces new regulations for calculating the solvency of insurance and reinsurance companies, replacing the previous framework known as Solvency I, which had been developed since the 1970s and comprised a total of 14 directives. Beyond offering a more holistic view of overall risk, the new regulatory framework emphasizes individualization at the entity level, linking it to specific parameters that characterize its operations. This approach incentivizes risk management practices aimed at reducing the overall risk profile and consequently the capital requirement. Specifically, instead of solely considering premiums and damages, or mathematical reserves in life insurance, as measures of risk, the new framework evaluates a plethora of factors. These include business segmentation, contract term, maturity of insurance premiums, sums insured, investment structure, credit standing of creditors, impact of stress tests on outcomes, internal statistics, and experiential realization of parameters crucial for calculation, among others. Consequently, under this new framework, two insurance companies with nearly identical volumes of business, measured by insurance premiums, can exhibit significantly different levels of solvency based on the efficacy of their risk management practices. This discrepancy arises from their adept utilization of elements prioritized by the new framework, notably the impact of diversification. The overarching objective of this new regulation is to enhance the protection of insurance beneficiaries in the broadest sense.

The transition of companies in the EU to Solvency II entails considerable implementation and maintenance costs. The new regulation introduces significantly more complex calculations and imposes stringent requirements on both the quantity and quality of reporting. This necessitates substantial investments in IT systems, the development of new business processes, and the recruitment and retention of skilled personnel. Despite the application of the principle of proportionality, which

[54] National Bank of Serbia, „Framework for Implementation of the Third Quantitative Impact Study of Solvency 2 on Insurance Sector in the Republic of Serbia ", 2023.

dictates that the extent of efforts to implement legal provisions should align with the volume and nature of the risk, along with the obligation to meet minimum standards, there has been a restructuring of the market. This has manifested in mergers and acquisitions of smaller entities by financially stronger counterparts. The solvency ratio has been maintained at a high level even after the transition to the new regulation, with the vast majority of entities recording solvency ratios above 150%, of which a significant number are above 200%. The highest levels of solvency ratios are recorded by the companies in Germany, where a median ratio of 299% was recorded, while this indicator is the lowest in Iceland, where it is at the level of 157%. The countries of the former Yugoslavia, now EU members, Slovenia and Croatia, achieved median ratios of 229% and 170%, respectively. How much the transition from Solvency I to Solvency II has significantly changed the way of measuring risks, by expanding the scope of observation from insurance risk only to other risk modules, is evidenced by the fact that according to the results for all EU Member States, market risk, which was not even measured according to the previous regulation, is individually the most dominant item, the risk module, in the total required solvency capital with a share of 56% with non-life insurance companies, up to over 70% in composite companies, i.e. reinsurance companies. The future of the EU insurance market entails a reform of the Solvency II Directive. Originally, the plan included revising certain segments after five years of its introduction, taking into account the effects of its implementation. However, this process has been delayed and slowed down due to the global pandemic. Nevertheless, reformed provisions are anticipated to come into effect in 2025. The reform will prioritize various aspects, including reducing the cost of capital for calculating the risk margin, constructing a yield curve, providing preferential treatment for long-term capital investments covering long-term liabilities, adjusting for volatility, and examining the impact of climate change through the Own Risk and Solvency Assessment (ORSA) report.

The legal framework governing insurance activity in the Republic of Serbia, based on the Insurance Law, represents a hybrid system. It incorporates most provisions of the Solvency I framework, but also introduces elements of the Solvency II Directive, particularly in qualitative requirements. Consequently, colloquially, it is often referred to as Solvency 1.5. The process of implementing Solvency II in Serbia is guided by the Solvency II Implementation Strategy in the Republic of Serbia, adopted by the National Bank of Serbia, aligning with the country's EU accession timeline. The Serbian insurance market has successfully navigated the anticipated phases of implementation. However, quantitative impact studies are ongoing to pinpoint the scope and nature of requirements under the new regulation, as well as the challenges associated with harmonization. This will enable both the regulator and insurance/reinsurance companies to adapt in a timely manner. The final phase of the Strategy involves harmonizing laws. Drawing from the experiences of countries that

have undergone similar harmonization processes, it is crucial to negotiate a gradual, phased implementation of certain provisions of the new regulatory framework.

The solvency ratio in the Serbian insurance market, measured by the ratio of available and required solvency margin according to the latest data calculated under Solvency I, stands at 209.70%. This reflects a highly capitalized sector. However, initial quantitative studies indicate a potential decline in this ratio under the new legislative standard for solvency calculation, albeit remaining at a satisfactory level on average. To effectively prepare the domestic insurance sector for the full adoption of the EU acquis, which encompasses regulations beyond the Solvency II Directive such as IDD, GDPR, IFRS, and the freedom to provide services across all member states, countries, regulators, and insurance companies must collaborate closely. This collaboration is crucial not only to meet minimum requirements but also to enhance entities to a level where they can withstand heightened competitive pressures. Achieving this goal necessitates addressing several systemic challenges. These include resolving issues related to the treatment of government bonds denominated in euros or with a currency clause, optimizing the reinsurance mechanism, adapting operations to enable segmentation in lines of business according to the new regulation, and clearly defining contract boundaries. Additionally, restructuring the portfolio to increase the share of products with preferential treatment and maximizing the effect of diversification is essential along with other necessary processes.

The Solvency II Directive offers clear guidelines for implementation, and Serbia benefits from a significant advantage compared to other countries at a similar stage of development: an extended timeframe for adoption. This prolonged period presents an opportunity to effectively learn from the experiences of other countries. The future success of Serbia's insurance market depends on its capacity to adapt to the new regulations and surmount these systemic challenges in the years ahead.

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ZAPOSLENI KAO TRŽIŠNI SEGMENT I BREND AMBASADORI DRUŠTVA ZA OSIGURANJE

PREGLEDNI RAD

Apstrakt

Uloga zaposlenih izuzetno je važna kao podrška razvoju svake kompanije. Naročito je važna činjenica kakav odnos zaposleni imaju prema kompaniji u kojoj rade i da li su oni prvi ti koji rado kupuju proizvode ili usluge matične kuće. Na taj način proizvod ili usluga dobija veoma važnu potvrdu u pogledu kvaliteta i kao takav ima prednost na tržištu. U radu je prikazan jedan od uspešnih primera odnosa zaposlenih prema usluzi osiguranja jedne od takvih, uspešnih kompanija, lidera na domaćem tržištu osiguranja, koja je razvila kombinovano osiguranje domaćinstva – paket „čuvar kuće". U radu je korišćen Computer Assisted Web Interview (CAWI) metod istraživanja, a učestvovalo je 37,1% zaposlenih koji su se izjašnjavali o novokreiranoj polisi osiguranja, odnosno novoj usluzi. Dobijeni rezultati zasnovani na manjem uzorku pokazali su da postoji skoro potpuna upoznatost zaposlenih sa polisom osiguranja „čuvar kuće" – 99%, te da je stepen zadovoljstva ispitanika zaposlenih u Kompaniji po svim aspektima polise iznad 75%.

Ključne reči: ljudski kapital; stavovi zaposlenih; osiguranje; polisa osiguranja; kombinovano osiguranje domaćinstva; interna komunikacija; korporativna komunikacija; tržišni segment; brend ambasadori.

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[4] Nebojša Žarković, *Pojmovnik osiguranja*, Skonto, Novi Sad, 2013, str. 268.
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I. Uvod

Osiguranje je privredna, uslužna delatnost koja štiti čoveka i njegovu imovinu od posledica dešavanja brojnih opasnosti i ima veliku ulogu kako unutar jedne zemlje tako i na međunarodnom nivou.[4] Nastalo je kao potreba da se poslovno okruženje i uslovi privređivanja, kao i život i rad ljudi, u uslovima velikih izazova i promena osiguraju od štetnih događaja. Nastanak štete odnosno štetnog događaja ne može se sprečiti osiguranjem, ali se može ostvariti ekonomska zaštita, što je i razlog postojanja osiguranja.[5] Nameće se zaključak da je u potpunosti opravdana tvrdnja da osiguranje predstavlja ekonomsku nužnost za svakoga ko vodi računa o bezbednosti u poslovanju i svakodnevnom životu.[6]

Osiguranje je multidisciplinarna nauka, istovremeno ekonomska, pravna i tehnička. Naime, zavisno od toga iz kog se aspekta posmatra sistem osiguranja, osiguranje je moguće definisati na različite načine. Ekonomski aspekt podrazumeva zaštitu imovine osiguranika (posredna i neposredna), zatim razvojnu, socijalnu i druge uloge. Pravni aspekt podrazumeva uređenje pravnih odnosa od zaključenja polise osiguranja i plaćanja premije do prijave i isplate šteta, dok tehnički aspekt uređuje funkcionisanje osiguranja kroz procenu rizika, obračun premije, uz upotrebu matematičko-statističkih metoda.[7] Time se može zaključiti da osiguranje, kao posebna delatnost, ima svoju specifičnu metodologiju koja se zasniva na ključnim elementima, a to su rizik, premija osiguranja i naknada iz osiguranja (odšteta).[8]

Osiguravajuće kuće na principu uzajamnosti i solidarnosti obezbeđuju ekonomsku zaštitu imovine i lica od mogućih rizika. Osnovna obaveza osiguranika je da plati premiju osiguranja, a osiguravača da u slučaju nastanka osiguranog slučaja nadoknadi štetu ili isplati osigurani iznos. Osiguravanjem imovine i lica stiču se sredstva i rezerve iz premija osiguranika,[9] u skladu s ekonomskim interesima osiguranika i osiguravajućih organizacija. Te organizacije obavljaju poslove osiguranja imovine i osiguranja života od opasnosti, smrti ili nesrećnog slučaja koji može da izazove trajan ili privremeni gubitak radne sposobnosti, kao i poslove osiguranja u slučaju

[4] N. Žarković, str. 268.

[5] N. Žarković, str. 603.

[6] Milan Bradić, „Analiza tržišta osiguranja na teritoriji Srbije za period od 2014. do 2018. godine", u: R. Doroslovački et al (ured.), *Zbornik radova Fakulteta tehničkih nauka*, god. 34, br. 05, Novi Sad, 2019, str. 844-847.

[7] Dragan Popović, *Model unapređenja kvaliteta procesa životnog osiguranja*, doktorska disertacija, Univerzitet u Novom Sadu, Fakultet tehničkih nauka, departman za industrijsko inženjerstvo i menadžment, Novi Sad, 2018, str. 75-102.

[8] Boris Marović, Bogdan Kuzmanović, Vladimir Njegomir, *Osnovi osiguranja i reosiguranja*, Princip Press, Beograd, 2009, str. 25.

[9] Antonije Tasić, *Osnovi osiguranja*, IŠP Privredno finansijski vodič, Beograd, 1976, str. 27: „Premija je, kao rizik, bitan element osiguranja. To je onaj iznos koji se uplaćuje u osiguravajući fond… Premija je, moglo bi se reći, cena rizika".

doživljenja. Iz navedenih razloga osiguranje je delatnost od posebnog nacionalnog interesa, koja za svoje poslove stiče sredstva uplatom premija osiguranja, odnosno reosiguranja i početnim rezervama. Dakle, možemo zaključiti da osiguranje obavlja važnu društvenu funkciju očuvanja imovine i lica.[10]

Osiguravajuće kuće na principu uzajamnosti i solidarnosti obezbeđuju ekonomsku zaštitu imovine i lica od mogućih rizika. Jedno od takvih, uspešnih društava za osiguranje jeste kompanija za koju sva istraživanja tržišta ukazuju da je najjači srpski brend u osiguranju. Prema podacima Narodne banke Srbije, Kompanija je vodeća u segmentu svih osiguranja osim životnih.[11] Podaci istraživanja o imidžu osiguravajućih kuća koje je realizovano 2016. godine[12] govore da je Kompanija u domenu pružanja usluga osiguranja najpoznatija osiguravajuća kuća na koju građani Srbije prvo pomisle (50,3%), dok su ostale osiguravajuće kuće znatno ređe kao prvopomenute, pri čemu samo 1,3% stanovnika ne zna ni za jednog pružaoca usluge osiguranja. Kada je reč o ukupnom spontanom prisećanju pružalaca usluge osiguranja (nakon potpitivanja), rezultati su još bolji, pa Kompanija ostaje čvrsto na prvom mestu sa 89,3% stanovnika koji znaju za to društvo kao pružaoca usluge osiguranja, dok 97,8% ispitanika zna za Kompaniju. Kao lider na tržištu, Kompanija se odlikuje stalnim poboljšanjem kako postojećih tako i kreiranjem novih usluga osiguranja shodno potrebama savremenog, digitalnog društva. Jedna od takvih usluga je i kombinovano osiguranje domaćinstva – paket „čuvar kuće". Reč je o polisi osiguranja koja je za veoma kratak period naišla na odobravanje velikog broja klijenata Kompanije. Prema zvaničnim podacima Kompanije, prodaja paketa „čuvar kuće" beleži kontinuiranu tendenciju rasta i po broju prodatih polisa i po visini naplaćene premije osiguranja.[13] Prema podacima u 2020. godini u odnosu na 2019. godinu, za broj prodatih polisa indeks je bio 117,8, a za zatvorenu premiju 121,6. Tendencija rasta je nastavljena i u 2021. godini, te je tako za period od prvih šest meseci broj prodatih polisa u odnosu na isti period 2020. godine porastao, indeks je 122,2, dok je indeks za zatvorenu premiju u istom periodu 124,1.

Zaposleni su posebna interesna grupa čiji uticaj može biti izuzetno snažan, zato je važno proveriti njihovo mišljenje u vezi sa proizvodima i/ili uslugama kompanije. U tom kontekstu uloga zaposlenih je izuzetno značajna. Oni su specifičan tržišni segment i kao takvi značajni su ne samo za kreiranje pozitivne slike o brendu, već igraju dragocenu ulogu i kao kupci koji imaju mogućnost da među prvima steknu korisničko iskustvo. Zbog toga je važno ispitati njihov stepen informisanosti o novom proizvodu. Stoga, cilj istraživanja je da pokaže da su stavovi zaposlenih važni

[10] N. Žarković, str. 172.

[11] Prema podacima sa zvaničnog sajta Narodne banke Srbije https://www.nbs.rs/export/sites/NBS_site/documents/osiguranje/izvestaji/izv_III_2022.pdf (datum pristupa: 16. 4. 2023)

[12] Stav građana Srbije prema tržištu osiguranja i percepcija Kompanije, istraživanje Ninamedia, Novi Sad, 2016, neobjavljen materijal.

[13] N. Žarković, str. 422.

Kompaniji i da je, s druge strane, važno da zaposleni poznaju ponudu kuće u kojoj rade te da visoko vrednuju kvalitet te ponude, sve na primeru novog proizvoda „čuvar kuće", koji je Kompanija kreirala 2016. godine.

II. Zaposleni kao značajan tržišni segment

U ekonomiji znanja ljudski kapital je pokretač intelektualnog kapitala i čini osnovu tržišne vrednosti poslovnih subjekata. Tačnije, ljudski kapital predstavlja sposobnost zaposlenih da koriste svoje kompetencije, tj. znanje, veštine i iskustvo, u cilju ispunjavanja očekivanja kupaca, tj. stvaranja dodatne vrednosti za preduzeće.[14] U tom kontekstu uloga interne komunikacije od izuzetnog je značaja jer zaposlene jasno usmerava ka ciljevima organizacije.[15] Osim znanja, iskustva i veština, ljudski kapital predstavlja i: inovativnost, kreativnost, fleksibilnost, tolerantnost, upornost, motivisanost, zadovoljstvo, sposobnost timskog rada, sposobnost učenja, sposobnost rešavanja problema, kritičko promišljanje, lojalnost, spremnost za formalni trening i kontinuiranu edukaciju. Dobra interna komunikacija osnov je za uspeh svake organizacije i predstavlja važan deo korporativne komunikacije.[16] Važno je napomenuti da zaposleni sami po sebi nisu ljudski kapital preduzeća, nego to postaju onda kada svoje znanje i sposobnosti transformišu u dela koja doprinose stvaranju (materijalne ili nematerijalne) vrednosti za preduzeće (dodata vrednost, novi klijenti, bolji imidž, uspešnija organizacija, profitabilan proizvod, novi proizvod...).

Ljudski kapital je individualan, tj. nije u vlasništvu poslovnog subjekta i pojavljuje se kao generator inovativnih potencijala poslovnih sistema. Tačnije, upravo je skriveno (*tacitno*) znanje, koje zaposleni sa gorenavedenim karakteristikama („umni radnici") poseduju i koje je gotovo nemoguće kopirati, najznačajniji izvor konkurentske prednosti preduzeća. Stoga, ukoliko preduzeće želi da zadrži kompetencije zaposlenih unutar preduzeća, neophodno je da ih sačuva kao informacije u bazama podataka ili da ih ugradi u nove metode, nove proizvode i usluge, nove organizacione strukture, odnosno da u što većoj meri transformiše to skriveno znanje u eksplicitno, tj. materijalizovano znanje koje postaje vlasništvo preduzeća i pretvara se u strukturalni kapital.[17] Zato se preduzeća širom sveta trude da profesionalne kompetencije svojih zaposlenih pretvore u kolektivno znanje koje ostaje u vlasništvu kompanije i kada neki od zaposlenih odu.

[14] Stefan Alimpic, „Intellectual capital aimed at creating value and competitive advantage of enterprises", in: A. Jaki, B. Mikula (ed.), *6th International Scientific Conference: „KNOWLEDGE, ECONOMY and SOCIETY – Managing organizations: Concepts and their applications"*, Cracow, Poland, 2014, str. 203–212.

[15] Milica Slijepčevic, Ana Bovan, Ivana Radojevic, „Internal communications as a factor of company's efficiency", *Marketing*, Vol. 49, No. 2, 2018, str. 124–143.

[16] Milica Slijepčevic, Milica Kostic, Ivana Radojevic, „Modern model of integrated corporate communication", *Journal of Innovative Business and Management*, 5-9, Vol. 10, No. 1, 2019, str. 5–9.

[17] Dragomir Sundać, Nataša Švast, *Intelektualni kapital – temeljni čimbenik konkurentnosti poduzeća*, Ministarstvo gospodarstva, rada i poduzetništva, Zagreb, 2009, str. 35, 42, 43, 61 i 62.

III. Osiguranje kao zaštita

Reč „osiguranje" (nem. *Versicherung*, engl. *insurance*, fr. *assurance*) u najširem smislu označava sigurnost, poverenje u nešto, zaštitu, obezbeđenje, zajamčenost. Drugim rečima, smisao te reči upućuje na svrhu osiguranja koja se sastoji u pružanju neke sigurnosti.[18]

Delatnost osiguranja tokom svog razvoja imalo je više definicija, ali su se sve uglavnom svodile na njegovu osnovnu ulogu zaštite imovine i lice. Tako značajan broj autora u oblasti osiguranja smatra da ono predstavlja zaštitu materijalnih i nematerijalnih potreba pojedinaca i privrednih subjekata, koje nastaju slučajno i mogu da se procene.[19] Takođe, Karl Borch definiše predmet osiguranja prema podeli na tri vrste ili klase osiguranja i objašnjava da iako svaka zemlja ima svoje specifičnosti, on je u osnovi određen posebnostima životnog, poslovnog osiguranja i osiguranja domaćinstava.[20]

Međutim, osiguranje je trenutno preraslo klasične podele osiguranja kao čisto ekonomske, tehničke ili pravne naučne discipline. Osiguranje danas predstavlja objedinjenu i inovativnu kategoriju nauke i prakse, tj. kombinaciju društvenih, ekonomskih, tehničkih, tehnoloških i jezičkih nauka u istom momentu. Prihvatanje osiguranja kao „inovativne kombinacije najboljeg iz svih nauka sa kojima se dodiruje", te primenom u praksi, dobija se neverovatan rezultat – poboljšanje postojećih usluga i kreiranje novih usluga osiguranja shodno potrebama savremenog, digitalnog društva.[21]

Jedna od takvih usluga je i kombinovano osiguranje domaćinstva – paket „čuvar kuće". U radu se ta usluga navodi kao usluga u vezi sa kojom su se izjašnjavali zaposleni u osiguravajućoj kući koja ju je lansirala. Utvrđivano je da li su zaposleni i u kojoj meri upoznati sa uslugom „čuvar kuće" i kakav je njihov stav u pogledu kvaliteta same usluge. Cilj istraživanja je da pokaže da su stavovi zaposlenih važni Kompaniji i da je s druge strane važno da zaposleni poznaju ponudu kuće u kojoj rade i da visoko vrednuju kvalitet te ponude, sve na primeru novog proizvoda „čuvar kuće".

IV. Osnovne informacije o paketu „čuvar kuće"

Paket „čuvar kuće" na krajnje jednostavan način obezbeđuje svojim klijentima osiguravajuće pokriće:

[18] Preuzeto sa sajta: *www.osiguranje.srb/pojam-i-znacaj-osiguranja* (datum pristupa: 17.08.2021)

[19] George E. Rejda, *Principles of Risk management and Insurance*, Addison Wesley, New York, 2011, str. 20.; Jelena Kočović, Predrag Šulejić, Tatjana Rakonjac-Antić, *Osiguranje*, Ekonomski fakultet u Beogradu, Beograd, 2010, str. 38.; Emmett Vaughan, Therese Vaughan, *Osnove osiguranja i upravljanja rizicima*, Mate, Zagreb, 2002, str. 35.

[20] Karl Borch, *The Mathematical Theory of Insurance*, Champan and Hall, London, 1974. str. 71–73.

[21] Zorica Šipovac, „Obrazovanje u funkciji razvoja novih proizvoda u osiguranju u Republici Srbiji", u: B. Marović, M. Ćurković, Z. Filipović, N. Miljević (ured.), *29. Susret osiguravača i reosiguravača Sarajevo (SORS)*, Sveučilišna tiskara, Zagreb, 2018, str. 257-265.;

- nastanjenih objekata (kuća i stanova) uključujući ugrađene instalacije i opremu u njima;
- stvarī domaćinstva;
- odgovornosti članova domaćinstva u svojstvu privatnih lica u svakodnevnom životu i odgovornosti iz posedovanja nepokretnosti; i
- osiguranje članova domaćinstva od posledica nesrećnog slučaja (nezgode).

Pored navedenog, osiguranjem mogu biti obuhvaćene i: sanitarije, pomoćni objekti kuće i stvari u njima, zajednički delovi zgrade i umetnički predmeti.

Paket ,,čuvar kuće" pruža pre svega osiguravajuću zaštitu od standardnih, iskustveno najfrekventnijih rizika, koji mogu pogoditi jedno domaćinstvo: od požara, udara groma, oluje, grada, eksplozije, pada letelice, manifestacije i demonstracije, udara sopstvenog motornog vozila u osigurani građevinski objekat, izliva vode iz instalacija, provalne krađe i razbojništva, loma stakla i loma instalacija.

Pored napred navedenih rizika, usluga pruža mogućnost ugovaranja i dodatnih, poslednjih godina veoma učestalih rizika, koji su se dešavali na našem podneblju. To su pre svega rizici od zemljotresa i poplave i bujice.

Pored ta dva za klijente veoma interesantna rizika, Kompanija pruža mogućnost osiguravajuće zaštite i od rizika iznenađenja: pritiska snega, pada drveta, dima, obesti i vandalizma, atmosferskih voda, kao i udara nepoznatog motornog vozila, opšte odgovornosti i nesrećnog slučaja (nezgode) članova domaćinstva.[22]

V. Metodologija

1. Prikupljanje podataka i opis uzorka

Radi prikupljanja podataka neophodnih za istraživanje, korišćen je ne slučajni pogodni uzorak zaposlenih u Kompaniji. Njega su sačinjavali ispitanici različitog demografskog profila. Osnovni metod istraživanja u ovom radu bila je anketa koju su ispitanici popunjavali putem interneta. Naime, u radu se koristio CAWI metod, koja predstavlja kvantitativno istraživanje u obliku kompjuterski podržanog veb-anketiranja. Taj metod je izabran zato što ispitanici nisu imali dovoljno vremena da u neposrednom kontaktu daju odgovore na sva planirana pitanja, a takođe i stoga što bi se njegovom primenom došlo do preciznijih odgovora koje je kasnije lakše upoređivati. Istraživanje je sprovedeno na uzorku od 615 elementarnih jedinica. Od tog broja 37,1% ispitanika je muškog pola, a 62,9% ženskog. Starost ispitanika se kretala od 18 pa do 60 i više godina. Naime, 9,3% ispitanika ima između 18 i 29 godina; 39,6% između 30 i 44; 38,8% između 44 i 59; dok 12,3% ima 60 i više godina.

[22] Sve navedene informacije preuzete su sa zvaničnog sajta Kompanije: *https://www.dunav.com/* (datum pristupa: 17. 8. 2021)

Većina ispitanika (55,1%) ima višu školu ili fakultet (osnovne, master ili doktorske studije), dok ostali (44,9%) srednju četvorogodišnju školu, gimnaziju ili specijalizaciju. Prikupljanje neophodnih, primarnih podataka sprovedeno je u periodu od 21. do 24. jula meseca 2020. godine.

2. Metod

Kada se govori o mernom instrumentu, anketni upitnik sadržao je 19 pitanja, od čega je većina bila zatvorenog tipa. Pojedina otvorena pitanja korišćena su kako bi se dobila detaljnija pojašnjenja na neka postavljena (zatvorena) pitanja ili podaci o sociodemografskim karakteristikama ispitanika. Kada je reč o zatvorenim pitanjima, većina njih bila je u formi skala gde se od ispitanika zahtevalo da iskažu stepen svog slaganja s nekom od definisanih stavki skale.

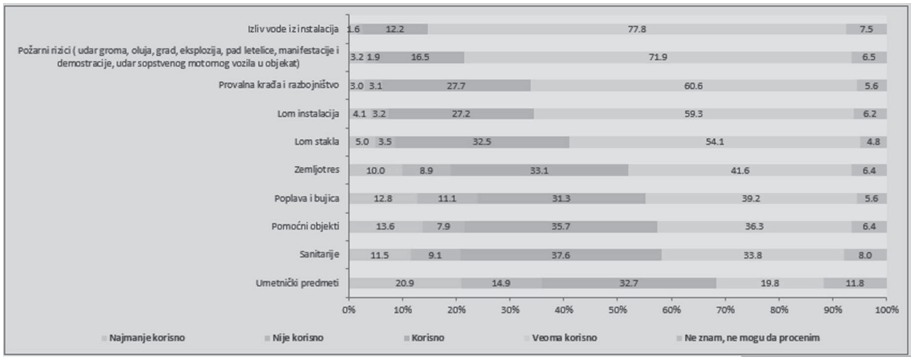
Poststratifikacija je urađena radi eliminacije onih što su odbili da učestvuju u istraživanju („ne odgovara"') usled odbijanja intervjua. Varijable poststratifikacije korišćene su u analizi podataka kako bi se ispitanici klasifikovali i grupisali, uz primenu kombinovanog multiplikovanog pondera na osnovu pola, godina starosti i nivoa obrazovanja u celokupnoj populaciji zaposlenih u Kompaniji.

Za analizu prikupljenih podataka korišćena je deskriptivna statistika, kao osnovna statistička tehnika koja se upotrebljava u svakom istraživanju.

Softver koji se koristio za unos podataka bio je WARP IT. Reč je o profesionalnom licenciranom programu za istraživanje tržišta s velikim opsegom mogućnosti prilikom postavljanja projekta.

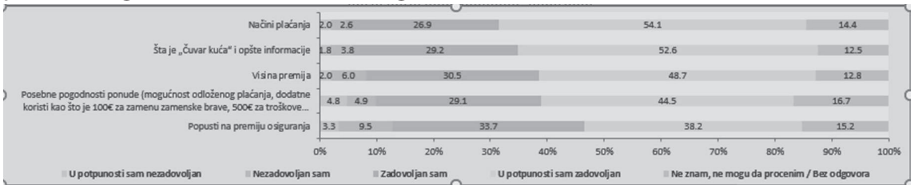
VI. Rezultati istraživanja

Oko 70% zaposlenih koji su učestvovali u istraživanju osiguralo je domaćinstvo u 2020. godini. Skoro 90% ispitanika koji to do sada nisu učinili imaju to u planu, a oni koji nemaju tu nameru kao najčešći razlog navode podstanarski status to jest neposedovanje nepokretnosti. Ostali zaposleni ističu ili da nemaju naviku da to čine ili su u pitanju ekonomski ili neki drugi razlozi. Na pitanje koji su to rizici koje je najkorisnije osigurati kada se radi o domaćinstvu, ispitanici su od ponuđenih izdvojili požarne rizike, instalacije (izliv i lom), provalnu krađu i razbojništva, kao i lom stakla. Detaljniji podaci mogu se videti na sledećem grafikonu.



Grafikon 1. Prema vašem mišljenju, koji je od navedenih rizika najkorisnije osigurati kada je u pitanju vaše domaćinstvo? (%)
Napomena: Total uzorak

Na pitanje da li su čuli za polisu osiguranja „čuvar kuće", čak 99% ispitanika je odgovorilo potvrdno. Od tog poduzorka ispitanika potom je zatraženo da ocene u kojoj meri su zadovoljni nivoom informisanosti u pogledu određenih aspekata u vezi s dotičnom polisom osiguranja. Najveće zadovoljstvo aspektom polise „čuvar kuće" primetno je u slučaju načina plaćanja, opštih informacija i visine premije. Detaljniji podaci mogu se videti na sledećem grafikonu.



Grafikon 2. U kojoj meri ste zadovoljni nivoom svoje informisanosti o sledećim aspektima vezanim za paket osiguranja „čuvar kuće"? (%)
Napomena: Poduzorak ispitanika koji su čuli za polisu osiguranja „čuvar kuće". Prikaz na 100%

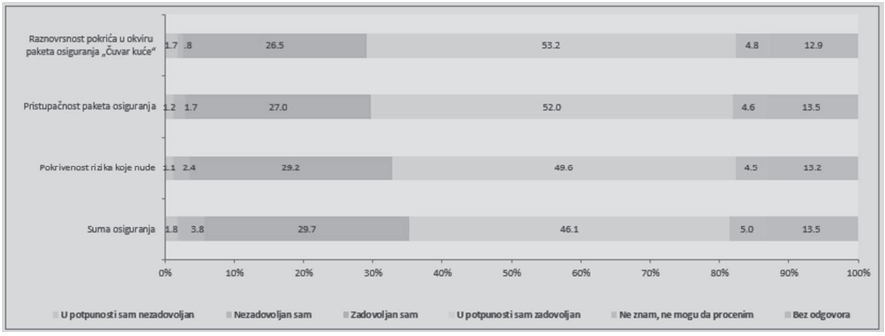
Više od polovine ispitanih zaposlenih, njih 55%, ima zaključenu polisu osiguranja „čuvar kuće" i ovaj paket većinom su odabrali zbog raznovrsnosti rizikā koje pokriva. Naime, njih skoro 63% se izjasnilo da je to osnovni razlog za njihovu odluku. Kao drugi razlog, za koji se odlučilo 18% ispitanika, navodi se odličan odnos premije i pokrića. Od ostalih razloga izdvajaju se: paket odgovara mojim potrebama (8,3%), imam poverenje u Kompaniju (5,8%) i po preporuci prijatelja / referenta prodaje osiguranja (5%). S druge strane, 45% ispitanika koji nisu odabrali taj paket kao najčešći razlog za takvu odluku navode posedovanje druge polise osiguranja u istom domenu

(37,8%). Kao drugi razlog, koji je navelo 14,4% zaposlenih, ističe se činjenica da su oni podstanari, odnosno da ne poseduju svoju nekretninu. Skoro 13% ispitanika opravdanje za tu odluku je pronašlo u ekonomskim razlozima, dok 11,6% njih planira da zaključi polisu u budućnosti. Ostali ili nemaju dovoljno informacija o paketu (10,2%) ili ne poseduju naviku (8%), dok neznatan procenat njih navodi neke druge razloge (4%) i činjenicu da ova polisa ne uključuje osiguranje električnih uređaja (1,1%).

Oko 70% ispitanih zna koliko okvirno mesečno iznosi premija za polisu osiguranja „čuvar kuće". Naime, kada je reč o iznosu, kao najčešći odgovor se pominju iznosi u rasponu od 300 do 500 RSD. Za taj raspon se opredelilo 57,5% zaposlenih. Sledeći raspon po ispitanicima je od 500 do 1.000 RSD. Naime, za taj raspon se odlučilo nešto više od petine ispitanih (21,5%). Oko 8% zaposlenih navelo je da je mesečna premija te polise osiguranja do 300 RSD. S druge strane, oko 7% njih kaže da je reč o iznosu do 2.000 RSD, a skoro 6% da se taj iznos kreće u rasponu od 3.000 do 8.000 RSD.

Više od polovine zaposlenih (55,6%) stava je da je iznos mesečne premije odgovarajući u odnosu na osiguranje (nakon pročitane izjave: Za stambeni objekat od 50 m^2 suma osiguranja je 3.000.000 dinara, a za stvari iz domaćinstva 600.000 dinara, iznos mesečne premije za ovakvu situaciju je 309 dinara). S druge strane, blizu 40% zaposlenih smatra da je iznos mesečne premije u odnosu na osiguranje jeftin. Ostali (njih 4,1%) ili ne znaju ili nemaju stav u tom pogledu, odnosno samo 1,1% njih smatra da je iznos mesečne premije u odnosu na osiguranje skup.

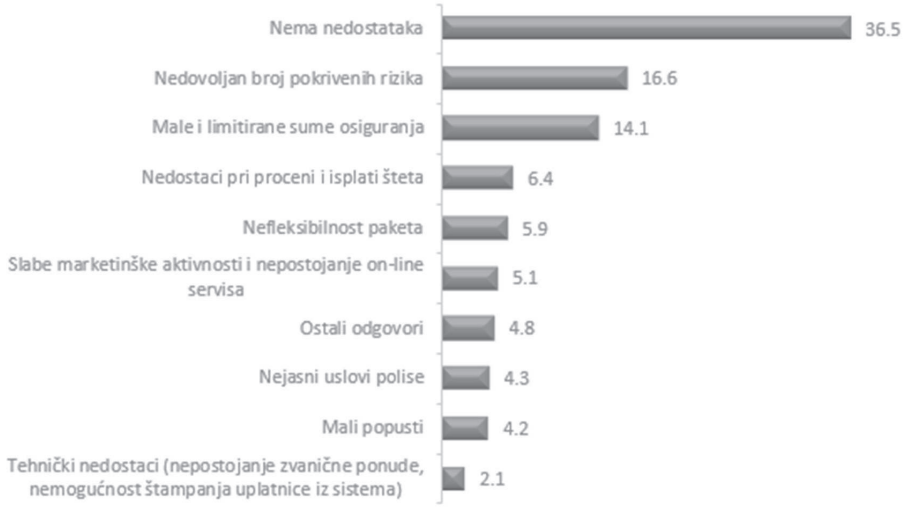
Stepen zadovoljstva po svim aspektima polise osiguranja „čuvar kuće" je iznad 75% (raznovrsnost pokrića, pristupačnost, pokrivenost rizika, suma osiguranja). Naime, više od polovine zaposlenih u potpunosti je zadovoljno kako raznovrsnošću pokrića u okviru ove polise osiguranja, tako i pristupačnošću paketa osiguranja. Između ostalog, blizu polovine ispitanih u potpunosti je zadovoljno kako pokrivenošću rizika koju ova polisa nudi, tako i sumom osiguranja. Detaljniji podaci mogu se videti na sledećem grafikonu.



Grafikon 3. U kojoj meri ste zadovoljni sledećim aspektima polise osiguranja domaćinstva „čuvar kuće"? (%)
Napomena: Poduzorak ispitanika koji su čuli za polisu osiguranja „čuvar kuće". Prikaz na 100%

Najveća prednost paketa „čuvar kuće" za 64,6% zaposlenih koji su za njega i čuli jeste raznovrsnost rizika koje pokriva. Kao ostale prednosti respektivno se izdvajaju: pristupačna cena (10,3%), sigurnost isplate štete (9,3%), odnos premije i pokrića (7,5%), fleksibilnost paketa (3,9%), jednostavna procedura za zaključenje polise (2%), način plaćanja (1,8%) i neke druge (0,8%).

Najveći nedostatak paketa „čuvar kuće" po mišljenju većine ispitanih (36,5%) ne postoji. U manjem procentu zaposleni navode nedovoljan broj pokrivenih rizika (16,6%) i male i limitirane sume osiguranja (14,4%). Ostali nedostaci, po ispitanicima, mogu se videti na sledećem grafikonu.



Grafikon 4. Koji je, po vašem mišljenju, najveći nedostatak paketa osiguranja „čuvar kuće"? (%)
Napomena: Poduzorak ispitanika koji su čuli za polisu osiguranja „čuvar kuće". Prikaz na 100%

Glavni podsticaji za osiguranje domaćinstva paketom „čuvar kuće" za zaposlene respektivno bi bili: osećaj sigurnosti i zaštićenosti, raznovrsniji rizici koje pokriva i pristupačna premija. Ostali odgovori tj. podsticaji mogu se videti na sledećem grafikonu.

Grafikon 5.: Šta bi vas lično podstaklo da osigurate svoje domaćinstvo paketom osiguranja „čuvar kuće"? (%)
Napomena: Total uzorak

Na osnovu svih prezentovanih rezultata istraživanja, može se zaključiti da zaposleni u Kompaniji imaju pozitivno mišljenje, tj. da su zadovoljni novom uslugom, kombinovanim osiguranje domaćinstva – paketom „čuvar kuće".

VII. Zaključak

Paket „čuvar kuće" je nova usluga uspešne osiguravajuće kuće i lidera na tržištu osiguranja koja je istovremeno dokaz posvećenosti te kompanije razvoju i inovacijama. Tome u prilog govore i rezultati istraživanja sprovedenog u ovom radu. Naime, postoji skoro potpuna upoznatost zaposlenih u Kompaniji s navedenom polisom osiguranja (99%). Najveće zadovoljstvo aspektom polise „čuvar kuće" primetno je u slučaju opštih informacija, načina plaćanja i visine premije. Nešto više od polovine zaposlenih (55%) ima zaključenu polisu osiguranja „čuvar kuće" i većinom su odabrali ovaj paket zbog raznovrsnosti rizika koje pokriva. Oni koji nisu odabrali taj paket kao najčešći razlog navode posedovanje druge polise osiguranja u istom domenu. Oko 70% ispitanih navodi mesečni iznos polise „čuvar kuće" i najčešće se pominju sume u rasponu od 300 do 500 RSD. Više od polovine zaposlenih stava je da je iznos mesečne premije odgovarajući u odnosu na osiguranje (nakon pročitane izjave – Za stambeni objekat od 50 m^2 suma osiguranja je 3.000.000 dinara, a za stvari iz domaćinstva 600.000 dinara, iznos mesečne premije za ovakvu situaciju je

309 dinara). Stepen zadovoljstva po svim aspektima posmatrane polise osiguranja (raznovrsnost pokrića, pristupačnost, pokrivenost rizika, suma osiguranja) ide iznad 75%. Najveća prednost paketa „čuvar kuće" je raznovrsnost rizika koje pokriva. S druge strane, po mišljenju većine zaposlenih, taj paket nema nedostataka. Ostali zaposleni u manjem procentu navode nedovoljan broj pokrivenih rizika i male i limitirane sume osiguranja. Kada je reč o podsticajima za osiguranje domaćinstva paketom „čuvar kuće" ističu se: osećaj sigurnosti i zaštićenosti, raznovrsniji rizici koje pokriva i pristupačna premija. Prema podacima iz 2023. godine, složena godišnja stopa rasta od pojave tog proizvoda na tržištu osiguranja, iz godine u godinu rezultati su sve bolji, iznosi 27%.[23]

Glavna korist od ovog istraživanja jeste pre svega provera stavova referentnog tržišnog segmenta, a to su zaposleni u Kompaniji, koji su potvrdili informisanost i pozitivan stav o kvalitetu usluge. Zadovoljni zaposleni su najpoželjniji brend ambasadori jer proširuju svoj uticaj na okruženje. Na taj način deo javnosti koja je u direktnom kontaktu sa zaposlenima stiče pozitivan utisak o proizvodu. Konačno, sve to potpomognuto adekvatnom integrisanom marketinškom kampanjom dovelo je do pozitivnih rezultata u vezi s brojem prodatih polisa i visinom naplaćene premije.

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[23] *Compound Annual Growth Rate* ili složena godišnja stopa rasta (CAGR) je metoda izračunavanja prosečne godišnje stope rasta investicije ili neke druge vrednosti tokom određenog perioda, uzimajući u obzir efekat kamate na kamatu.

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EMPLOYEES AS MARKET SEGMENT AND BRAND AMBASSADORS OF INSURANCE COMPANIES

REVIEW ARTICLE

Abstract

The role of employees is crucial in supporting the development of any company. The attitude of employees towards the company they work for is of particular significance, as is whether they are the first to willingly buy the company's products and services. In this way, the product or service receives a very important endorsement, in quality terms, and gains a competitive advantage on the market. The paper before you will showcase a successful example of employees' attitudes towards an insurance service offered by one such successful company, a leader on the local insurance market and its comprehensive household insurance product named the "home guard" package. The authors of the paper applied the Computer Assisted Web Interview (CAWI) research method, with 37.1% of employees participating and expressing their views on the newly created insurance policy or service. The obtained results, based on a smaller sample, showed that almost all of the employees are aware of the "home guard" insurance policy (99%), and that the level of satisfaction of the respondents employed with the company regarding all aspects of the relevant policy was above 75%.

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I Introduction

Insurance is an economic, service-oriented activity that protects individuals and their property against the consequences of various risk occurrences and plays a significant role, both locally and internationally.[4] It emerged from a necessity to insure the business environment, economic conditions and the lives and work of people against the loss events, amidst significant challenges and changes. Insurance cannot prevent the occurrence of a loss or a loss event, but it can provide economic protection, which is the very reason for its existence.[5] The conclusion is evident that it is fully reasonable to claim that insurance represents an economic necessity for anyone concerned with safety in business and everyday life.[6]

Insurance is a multidisciplinary science, simultaneously economic, legal, and technical. Depending on the considered aspect of the insurance system, we may define the business in various ways. The economic aspect implies the protection of the Insured's property (both directly and indirectly), as well as developmental, social, and other roles of insurance. The legal aspect implies regulating legal relations, starting from the moment of conclusion of the insurance policy and payment of premiums until the claim notification and payment, while the technical aspect governs the functioning of insurance business through risk assessment, premium statement, using mathematical and statistical methods.[7] This leads to the conclusion that insurance, as a distinctive activity, has its specific methodology based on key elements, namely: the risk, insurance premium, and insurance compensation (indemnity).[8]

Based on the principles of mutuality and solidarity, the insurance companies provide economic protection for property and persons against potential risks. The primary liability of the Insured is to pay the insurance premium, and that of the Insurer is to indemnify for the claims or pay the sum insured upon occurrence of an insured event. By insuring property and persons, funds and reserves are acquired from

[4] Nebojša Žarković, *Pojmovnik osiguranja*, Skonto, Novi Sad, 2013, p. 268.
[5] N. Žarković, p. 603.
[6] Milan Bradić, „Analiza tržišta osiguranjana teritoriji Srbije za period od 2014. do 2018. godine", *Zbornik radova Fakulteta tehničkih nauka*, No. 5/2019, pp. 844–847 .
[7] Dragan Popović, *Model unapređenja kvaliteta procesa životnog osiguranja*, doctoral dissertation, University of Novi Sad, Faculty of Technical Sciences, Department of Industrial Engineering and Management, Novi Sad, 2018.
[8] Boris Marović, Bogdan Kuzmanović, Vladimir Njegomir, *Osnovi osiguranja i reosiguranja*, Princip Press, Belgrade, 2009, p. 5.

the premiums paid by the Insured,[9] in line with the economic interests of both the Insured and the insurance entities. These entities carry out the activities of insurance of property and life against risks, death, or accidents that may cause permanent or temporary disability, as well as the activities of insurance in case of survival. For these reasons, insurance represents an industry of a special national interest, acquiring funds for its operations through the collection of insurance or reinsurance premiums and initial reserves. Consequentially, we may conclude that insurance performs an important social function in protecting the property and persons.[10]

Based on the principles of mutuality and solidarity, the insurance companies provide economic protection for property and persons against potential risks. One such successful insurance company is precisely the one for which all market research indicates is the strongest Serbian brand in the insurance business. According to the data obtained from the National Bank of Serbia, this Company is the leader in all insurance lines, other than life.[11] Research data on the image of insurance companies conducted in 2016[12] indicate that the subject Company is the most well-known insurance company in the field of providing insurance services, and is mentioned first by 50.3% of Serbian citizens, while other insurance companies are significantly less frequently mentioned first. Only 1.3% of the Serbian population is not aware of any insurance service providers. When it comes to overall spontaneous recall of insurance service providers (after propping), the results are even better, with the subject Company firmly occupying in the first place, accounting for 89.3% of citizens being aware of it as an insurance service provider, while 97.8% of the respondents are aware of the Company in general. As a market leader, the Company is characterized by constant improvement of both the services included in its actual proposal and the development of new insurance services, tailored to the needs of the modern, digital society. One such service is the comprehensive household insurance - the "home guard" package. This insurance policy has received approval from a large number of the company's clients in a very short period. According to Company official data, the sale of the "home guard" package reports a tendency of permanent growth in both the number of policies sold and the amount of insurance premium collected.[13] According to 2020 data relative to 2019, the index for the number of policies sold was 117.8, whereas the closed premium index was 121.6. The growth

[9] Antonije Tasić, *Osnovi osiguranja*, IŠP Privredno finansijski vodič, Beograd, 1976, p. 27: "Premia is, like a risk, an essential element of insurance. It is the amount paid into the insurance fund... Premium could be said to be the price of risk."

[10] N. Žarković, p. 172.

[11] According to data from the official website of the National Bank of Serbia. https://www.nbs.rs/export/sites/NBS_site/documents/osiguranje/izvestaji/izv_III_2022.pdf, accessed 16. 4. 2023.

[12] Citizens' Attitudes Toward the Insurance Market and Perception of the Company, Ninamedia Research, Novi Sad, 2016, unpublished material.

[13] N. Žarković, p. 422.

tendency continued in 2021, with the increased number of policies sold in the first six months, relative to the same period 2020, accounting for a growth index of 122.2. In the same period, the index of the closed premium was 124.1.

The employees are a group of special interest, since their influence can be extremely powerful. Therefore, it is significant to check their opinion regarding the Company's products and/or services. In this context, the role of employees is exceptionally significant. They constitute a specific market segment and, as such, are important not only for shaping a positive brand image, but play a precious role as customers who have had the opportunity to be among the first to experience a product or a service. Therefore, it's crucial to assess their level of awareness about a new product.

Hence, the goal of this research is to demonstrate how significant the employee attitudes to the Company are and, on the other hand, how significant it is that the employees are familiar with the proposal of the company they work for and that they think highly of the quality of such proposal. This has been done using the example of the new product "Home Guard" that our company launched in 2016.

II Employee as significant market segment

In the knowledge economy, human capital is the driver of intellectual capital and forms the basis of market value of business entities. More specifically, human capital represents the ability of employees to utilize their competencies, that is, knowledge, skills, and experience, to meet customer expectations, and add value to the company.[14] In this context, the role of internal communication is of paramount importance, as it clearly directs employees towards the goals of the company.[15] In addition to knowledge, experience, and skills, human capital also encompasses the innovativeness, creativity, flexibility, tolerance, persistence, motivation, satisfaction, teamwork and learning ability, problem-solving ability, critical thinking, loyalty, readiness for formal training, and continuous education. Good internal communication is the foundation for the success of any organization and represents an important part of corporate communication.[16] It is important to note that employees are not *per se* the human capital of the company, but they become so when they transform their knowledge and abilities into actions that contribute to the creation of (material or

[14] Stefan Alimpić, "Intellectual capital aimed at creating value and competitive advantage of enterprises", *Knowledge, Economy and society – Managing organizations: Concepts and their applications* (editors Andrzej Jaki and Bogusz Mikula), Cracow, Poland, 2014, pp. 203–212.

[15] Milica Slijepčevic, Ana Bovan, Ivana Radojevic, "Internal communications as a factor of company's efficiency", *Marketing*, No. 2/2018, pp. 124–143.

[16] Milica Slijepčevic, Milica Kostic, Ivana Radojevic, "Modern model of integrated corporate communication", *Journal of Innovative Business and Management*, No. 1/2019.

immaterial) value for the company (added value, new clients, better goodwill, more successful organization, profitable product, new product etc).

Human capital is individual, that is, it is not owned by an entity and appears as a generator of innovative potentials of business systems. More precisely, it is the hidden (*tacit*) knowledge, owned by the employees with the characteristics mentioned above ("knowledge workers"), which is almost impossible to replicate and represents the most significant source of a company's competitive edge. Therefore, if a company wants to maintain the competencies of its employees within its boundaries, it is necessary to preserve the information of these individuals in the company databases or incorporate them into new methods, new products and services, new organizational structures, in other words, transform this hidden knowledge into explicit, i.e., materialized knowledge that becomes the property of the company and turns into structural capital.[17]

Hence, the global companies strive to transform the professional competencies of their employees into collective knowledge that remains the company's ownership even after some of these employees have left the company.

III Insurance as protection

The term "insurance" (germ. *Versicherung*, engl. *insurance*, fr. *assurance*), in its broadest sense, denotes security, trust, protection, assurance, and guarantee. In other words, the meaning of this term implies the purpose of insurance, that is, providing some form of security.[18]

The insurance industry, throughout its development, has been assigned several definitions, but they all generally come down to its fundamental role in protecting property and persons. Thus, a significant number of authors in insurance field consider it as the protection of material and immaterial needs of individuals and entities that arise accidentally and can be assessed.[19]

Karl Borch defines the subject-matter insured according to the classification into three types or classes of insurance and explains that although each country has its own characteristic features, this subject-matter is fundamentally determined by the characteristics of life, commercial and household insurance.[20]

[17] Dragomir Sundać, Nataša Švast, *Intelektualni kapital – temeljni čimbenik konkurentnosti poduzeća*, Ministarstvo gospodarstva, rada i poduzetništva, Zagreb, 2009, pp. 35, 42, 43, 61 and 62.

[18] Taken over from the website: *www.osiguranje.srb/pojam-i-znacaj-osiguranja,* accessed 17. 08. 2021.

[19] George E. Rejda, *Principles of Risk management and Insurance*, Addison Wesley, New York, 2011, p. 20; Jelena Kočović, Predrag Šulejić, Tatjana Rakonjac-Antić, *Osiguranje,* Ekonomski fakultet Univerziteta u Beogradu, Belgrade, 2010, p. 38; Emmett Vaughan, Therese Vaughan, *Osnove osiguranja i upravljanja rizicima*, Mate, Zagreb, 2002, p. 35.

[20] Karl Borch, *The Mathematical Theory of Insurance*, Champan and Hall, London, 1974.

However, insurance has currently surpassed classical divisions of insurance as purely economic, technical, or legal scientific discipline. Insurance today represents a unified and innovative category of science and practice, that is, a combination of social, economic, technical, technological, and linguistic sciences, at the same time. By accepting insurance as an "innovative combination of the best from all sciences it touches upon" and by applying it in practice, an incredible result is obtained – the improvement of existing and the creation of new insurance services according to the needs of modern, digital society.[21]

One such service is comprehensive household insurance - the "home guard" package. In this paper, this service has been cited as the one about which the employees of the insurance company that launched it expressed their opinions. The research was to establish whether the employees were familiar with the "home guard" service and to what extent, as well as what their attitude was regarding the service quality. It aimed to demonstrate that the attitudes of employees were significant for the Company and, on the other hand, that it was important for the employees to be familiar with the offer of the company they work for and to value high its quality, all using the example of the new "home guard" product.

IV Basic information on "home guard" product

In a client-friendly manner, the "home guard" product provides the insurance cover for the following:

- occupied facilities (houses and apartments) including built-in installations and equipment;
- household contents;
- liability of household members as individuals in everyday life and liability arising from ownership of real property; and
- accident insurance of household members.

In addition to the above, insurance can also cover sanitary fixtures, auxiliary buildings of the house and their contents, common parts of the building, and works of art.

The "home guard" package primarily provides insurance protection against standard, empirically most frequent risks that can affect a household, such as fire, lightning strike, storm, hail, explosion, falling aircraft, manifestations and demonstrations, collision of own motor vehicle into the facility insured, water damage, burglary, robbery, glass breakage, and installation breakage.

[21] Zorica Šipovac, "Educational Role in the Development of New Insurance Products in the Republic of Serbia", Proceedings from the 29th Insurance and Reinsurance Meeting – Sor (editors Boris Marović *et al.*), Sveučilišna tiskara, Zagreb, 2018, pp. 257–265.

In addition to the aforementioned risks, this product offers the possibility of contracting additional, recently very common risks that have occurred in our region. These are primarily risks of earthquakes and/or floods and torrents.

Also, in addition to these two risks which are very interesting for the clients, the Company offers the possibility of insurance protection against unforeseen risk such as the impact of snow, falling tree, smoke, vantonous and vexatious actiona and vandalism, atmospheric waters, as well as collision with an unknown motor vehicle, general liability, and accident of household members.[22]

V Methodology

1. Collection of data and sample description

In order to collect data required for the study, we used a non-random convenient sample of employees in the Company. This sample comprised the respondents of various demographic profiles. The primary research method in this study was a survey that respondents completed via the internet. Specifically, the study used the CAWI method, which represented quantitative research in the form of computer-assisted web interviewing. The method was opted for because the respondents did not have enough time to answer, in direct contact, to all the planned questions, but also because its application led to more precise answers that could be easily compared in further work. The study was conducted on a sample of 615 elementary units. Of this number, 37.1% of the respondents were male, and 62.9% were female. The age of the respondents ranged from 18 to 60 and above. Specifically, 9.3% of the respondents were between 18 and 29 years old; 39.6% between 30 and 44; 38.8% between 44 and 59; while 12.3% were 60 years old and above. The majority of respondents (55.1%) had higher education (undergraduate, master's, or doctoral studies), while the others (44.9%) had completed secondary education, high school, or a kind of specialization. The collection of necessary primary data was conducted from 21 to 24 July 2020.

2. Method

When it comes to the measuring instrument, the survey questionnaire contained 19 questions, most of which were closed-ended. Some open-ended questions were used to obtain more detailed explanations regarding certain closed-ended questions or data on respondents' sociodemographic characteristics. As for the

[22] All the information provided was taken from the official website of the Company: *https://www.dunav.com/*, accessed 17. 8. 2021.

closed-ended questions, most of them were in the form of scales, where respondents were asked to express their level of agreement with an item defined on the scale.

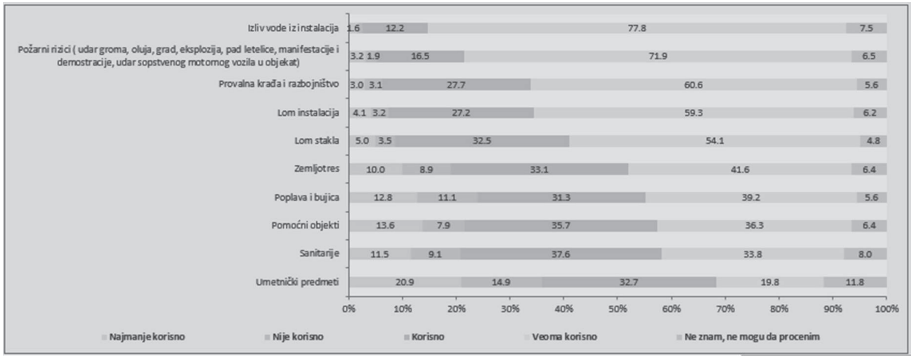
Post-stratification was conducted so as to do away with those who denied to participate in the study ("does not apply") because they did not accept to be interviewed. Post-stratification variables were used in data analysis to classify and group respondents, using a combined multiplicative weight based on gender, age, and level of education in the entire population of employees in the Company.

Descriptive statistics were used for the analysis of collected data, as the basic statistical technique used in every research.

The software used for data entry was WARP IT. It is a professional licensed market research program with extensive capabilities in project setup.

VI Research results

Around 70% of the employees who participated in the research took out the insurance coverage of their households in 2020. Nearly 90% of the respondents who had not done so yet planned to do it, while those who did not intend it at all, most commonly said that the reason had been their tenants' status, i.e. the fact that they did not own any real property. Other employees mentioned either not having the habit to maintain such a coverage, or some economic and other reasons. When asked about what risks were most beneficial to cover under the household insurance, the respondents singled out fire, installations (water escape and breakage of installations), burglary, and glass breakage. Detailed data can be observed in the graph below.

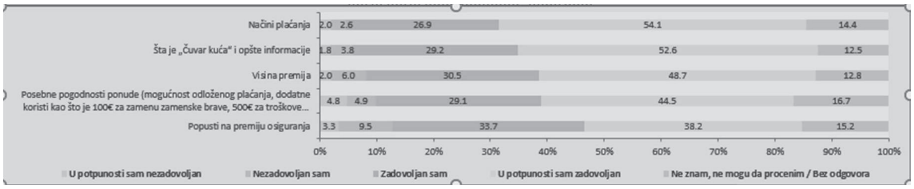


Graph 1. According to your opinion, which of the specified risks are most important to insure in your household? (%)

Note: Total sample

When asked if they had heard of the "home guard" insurance policy, a staggering 99% of respondents answered affirmatively. Thus, obtained subset of respondents was then asked to rate their level of satisfaction with the degree of

information regarding certain aspects related to the aforementioned insurance policy. The highest satisfaction with the "home guard" policy was noticeable in terms of payment methods, general information, and premium amounts. Detailed data can be seen in the graph below.



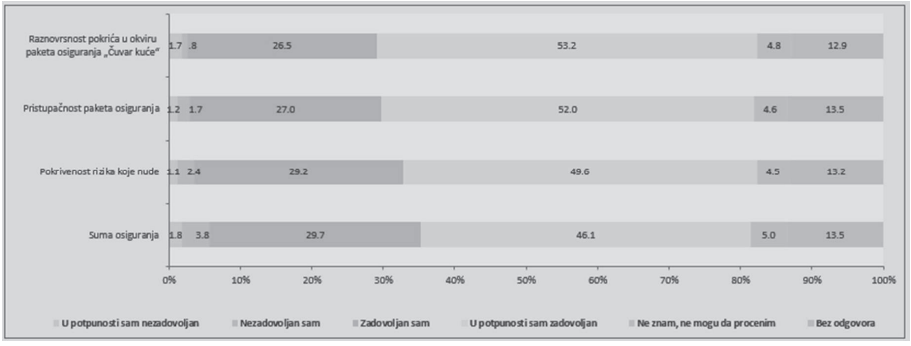
Graph 2. To what extent are you satisfied with the level of information you have regarding the following aspect of the "home guard" insurance package? (%)
Note: Subset of respondents that had heard for the "home guard" insurance policy. The presentation is 100%

More than half of the surveyed employees, namely 55% of them, have opted for the "home guard" insurance policy, mainly due to the variety of risks covered. Specifically, nearly 63% stated that this was the primary reason for their decision. As the second reason, 18% of respondents cited an excellent premium-to-coverage ratio. The others specified the reasons such as: the package meets my needs (8.3%), I trust the Company (5.8%), and It was recommended to me by a friend/insurance sales representative (5%). On the other hand, 45% of the respondents who did not opt for this package cited having another insurance policy in the same domain as the most common reason for their decision (37.8%). The second reason, cited by 14.4% of employees, was the fact that they were tenants, meaning they did not own any real property. Nearly 13% of the respondents explained such decision by economic reasons, while 11.6% said they planned to take out the policy in the future. Others either lacked sufficient information about the package (10.2%) or were not used to taking out such an insurance coverage (8%), while a negligible percentage specified other reasons (4%) and the fact that this policy did not include insurance of electrical devices (1.1%).

Around 70% of the respondents were roughly informed of the amount of the monthly premium for the "home guard" insurance policy. Namely, speaking of the amount, the most common response was that it ranged from 300 to 500 RSD. 57.5% of employees opted for this range. The next range chosen by respondents was from 500 to 1,000 RSD, with just over a fifth of respondents (21.5%) selecting this range. Around 8% of employees stated that the monthly premium for this insurance policy was up to 300 RSD. On the other hand, about 7% of them said that it was up to 2,000 RSD, while almost 6% stated that it ranged from 3,000 to 8,000 RSD.

More than half of the employees (55.6%) believed that the amount of the monthly premium was adequate for the insurance coverage (after reading the statement: "For a residential building of 50 m2, the sum insured is 3,000,000 dinars, whereas for the household items it is 600,000 dinars. The monthly premium is 309 dinars"). On the other hand, near 40% of employees considered the monthly premium cheap relative to the offered insurance coverage. The remaining respondents (4.1%) either did not know or did not have an opinion on this matter, with only 1.1% of them considering the monthly premium expensive relative to the insurance coverage it provided.

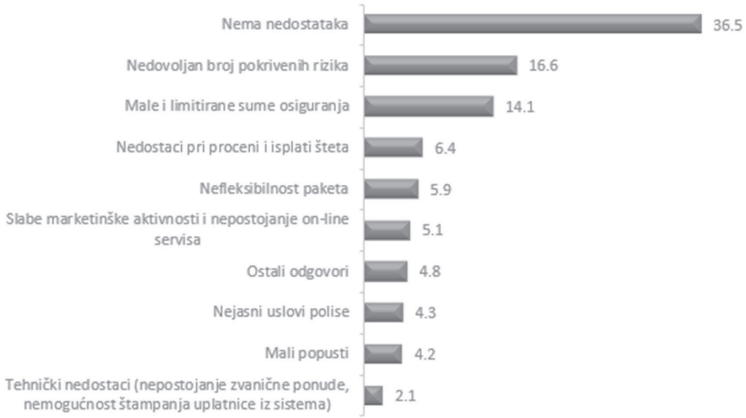
The level of satisfaction with all aspects of the "home guard" insurance policy was above 75% (diversity of coverage, accessibility, risk coverage, sum insured). Namely, more than half of the employees were fully satisfied with both the diversity of coverage under that insurance policy and the affordability of the insurance package. Among other things, close to half of the respondents were completely satisfied with both the risk coverage offered by this policy and the sum insured. Detailed data could be seen in the following graph.



Graph 3. To what extent are you satisfied with the following aspects of household insurance policy „home guard"? (%)
Note: The subsample of respondents that heard of the „home guard" insurance policy. The presentation is 100%,

The greatest advantage of the "home guard" package for 64.6% of employees who had heard of it was the diversity of risks it covered. Other advantages respectively included the affordable price (10.3%), security of claims payment (9.3%), premium-to-coverage ratio (7.5%), package flexibility (3.9%), simple policy conclusion procedure (2%), payment method (1.8%), and others (0.8%).

According to the majority of respondents, the biggest drawback of the "home guard" package did not exist at all (36.5%). To a lesser degree, employees mentioned the lack of scope of coverage for risks (16.6%) and small and limited sums insured (14.4%). Other drawbacks, as per respondents, could be seen in the following graph.



Graph 4. What is, according to you, the major drawback of the "home guard" insurance package? (%)
Note: The subsample of respondents that heard of the „home guard" insurance policy. The presentation is 100%

According to the standing of employees, the main motivation for insuring households under the "home guard" package was, respectively a sense of security and protection, a wider range of risks covered, and affordable premiums. Other responses or spurs can be seen in the graph below.

Graph 5.: What would personally motivate you to insure your household under the "home guardian" insurance package? (%)
Note: Total sample

Based on all presented research results, it can be concluded that the employees in the Company have a positive opinion, i.e., they are satisfied with the new service, the comprehensive household insurance package – "home guard".

VII Conclusion

The "home guard" package is a new service of a successful insurance company and a market leader in the insurance industry, and, among other things, it may be deemed to testify to the company's commitment to development and innovation. This fact is further supported by the results of the research conducted in this study. Namely, there is almost complete awareness among employees in the Company of the insurance policy in question (99%). The highest satisfaction with the "home guard" policy is noticeable in terms of general information, payment methods, and premium levels. More than half of the employees (55%) have taken out the "home guard" insurance policy, mostly choosing this package due to the diversity of risks coved by it. Those who have not chosen this package, most commonly state that they already possess another insurance policy to cover the same risks, as the main reason. Around 70% of respondents mention the monthly amount for the "home guard" policy, with sums ranging mostly from 300 to 500 RSD. More than half of the employees believe that the monthly premium amount is adequate price for the relevant insurance coverage (after reading the statement - "For a residential building of 50 m2, the sum insured is 3,000,000 dinars, and for household contents - 600,000 dinars, the monthly premium is 309 dinars"). The satisfaction level with regard to all the aspects of the observed insurance policy (diversity of coverage, accessibility, risk coverage, sum insured) is above 75%. The greatest advantage of the "home guard" package is diversity of risks it covers. On the other hand, according to the majority of employees, this package has no drawbacks. Other employees mention, to a lesser degree, insufficient coverage for the risks and small and limited sums insured. Regarding motivation for insuring households under the "home guard" package, the respondents mostly often stress a sense of security and protection, a wider range of risks covered, and affordable premiums. According to the 2023 data, the compound annual growth rate since the introduction of this product in the insurance market has been increasing year-on-year, reaching 27%.[23]

The main benefit of this study is primarily the verification of attitudes within the reference market segment, which are the employees in the company, who confirmed their awareness and positive attitude towards the quality of the service. Satisfied employees are the most desirable brand ambassadors, as they expand their influence on the business environment. In this way, part of the public that is in direct

[23] Compound Annual Growth Rate (CAGR) is the method of calculating the average annual growth rate of an investment or another value over a certain period, taking into account the effect of compound interest.

contact with employees gains a positive impression of the product. Finally, all of this, supported by an appropriate integrated marketing campaign, has led to positive results in terms of the number of policies sold and the amount of premium collected.

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POTENCIJAL ZA RAZVOJ PROIZVODA OSIGURANJA ARBITRA OD PROFESIONALNE ODGOVORNOSTI U REPUBLICI SRBIJI

PREGLEDNI RAD

Apstrakt

Uporednopravno posmatrano, osiguravajuća društva su relativno skoro krenula da pružaju uslugu osiguranja arbitra od građanskopravne odgovornosti. Neki pravni sistemi propisali su obavezno osiguranje svih arbitara. Takođe, razne renomirane arbitražne institucije zauzele su stav da li preporučuju da se arbitri osiguraju ili ne. Međutim, postoje dijametralno suprotna mišljenja u različitim pravnim sistemima da li postojanje ovakvog proizvoda osiguranja dopuštaju pozitivni propisi i javni poredak. U skladu sa stanjem na svetskoj arbitražnoj sceni, neophodno je ispitati da li postoji pravni osnov za ovakav proizvod osiguranja na srpskom finansijskom tržištu i koje su šanse da zaživi.

Ključne reči: *Arbitraža. – Osiguranje od građanskopravne odgovornosti. – Profesionalno osiguranje. – Osiguranje arbitara.*

I. Uvod

Da bi se ustanovilo da li je osiguranje arbitara legalan proizvod osiguranja na srpskom finansijskom tržištu, neophodno je da se utvrdi ispunjenost pravnih preduslova. Prvo, mora se utvrditi priroda građanskopravne odgovornosti arbitra za radnje koje vrši tokom arbitražnog postupka. Zatim, ako ona postoji, neophodno

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je utvrditi koji stepen nepažnje se zahteva da bi se odgovornost uspostavila. Ako se ove činjenice konstatuju, pažnju treba preusmeriti na pozitivne propise iz oblasti prava osiguranja, obligacionog prava i arbitraže koji će pokazati koji stepen nepažnje osiguranika (arbitra) stvara pravne preduslove da se treće lice naplati od osiguravača. Taj korak je bitan jer, ako je prag nepažnje prilikom uspostavljanja građanskopravne odgovornosti arbitra viši od praga nepažnje do kojeg se isplaćuje osigurana suma trećem licu, onda u tom slučaju takav proizvod ne može da opstane na srpskom finansijskom tržištu.

Proizvodi osiguranja od građanskopravne odgovornosti se nude nosiocima slobodnih profesija (građevinski inženjeri, lekari, advokati itd.). Arbitri se, međutim, po jednoj svojoj karakteristici razlikuju od ostalih slobodnih profesija, a to je da u delu arbitražnog postupka vrše funkciju suda. Stoga, u radu će se predstaviti koja je razlika između režima sudijske funkcije koju arbitar vrši i ostalih radnji koje po prirodi posla preduzima i kako se to održava na njegovu građanskopravnu odgovornost i obaveze osiguravača.

II. Građanskopravna odgovornost arbitra

Arbitri moraju da budu fizička lica sa poslovnom sposobnošću. Ti uslovi mogu da budu pooštreni arbitražnim sporazumom,[2] zakonom[3] ili pravilncima arbitražne institucije.[4] Za potrebe profesionlanog osgiuranja arbitra najbitnije je podeliti arbitre u naredne tri kategorije: javni beležnici, advokati[5] i treća lica. Razlog koji stoji iza ovakve podele je što su javno beležništvo i advokatura jedine profesije kojima se zakonom eksplicitno dopušta da vrše poslove arbitra, a opet, u obavezi su da budu osigurani od profesionalne odgovornosti. Kako oba zakona ova pitanja rešavaju na sopstven i drugačiji način, te dve profesije čine dve kategorije, te ih treba zasebno i posmatrati.

Da bi jedan arbitar uopšte razmatrao da se osigura od građanskopravne odgovornosti, neophodno je da može građanskopravno da odgovara. Arbitri su specifični po tome što su pod dva režima građanskopravne odgovornosti. Jedan se tiče sudijske funkcije koju arbitar vrši, na osnovu koje postoji imunitet tokom radnji kojima može da se prouzrokuje šteta (npr. pogrešna primena prava).[6] Tada

[2] Zakon o arbitraži – ZA, *Službeni glasnik RS*, br. 46/2006, čl. 19. Ta lica uopšte ne moraju da budu pravnici, već mogu da budu lica sa određenim tehničkim znanjima (npr. inženjeri) koja će vršiti funkciju arbitra.

[3] Zakon o mirnom rešavanju radnih sporova – ZMRRS, *Službeni glasnik RS*, br. 125/2004, 104/2009 i 50/2018, čl. 38; Zakon o sportu – ZSP, *Službeni glasnik RS,* br. 10/2016, čl. 54, str. 3.

[4] Pravilnik o postupku za rešavanje sporova povodom registracije naziva nacionalnih internet domena, *Službeni glasnik RS*, br. 31/11, 24/12, 67/14 i 61/16, čl. 4, str. 2.

[5] Zakon o advokaturi – ZAD, *Službeni glasnik RS,* br. 31/2011 i 24/2012 – odluka US, čl. 37. Zakon o javnom beležništvu – ZJB, *Službeni glasnik RS*, br. 31/2011, 85/2012, 19/2013, 55/2014 – dr. zakon, 39/2014 – dr. zakon, 121/2013, 6/2015 i 106/2015, čl. 59.

[6] Jelena Perović Vujačić, "Obligations of arbitrators in international commercial arbitration", *Revija Kopaoničke* škole *prirodnog prava*, br. 1/2019, str. 158–159.

odgovara samo ako je prouzrokovao štetu sa namerom, kao što bi i sudija odgovarao.[7] Kontinentalnopravna sudska praksa, konkretno francuska[8] i holandska,[9] utvrdila je da će arbitar za slučajeve koji se tiču vršenja sudijske dužnosti odgovarati samo u slučaju grube nepažnje, namere ili prevare. Postoji i uže tumačenje Vrhovnog suda Austrije koji tvrdi da u slučaju svoje sudijske uloge odgovara za nameru. To stanovište je zauzeo i Apelacioni sud u Briselu,[10] dok se odgovornost po ugovornom pravu primenjuje na ostale delove vršenja te uloge koji se ne tiču primene prava,[11] što je najviše u skladu sa čl. 7 Zakona o sudijama.[12]

Međutim, postoje dužnosti i radnje koje vrši tokom arbitražnog postupka za koje ne odgovara kao sudija, već kao ugovorna strana odnosno stručnjak. Taj režim odgovornosti se temelji na arbitražnom sporazumu i opštim obavezama arbitra.[13] Naravno, arbitar prilikom nanošenja štete strankama neretko može da naškodi i trećim licima koja, takođe, mogu da podnesu odštetni zahtev,[14] ali zarad jednostavnosti rada, njima se nećemo ekstenzivno baviti.

Javni beležnik prilikom vršenja svoje delatnosti u okviru svojih javnih ovlašćenja kao javni beležnik odgovara deliktno. Međutim, dok vrši poslove koji nisu u suprotnosti sa njegovom delatnošću, kao što je postupanje kao arbitar, odgovara po ugovornoj odgovornosti jer stupa u ugovorni odnos sa njima kao privatno lice, a ne kao imalac javnopravnih ovlašćenja.[15] Advokati odgovaraju na isti način jer su

[7] Zakon o sudijama – ZS, *Službeni glasnik RS*, br. 10/2023, čl. 7.

[8] J. Perović Vujačić, str. 158–162. Teresa Giovannini, „Chapter 36: Immunity of Arbitrators", *The Plurality and Synergies of Legal Traditions in International Arbitration: Looking Beyond the Common and Civil Law Divide*, (editors Nayla Comair-Obeid and Stvaro Brekoulakis), Alphen aan den Rijn, 2023, str. 443. Cour de cassation, chambre civile 2, 29.6.1960; TGI Paris, *Bompard et Carcassonne*, 13.6.1990, potvrdio CA Paris, 22.5.1991.

[9] *Qnow B.V. v. V (chairperson)*, 30. 9. 2016, ECLI:NLHR:2016:2215 pozivajući se na standard koji je Vrhovni sud Holandije primenio 2009. u slučaju *ASB Greenwold v. NAI and Arbitrators*, 4. 12. 2009, ECLI:NL:PHR:2009:BJ7834. U slučaju iz 2009. Taj standard je usvojen analognom primenom holandskog pandana Zakona o sudijama koji propisuje isti kriterijum kao i pomenuta francuska sudska praksa.

[10] *A. v. E. V.*, Court of Appeal of Brussels, 2015/AR/208, 28.11.2017. Sud je zauzeo stav da arbitar odgovara u slučaju namere i prevare kao i ostale sudije. Takođe je navedeno da je irelevantno što se arbitrova funkcija zasniva na ugovoru, budući da on ima istu ulogu kao i sudija. U samom postupku arbitar je proglašen odgovornim jer je aktivno uključivao veštaka u donošenje arbitražne odluke prihvatajući njegova viđenja o tumačenju prava i dopustivši veštaku da prevaziđe sopstvena ovlašćenja.

[11] *Mr. A – Chairman of arbitral tribunal v. German Company X*, Supreme Court of Austria (Oberster Gerichtshof) – 1 Ob 253/17, 28.4.1998, ICCA Yearbook Commercial Arbitration 2001 – Volume XXVI, 221–228.

[12] ZS, čl. 7.

[13] J. Perović Vujačić, str. 158–162.

[14] Ramón Mullerat, *The liability of arbitrators: a survey of current practice*, International Bar Association – Commission on Arbitration, Chicago, 2006, str. 8. Ta lica mogu da budu arbitražna institucija (npr. kršenje obaveznih pravila i narušavanje ugleda) ili lica poput advokata i veštaka (npr. nedozvoljeno odavanje tajni i podataka koje je arbitar saznao o njima).

[15] ZJB, čl. 4, 5 i 58. Marija Karanikić Mirić „Odgovornost javnih beležnika u srpskom građanskom pravu", *Pravni* život, br. 10/2014, str. 569–571.

sa strankama u ugovornom odnosu prilikom vršenja poslova advokature, u šta se ubraja, između ostalog, i vršenje uloge arbitra.[16]

Konačni zaključak ovog segmenta je da će arbitri svakako odgovarati po osnovu ugovorne odgovornosti, što je u skladu sa sudskom praksom drugih kontinentalnopravnih sistema,[17] a u slučaju štete nastale tokom vršenja „kvazi-sudske" funkcije, odgovaraće za slučaj grube nepažnje i namere. To je bitno jer će osiguranik biti dužan da naknadi štetu usled obične, ali i grube nepažnje, što je osobenost osiguranja od građanskopravne odgovornosti, dokle god ta gruba nepažnja ne podrazumeva grubu povredu pravila struke.[18] Međutim, osiguranje od namere se nikako ne može zaključiti jer je suprotno javnom poretku budući da se takva vrsta osiguranja imperativno zabranjuje.[19]

III. Šteta prouzrokovana postupanjem arbitra

Neophodno je sagledati da li postoje radnje arbitra koje mogu da se učine sa dovoljno niskim stepenom nepažnje koje bi kasnije mogle da se kvalifikuju kao osigurani slučaj.

Prvi od načina za prouzrokovanje štete je neblagovremeno donošenje arbitražne odluke, što je poznata praksa i u kontinentalnopravnim i *common law* jurisdikcijama.[20] Iako rokovi propisani arbitražnim pravilima mogu da se produže uz odobrenje arbitražne institucije,[21] zaključuje se da u slučaju neopravdanog zakašnjenja u donošenju arbitražne odluke arbitri mogu da budu dužni da nadoknade štetu strankama.[22] Takođe, autor je mišljenja da takva šteta može da nastane usled obične nepažnje i grube nepažnje arbitra, a ne isključivo iz namere.

[16] Što se tiče pomenutih trećih lica, ta treća lica mogu da budu pravnici koji nisu ni advokati ni javni beležnici kao što su npr. profesori prava. Treba istaći da ta lica ne moraju nužno da budu pravnici. To mogu da budu i stručnjaci u drugim oblastima koji mogu da budu veoma korisni u sporovima koji zahtevaju tehnička znanja (npr. građevinski inženjer kao arbitar u sporu koji proizlazi iz ugovora o građenju). Sva treća lica prilikom postupanja kao arbitar odgovoaraju pod režimom ugovorne odgovornosti kao privatna lica.

[17] Gustaf Möller, "The Finnish Supreme Court and the Liability of Arbitrators", *Journal of International Arbitration*, No. 1/2006, str. 95–99. *Roulas v. Professor J. Tepora; Mr. A – Chairman of arbitral tribunal v. German Company X*.

[18] Nataša Petrović Tomić, *Osnovi prava osiguranja*, Beograd, 2021, str. 203.

[19] Zakon o obligacionim odnosima - ZOO, *Službeni list SFRJ*, br. 29/78, 39/85, 45/89 – odluka USJ i 57/89, *Službeni list SRJ*, br. 31/93, *Službeni list SCG*, br. 1/2003 – Ustavna povelja i *Službeni glasnik RS*, br. 18/2020, čl. 920.

[20] Ahmed Fathy Mohamed el Shourbagy, *Arbitrator and Arbitral Institutions: Liability and Insurance*, Rotterdam, 2021, str. 134. Autor se poziva na slučaj pred *Cour de cassation* (2006) i *CA Paris* (2015) u kojima su arbitri zbog donošenja odluke nakon isteka roka morali da nadoknade troškove koji su time nastali. Treći slučaj je bio pred Apelacionim sudom Kalifornije (1983) gde je utvrđeno da blagovremeno donošenje arbitražne odluke nije komponenta „kvazi-sudske" funkcije arbitra, te stoga imuniteta nema.

[21] Privredna komora Srbije, Pravilnik o spoljnotrgovinskoj arbitraži – STA, čl. 41. Beogradski arbitražni centar, Pravilnik Beogradskog arbitražnog centra (Beogradska pravila) – BAC, čl. 32.

[22] Jelena Vukadinović Marković, Ivana Radomirović, „Pravo na naknadu štete kao posledica povrede *receptum arbitri* – građanskopravna odgovornost arbitara", *Prouzrokovanje* štete*, naknada* štete *i osiguranje*

Očuvanje nezavisnosti i nepristrasnosti koja proističe iz čl. 21 ZA kao objektivne i subjektivne komponente je jedna od dužnosti koja se manifestuje kroz obavezu arbitra da saopšti relevantne činjenice. U slučaju da arbitar ne saopšti relevantne činjenice,[23] posledično može da dođe do nastanka štete u vidu dodatnih troškova koje stranke snose kao posledice odugovlačenja arbitraže. Šteta može da nastane i naknadnim poništenjem arbitražne odluke ili njenim nepriznavanjem i neizvršenjem.[24] Različiti sudovi su zasnovali građanskopravnu odgovornost za kršenje dužnosti nalik onoj u čl. 21 ZA na osnovu opštih obligacionopravnih pravila jer je kršenje te dužnosti direktan uzrok povećanih troškova odnosno štete.[25] To ostavlja prostor da se ta dužnost prekrši grubom nepažnjom, a možda čak i običnom nepažnjom. Situacije koje ukazuju da ova dužnost može da se prekrši nižim stepenima nepažnje su kada arbitar teško može da proceni da li su neke činjenice relevantne. Jedan od primera je kada njegove okolnosti ne spadaju u *exempli causa* „narandžastu" ili „zelenu" listu koju je IBA donela zarad sprečavanja sukoba interesa među arbitrima.[26]

Naredna obaveza arbitra je da savesno i efikasno obavlja svoju dužnost.[27] Ovakva obaveza može da se prekrši na dva načina. Prvi je samoinicijativno povlačenje arbitra iz postupka, doduše bez opravdanog razloga.[28] Pitanje je da li arbitar može neopravdano da se povuče, a da to bude u domenu obične ili grube nepažnje, kako bi šteta nastala od takve okolnosti mogla da se isplati od strane osiguravača.

Drugi način se tiče vođenja samog postupka. Savesnost bi se ticala poštovanja svih načela i pravila arbitražnog postupka, zahteva stranaka, ali i adekvatne primene materijalnog prava. Tu se, takođe, ubraja načelo ravnopravnog tretiranja

(urednici Zdravko Petrović, Vladimir Čolović i Dragan Obradović), Beograd – Valjevo, 2022, str. 242; J. Perović, str. 143.

[23] Gašo Knežević, Vladimir Pavić, *Arbitraža i ADR*, Beograd, 2009, str. 92–94; J. Perović Vujačić, str. 149–152.

[24] J. Vukadinović Marković, I. Radomirović, str. 242.

[25] G. Möller, str. 95–99. *Roulas v. Professor J. Tepora*. Zanimljivo je da Vrhovni sud Finske tvrdi da, ukoliko arbitar obavesti stranke o razlogu za izuzeće, ne bude izuzet, a odluka ipak bude poništena da ne bi odgovarao jer ne bi postojala uzročno-posledična veza. Takođe, iako je Apelacioni sud Helsinkija utvrdio postojanje *culpa levis*, što Vrhovni sud Finske nije osporavao, utvrđeno je da je kao stručnjak morao da zna da je pružanje kosnultantskih usluga bankama u vlasništvu jedne od stranaka u arbitražnom postupku moglo da izazove opravdanu sumnje suprotne stranke. *Mr. A – Chairman of arbitral tribunal v. German Company X*. Do sličnog zaključka je došao i Vrhovni sud Austrije u pomenutom slučaju primenjujući nemačko pravo (BGB) i koji je pobio mišljenje Bečkog apelacionog suda. Spor je nastao jer predsedavajući arbitar nije obavestio stranke da je u prošlosti na zahtev *de facto* vlasnika Nirnberške kompanije (koja je bila u sporu sa Kompanijom X) predsedavao arbitražnom institucijom te ekonomske organizacije koja je registrovana u Beču.

[26] IBA Council, *IBA Guidelines on Conflicts of Interest in International Arbitration*, International Bar Association, London, 2014, str. 22–27.

[27] ZA, čl. 24, 48; J. Perović Vujačić, str. 136–139; Katarina Jovičić, „Pravna priroda odnosa između arbitara i stranaka: receptum arbitri", *Strani pravni život*, br. 1/2020, str. 24.

[28] ZA, čl. 25. G. Knežević, V. Pavić, str. 99; J. Vukadinović Marković, I. Radomirović, str. 242; J. Perović Vujačić, str. 148. Opravdani razlog mora da nastane usled stvarnih ili pravnih činjienica.

stranaka odnosno da obe stranke imaju priliku da pod istim uslovima izraze svoje stavove i argumente.[29] Opasnost koja nastaje nije samo od izazivanja štete strankama pukim lošim vođenjem postupka, već što usled nekvalitetnih odluka može da dođe do poništenja ili nepriznanja i neizvršivosti. Takva okolnost bi stvorila dodatne troškove za stranke u arbitražnom sporu za koju bi odgovarao arbitar.[30] Vrhovni sud Holandije se dva put susreo sa takvim slučajevima u kojima je primenio isti standard, ali je zauzeo drugačija stanovišta zavisno od toga zbog čega je kasnije poništena arbitražna odluka.[31]

Još jedan način nastanka je da arbitar povredi načelo poverljivosti postupka neovlašćenim otkrivanjem informacija nekim trećim licima koja ne bi smela da znaju sadržinu ili ishod postupka ili podatke koje je saznao o strankama tokom postupka.[32] Ovakav vid štete, takođe, može da nastane s namerom, ali i slučajno usled rasejanosti arbitra u nekoj neformalnoj atmosferi.

Osnovano je zaključiti da postoje radnje kojima arbitar može uz običnu ili grubu nepažnju da prouzrokuje štetu strankama u arbitražnom postupku koju bi kasnije morao da nadoknadi. Dakle, sa stanovišta osnovnih građanskopravnih instituta, uslovi za postojanje profesionalnog osiguranja za odgovornost arbitra u Republici Srbiji su ispunjeni.

IV. Regulatorni okvir profesionalnog osiguranja arbitra

1. Domašaj obaveznih profesionalnih osiguranja

Neophodno je podsetiti se prvobitne podele na advokate, javne beležnike i treća lica zarad lociranja regulatornog okvira. Javni beležnici i advokati imaju zakonsku obavezu da se osiguraju od građanskopravne odgovornosti.[33] Međutim, režimi njihovih profesionalnih osiguranje se međusobno razlikuju.

Problem je što osiguranje javnih beležnika ne pokriva postupanje kao arbitra, jer to nije u okviru njihove delatnosti.[34] Zakon o javnom beležništvu u čl. 4 jasno kaže šta je okvir javnobeležničke delatnosti i ne pominje obavljanje poslova arbitra. Međutim, u narednom čl. 5 koji navodi izuzetke koji nisu nespojivi sa

[29] K Jovičić, str. 24.

[30] J. Vukadinović Marković, I. Radomirović str. 242; K. Jovičić, str. 24.

[31] *Qnow B.V. v. V (chairperson),* 30.9.2016, ECLI:NLHR:2016:2215. Vrhovni sud Holandije je u prvom slučaju zaključio da je predsedavajući arbitar dužan da naknadi štetu jer nije obezbedio da svi arbitri potpišu arbitražnu odluku, te samim tim učinio je neizvršivom. *Greenwold v. NAI and Arbitrators*, 4. 12. 2009, ECLI:NL:PHR:2009:BJ7834. U drugom slučaju su Arbitri i NAI tuženi da naknade štetu jer su vodili arbitražni postupak i doneli arbitražnu odluku bez postojanja arbitražnog sporazuma, zbog čega je kasnije arbitražna odluka poništena, ali je Vrhovni sud Holandije utvrdio da ta činjenica nije dovoljna da zasnuje odgovornost.

[32] J. Vukadinović Marković, I. Radomirović, str. 242; K. Jovičić, str. 23; J. Perović Vujačić, str. 154.

[33] ZAD, čl. 37, st. 1. ZJB, čl. 59, st. 1.

[34] M. Karanikić Mirić, str. 571.

javnobeležničkom delatnošću, nabraja, između ostalog, obavljanje poslova arbitra.[35] Dakle, ako bi javni beležnik koji postupa kao arbitar hteo da se osigura od štete koju pričini kao arbitar, morao bi da se ponovo osigura.

Položaj advokata je znatno bolji, budući da je profesionalno osiguranje za advokate sveobuhvatno. U okviru definicije delatnosti advokata odnosno pružanja pravne pomoći, se u čl. 3, st. 1, tač. 5 ZAD, eksplicitno navodi i: „posredovanje u cilju zaključenja pravnog posla ili mirnog rešavanje sporova i spornih odnosa". Stoga, ako zaključimo da obavezno osiguranje pokriva štetu koja nastane prilkom pružanja pravne pomoći, to nas dovodi do zaključka da ono pokriva i štetu nastalu prilikom vršenja poslova arbitra.[36]

Dakle, prilikom vršenja poslova arbitra sva lica, osim advokata, nisu osigurana. Određeni pravni sistemi poput Španije su uveli obavezno osiguranje registrovanih arbitra,[37] a ICC je preporučila svim arbitrima da ugovore osiguranje od profesionalne odgovornosti.[38] Pored ICC, LCIA i NAI, takođe, pružaju osiguranje svojim arbitrima.[39] Razvoj ove prakse je najprimetniji u Španiji gde su razne advokatske komore uvrstile vršenje poslova arbitra u advokatsko osiguranje, a arbitražne institucije osiguravaju svoje arbitre, dok u slučaju *ad hoc* arbitraža, sami arbitri zaključuju ugovor o osiguranju of profesionalne odgovornosti ili sličan vid garancije.[40]

2. Postupak naplate od osiguravača

Kada arbitar pričini stranci štetu, bitno je odgovoriti na pitanje kako će se stranke naplatiti od njegovog osiguravača kada nastane osigurani slučaj. Osigurani slučaj nastaje kada štetni događaj prouzrokuje štetu trećem licu i to lice od tog trenutka može u subjektivnom roku od tri, a objektivnom od pet godina da podnese zahtev za nadoknadu štete odnosno naplate od osiguravača.[41]

Oštećeno lice mora prvenstveno da zna koliki je iznos štete koje je pretrpelo. Taj iznos se relativno lako određuje jer se ta šteta često manifestuje kao stvaranje dodatnih troškova za sprovođenje arbitraže. Zatim, to lice može da se obrati

[35] ZJB, čl. 4, čl. 5, st. 2, tač. 4.

[36] ZAD, čl. 3, st. 1, tač. 5.

[37] Španski Zakon o arbitraži iz 2003. godine (*Ley de Arbitraje*; dalje u fusnotama: LA), čl. 21, st. 1. Obavezno osiguranje je uvedeno 2013.

[38] ICC Commission on International Arbitration, "Final Report on the Status of the Arbitrator", *ICC International Court of Arbitration Bulletin*, Vol. 7, No. 1/1996, str. 32.

[39] A. el Shourbagy, 190.

[40] María Pilar Perales Viscasillas, Liability Insurance in Arbitration: The Emerging Spanish Market and the Impact of Mandatory Insurance Regimes, 2014, *https://arbitrationblog.kluwerarbitration.com/2014/01/08/liability-insurance-in-arbitration-the-emerging-spanish-market-and-the-impact-of-mandatory-insurance-regimes/*, pristupljeno: 15. 12. 2023.

[41] N. Petrović Tomić, str. 211–213. S druge strane, u *common law* sistemima se često primenjuje *claims-made* sistem gde se smatra da je osigurani slučaj nastupio kada oštećeni podnese tužbu.

osiguravaču i da zahteva naknadu štete koju je pretrpelo događajem koji je izazvao osiguranik tj. arbitar. Naravno, osiguravač će, ako usvoji zahtev, isplatiti oštećenika jedino do iznosa osigurane sume.[42] Taj iznos, koji je npr. u slučaju Advokatske komore Beograda 20,000€,[43] može da bude premali, pogotovo kada su u pitanju sporovi velike vrednosti što proporcionalno utiče na troškove postupka koji, ukoliko se radnjama arbitra povećaju, se poistovećuju sa iznosom štete. Zbog toga, preporučuje se da arbitar dobrovoljno zaključi ugovor o osiguranju kako bi mogao da pokrije veće iznose štete koje će potencijalno morati da naknadi.

Osiguravač usvaja ili odbija zahtev na osnovu toga koliko je verovatno da je osiguranik zaista odgovoran i da li je to dokazivo. Još jedna opcija je da se oštećeni obrati direktno arbitru, ali tu postoji rizik insolventnosti osiguranika.[44] Ukoliko se oštećeni opredeli za parnični postupak, mora da bude spreman na to da će se osiguravač i osiguranik naći na strani tuženog kao suparničari na osnovu konekstiteta predmeta osiguranja i predmeta spora. Ako ne budu formalno suparničari, velika je verovatnoća da će se na neki način uključivati u postupku na strani tuženog.[45]

3. Specifičnosti u slučaju arbitražnog veća

Zarad kvalitetnog regulisanja ovog instituta neophodno je utvrditi kako se pomenuti principi održavaju na prava oštećenog u slučaju postojanja arbitražnog veća koje čini neparan broj arbitara, najčešće tri.[46]

Autor je mišljenja da bi na osnovu čl. 206 i 208 ZOO odnosima morali da odgovaraju solidarno, osim pod izuzetnim okolnostima kada se može jasno utvrditi da jedan ili više članova arbitražnog veća nisu imali učešća u donošenju određene odluke, te ni u prouzrokovanju štete. Ako se oštećeni naplati od određenog arbitra ili njegovog osiguravača, taj arbitar bi imao pravo da se regresira od ostalih arbitara odnosno njihovih osiguravača. Iako taj arbitar nije treće oštećeno lice, već jedan od štetnika, neophodno je prisetiti se da je funkcija solidarne odgovornosti zaštita poverioca, a ne alat solidarnih dužnika da izbegavaju regres drugih dužnika.[47] Stoga bi prigovor da arbitar koji se regresira nije treće oštećeno lice bio neutemeljen. Neovisno od toga, zarad izbegavanja konfuzije možda bi i bilo korisno da članovi arbitražnog veća za dati arbitražni postupak zaključe kolektivni ugovor sa osiguravačem.

Jedan od izuzetaka kada ko-arbitri ne bi trebalo da odgovaraju je u slučaju štete koju je prouzrokovao predsednik arbitražnog veća. ZA propisuje da on predsedava

[42] ZOO, čl. 941, st. 1.

[43] Advokatska komora Beograda, Osiguranje od profesionlane odgovornosti, 2021, *https://akbgd.org.rs/sr/osiguranje-od-profesionalne-odgovornosti/*, pristupljeno: 15. 12. 2023.

[44] N. Petrović Tomić, str. 203.

[45] N. Petrović Tomić, str. 207.

[46] ZA, čl. 16.

[47] ZOO, čl. 206, 208.

većem, što uobičajeno znači da priprema nacrt arbitražne odluke, izriče odluku i sl.,[48] ali bez jasnog propisivanja njegovih ovlašćenja. Međutim, njegovo ovlašćenje može da bude prošireno arbitražnim sporazumom, ali i pravilima arbitražne institucije. Pravila Beogradskog arbitražnog centra dopuštaju da arbitražno veće ovlasti predsednika da samostalno donosi zaključke kojima se upravlja postupkom.[49] Tako, u određenom broju slučajeva šteta koju prouzrokuje arbitražno veće, zapravo može da se pripiše predsedniku arbitražnog veća. U skladu s tim, on bi samostalno odgovarao, a ostalim članovima arbitražnog veća odgovornost ne bi mogla da se pripiše, budući da oni uopšte nisu učestvovali u donošenju tih zaključaka.

Drugi izuzetak bi mogao da dođe do izražaja mnogo češće i tiče se arbitra koji glasa protivno odluci ostatka veća, ali, nezavisno od njegovog glasa, procesni akt ili konačna odluka opstaje. Stoga, konstatovaće se da je taj arbitar glasao protiv. On čak može pod određenim okolnostima da odbije da potpiše odluku. Takođe, može da napiše izdvojeno mišljenje koje na njegov zahtev može da se uruči arbitražnim strankama.[50] Na taj način se arbitar „ograđuje" od odgovornosti prema strankama, budući da je on izvršio sve što je u njegovoj moći da se ne donese takav pravni akt. Štaviše, u slučaju pisanja izdvojenog mišljenja, taj arbitar je preuzeo sve što je mogao da bi ukazao svojim kolegama, zašto smatra da su došli do pogrešnom zaključka prilikom donošenja arbitražne odluke.

Kako uzročno-posledična veza između tog člana arbitražnog veća i štete koja se nanese strankama ne postoji, taj član ne sme ni pod kojim uslovima da snosi građanskopravnu odgovornost. U skladu s tim, oštećeno lice ne bi smelo da se obrati njegovom osiguravaču za naknadu štete. Zanimljiv scenario može da nastane u slučaju da arbitražno veće ima kolektivan ugovor sa osiguravačem. To otvara nova pitanja kako se njegov manjak nepažnje odražava na osiguranu sumu i buduće premije.

Smatramo da je odgovor na pitanje, da li bi ovakva okolnost trebala da se odrazi na sumu iznosa osiguranja, teže pronaći i da prevazilazi domet ovog rada. Međutim, ono u šta smo sigurni je da taj član arbitražnog veća ne bi smeo da trpi bilo kakve posledice u budućnosti u smislu povećane premije osiguranja za naredni put zbog toga što je nastupio osigurani slučaj usled radnji njegovih saosiguranika.

V. Trenutno stanje na međunarodnoj arbitražnoj sceni

Pravni preduslovi za osiguranje arbitra definitivno postoje, ali neophodno je utvrditi njegovu održivost na srpskom finansijskom tržištu. Naime, po nalazima Švajcarskog udruženja arbitra, više od 50% arbitražnih institucija se osigurava i nudi osiguranje arbitrima na njihov zahtev, ali veoma mali broj to zahteva. Jedan od

[48] G. Knežević, V. Pavić, str. 154.
[49] BAC, čl. 29, st. 3.
[50] ZA, čl. 51, 52.

razloga je taj što u *common law* sistemima imaju imunitet nalik sudiji. Za radnje po kojima ne odgovaraju nalik sudiji računaju da ne mogu da prouzrokuju veliku štetu te se ne osiguravaju. Takođe, jedan od problema je to što ovaj proizvod osiguranja nije dostupan na svim tržištima.[51]

Pored toga, osiguravači smatraju da je reč o neistraženom tržištu i da u brojnim državama ne postoji veliki broj klijentele tj. arbitra. Mnogi osiguravači ne znaju mnogo o arbitraži i zbog toga su tehnički nepotkrepljeni da uopšte stvore polisu za njih, a kamoli da učestvuju u takvim sporovima. Čak i kad bi stvorili polisu, osiguranje arbitra u arbitražama visokog iznosa bi nekad možda iziskivala i reosiguranje. Takođe, teško je proceniti po pravilima koje države će naredna arbitraža da se sprovede i kako će to da se odrazi na rizik arbitra tj. osiguranika.[52] Međutim, ICC je imao uspeha u sastavljanju opšte polise osiguranja za svoje arbitre koja je čak dva put primenjena u praksi. Oni svoje arbitre osiguravaju tokom trajanja samog arbitražnog postupka.[53] Doduše, neki osiguravači preferiraju da zaključuju godišnje ugovore sa arbitrima. Prilikom procene rizika uzimaju u obzir: broj arbitraža godišnje, iskustvo, vrednost spora, vrstu spora, kojoj industriji spor pripada, ali i stav arbitražne institucije i države čije se pravo primenjuje po pitanju imuniteta arbitra.[54]

Jedan od argumenata protiv uvođenja ovog instituta je da bi se propisivanjem obaveznog osiguranja arbitri opteretili i obeshrabrili. Zagovornici obaveznog osiguranja za arbitre odgovaraju na ovaj argument tako što kažu da mnogi drugi nosioci slobodnih profesija moraju da se osiguraju, a ne ističu tu okolnost kao problem svoje profesije.[55] Još jedno pitanje koje se razmatra je da li bi osiguranje stvorilo

[51] Tadas Varapnickas, To Insure or Not to Insure: Should Arbitrators Be Obliged to Insure Their Civil Liability? 2019, *https://arbitrationblog.kluwerarbitration.com/2019/11/08/to-insure-or-not-to-insure-should-arbitrators-be-obliged-to-insure-their-civil-liability/*, pristupljeno: 15. 12. 2023. Maria Pilar Perales Viscasillas, "Arbitration insurance: an emerging market in Spain", *Revisita del Club Español de Arbitraje*, Iss. 20/2014, str. 74.

[52] M. Pilar Perales Viscasillas, str. 74. Howard M. Holtzmann *et al.*, "Matters Not Addressed in the Final Text of the 2006 Amendments to the UNCITRAL Model Law", *A Guide to the 2006 Amendments to the UNCITRAL Model Law on International Commercial Arbitration: Legislative History and Commentary* (editors Howard M. Holtzmann *et al.*), Alphen aan den Rijn, 2015, str. 674, 695–696. Različiti režimi građanskopravne odgovornosti arbitra je razlog zbog kojeg se UNCITRAL Model Law 2006 nije bavio tom temom. Sekretarijat UNCITRAL-a je uočio da *common law* zemlje daju arbitrima imunitet sličan sudijskom, dok ih kontinentalnopravne zemlje tretiraju u skladu sa pravilima ugovornopravne odgovornosti.

[53] A. el Shourbagy, str. 221, 227–229. U slučaju *Landmark Venture Inc. v. Stephanie Cohen and The International Chamber of Commerce*, 25. 11. 2014, U.S. District Court Southern District of New York, 13 Civ. 9044 (JGK), osiguravač ICC je bio spreman da se umeša u spor, ali tužba nije bila uspešna, dok su u drugom slučaju, koji predsednik ICC u intervjuu nije imenovao, tri londonska arbitra iskoristila ICC osiguranje jer im je odgovaralo više od advokatskog osiguranja koje su imali, nakon što je protiv njih podignuta tužba.

[54] A. el Shourbagy, str. 227. Zanimljivo je da neki osiguravači ne osiguravaju za arbitriranje u *common law* zemljama, naročito SAD, te arbitri u tim slučajevima moraju dodatno da se osiguraju.

[55] A. el Shourbagy, str. 189. Ista diskusija se pokrenula u britanskom *House of Lords* prilikom izmene *English Arbitration Act*. Ovaj argument za obavezno osiguranje arbitra je izneo Lord Dejvid Heking (*David Hacking*), doduše, na kraju obavezno osiguranje arbitra nije uvršteno u novi zakon.

moralni hazard među arbitrima. Opet, isto može da se desi ako arbitri imaju previsok imunitet.[56] Autor smatra da ne postoji velika opasnost od problema moralnog hazarda jer je uveren da arbitra, koji često škodi strankama svojim odlukama i tako ih čini nezadovoljnim, neće uspeti da ostane konkurentan i da će njegovo ponašanje samo tržište na taj način sankcionisati.

VI. Zaključak

Na osnovu svega autor zauzima stav da je potrebno imati harmonizovan režim za sve arbitre po pitanju osiguranja. Trenutno se čini nepravičnim i nedopustivim da samo advokati imaju osiguranje koje pokriva njihovo postupanje kao arbitri, a da ostala lica ostanu nezaštićena.

Zbog toga treba razmotriti ideju o obaveznom osiguranju arbitra od profesionalne odgovornosti i time unifikovati njihov status neovisno od profesije kojoj pripadaju. Pre uvođenja takvog instituta bitno je sprovesti istraživanje koje bi ukazalo koliko često arbitri pričinjavaju štetu, te videti da li je uvođenje ovog instituta smisleno. Ukoliko se ispostavi da je opravdano uvesti ga, neophodno je doneti ovu normu u komunikaciji sa arbitražnom stručnom javnošću, arbitražnim institucijama, osiguravajućim društvima i udruženjima, kao i nadležnim regulatorom (NBS). Konačno, pored kolektivnog dijaloga, srpski zakonodavac bi morao da sagleda decenijski razvoj tržišta obaveznog osiguranja arbitra onih država koje su to primenile. Poučen istim, zakonodavac bi mogao da preduzme prave korake koji su najbolji za pravnu i ekonomsku realnost Republike Srbije.

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[56] R. Mullerat, str. 10.

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POTENTIAL FOR DEVELOPMENT OF ARBITRATOR PROFESSIONAL LIABILITY INSURANCE SERVICE IN THE REPUBLIC OF SERBIA

REVIEW ARTICLE

Abstract

From a comparative legal perspective, insurance companies have relatively recently begun to offer the service of arbitrator civic-legal liability insurance. Some legal systems have mandated insurance for all arbitrators. Additionally, various reputable arbitration institutions have taken a stance on whether they recommend arbitrators to be insured or not. However, there are diametrically opposed opinions in varous legal systems regarding whether the existence of such insurance service is allowed by positive regulations and public policy. In line with the situation at the global arbitration scene, it is necessary to examine whether there is a legal basis for such insurance service in the Serbian financial market and what are the prospects for its establishment.

Keywords: *arbitration, civic-legal liability insurance, professional insurance, arbitrators' insurance.*

I. Introduction

In order to establish whether arbitrators' insurance is a legal insurance service in the Serbian financial market, we need to determine that the legal prerequisites are fulfilled. First, we must define the nature of the civic liability of an arbitrator for actions taken during the arbitration process. Then, in the event of existance of such liability,

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it is necessary to establish the degree of negligence required for the attachment of such liability. Upon the establishment of the mentioned facts, attention should be directed to positive regulations in the fields of insurance law, tort law, and arbitration, which will indicate the degree of negligence by the insured (arbitrator) that creates legal conditions for third-party claims against the Insurer. This step is important because if the threshold of negligence in establishing the civic-legal liability of an arbitrator exceeds the threshold of negligence for which the sum insured sum is paid to a third party, such a service cannot thrive in the Serbian financial market.

Services for civic-legal liability insurance are offered to holders of liberal professions (civil engineers, doctors, lawyers, etc.). However, arbitrators, by one of their characteristics, differ from other liberal professions; namely, they perform a judicial function in part of the arbitration process. Therefore, this paper will present the difference between the regime of judicial function performed by an arbitrator and other actions taken by nature of the job and how that reflects on their civic-legal liability and the obligations of the Insurer.

II. Civic-legal liability of an arbitrator

Arbitrators have to be individuals with legal capacity. These conditions may be tightened by the arbitration agreement,[2] law,[3] or rulebooks of an arbitration institution.[4] For the purposes of professional arbitrators' insurance, it is most important to divide arbitrators into the following three categories: notaries public, lawyers,[5] and third parties. The reason behind this division is that notarial services and legal practice are the only professions explicitly permitted by law to act as arbitrators, yet they are obligated to be insured against professional liability. Since both laws address these issues in their own distinct ways, these two professions constitute two categories and should be separately considered.

For an arbitrator to even consider obtaining insurance against civic-legal liability, they must be eligible to be liable in a civic-legal sense. Arbitrators are specific in that they are subject to two regimes of civic-legal liability. One concerns the judicial function performed by the arbitrator, under which there is immunity during actions that

[2] Law on Arbitration – LA, *Official Gazette of the RS*, No. 46/2006, Article 19. These individuals do not necessarily have to be legal professionals, but can be persons with specific technical knowledge (e.g., engineers) who will serve as arbitrators.

[3] Law on Mediation in Labor Disputes – LMLD, *Official Gazette of the RS*, No. 125/2004, 104/2009, and 50/2018, Article 38; The Law on Sports – LS, *Official Gazette of the RS*, No. 10/2016, Article 54, para. 3.

[4] Rulebook on Procedure for Resolving Disputes Regarding Registration of National Internet Domain Names, *Official Gazette of the RS*, No. 31/11, 24/12, 67/14, and 61/16, Article 4, para. 2.

[5] Law on Legal Profession – LLP, *Official Gazette of the RS*, No. 31/2011 and 24/2012 – Decision of the Constitutional Court, Article 37. Law on Notaries Public – LNP, *Official Gazette of the RS*, No. 31/2011, 85/2012, 19/2013, 55/2014 – as amended, 39/2014 – as amended, 121/2013, 6/2015, and 106/2015, Article 59.

may cause damage (e.g., incorrect application of law).[6] In such cases, liability arises only if damage is caused intentionally, similar to the liability of a judge.[7] Continental judicial practice, specifically French[8] and Dutch,[9] has established that arbitrators will be liable only in cases of gross negligence, intent, or fraud in the performance of their judicial duty. There is also a narrower interpretation by the Supreme Court of Austria, which argues that in cases of the judicial role of arbitrators, liability arises for intent. This viewpoint has also been adopted by the Court of Appeal in Brussels,[10] whereas the liability under contract law applies to other aspects of enacting the role of arbitrators, not related to the application of law,[11] which is most consistent with the Article 7 of the Judges Act.[12]

However, there are duties and actions performed during the arbitration process for which the arbitrator is not liable as a judge but rather as a contractual party or expert. This regime of liability relies upon the arbitration agreement and the general obligations of an arbitrator.[13] Of course, arbitrators may inflict damage upon third parties while damaging their clients, and these third parties may also file claims for indmenity,[14] but for the sake of straightforwardness of this paper, we will not extensively address them.

A notary public, when performing their activities within their public powers as a notary public, is liable under tort law. However, while performing tasks that

[6] Jelena Perović Vujačić, "Obligations of Arbitrators in International Commercial Arbitration", *Review of the Kopaonik School of Natural Law*, No. 1/2019, pp. 158–159.

[7] Judges Act – JA, *Official Gazette of the RS*, No. 10/2023, Article 7.

[8] J. Perović Vujačić, pp. 158–162. Teresa Giovannini, "Chapter 36: Immunity of Arbitrators", *The Plurality and Synergies of Legal Traditions in International Arbitration: Looking Beyond the Common and Civil Law Divide*, (editors Nayla Comair-Obeid and Stavros Brekoulakis), Alphen aan den Rijn, 2023, p. 443. Cour de cassation, chambre civile 2, 29.6.1960; TGI Paris, Bompard et Carcassonne, 13. 6. 1990, confirmed by CA Paris, 22.5.1991.

[9] *Qnow B.V. v. V* (chairperson), 30. 9.2 016, ECLI:NLHR:2016:2215 referring to the standard applied by the Supreme Court of the Netherlands in 2009 in the case of *ASB Greenwold v. NAI and Arbitrators*, 4. 12. 2009, ECLI:NL:PHR:2009:BJ7834. In the 2009 case, this standard was adopted by analog application of the Dutch equivalent of the Judges Act, which prescribes the same criterion as the aforementioned French case law.

[10] *A. v. E. V.*, Court of Appeal of Brussels, 2015/AR/208, 28. 11. 2017. The court took the position that arbitrators are liable in cases of intention and fraud, just like other judges. It was also stated that it was irrelevant that the arbitrator's function is based on a contract, since they have the same role as judges. In the arbitration proceedings themselves, the arbitrator was held responsible because they actively involved an expert in making the arbitral decision by accepting their views on the interpretation of the law and allowing the expert to exceed their own authority.

[11] *Mr. A – Chairman of arbitral tribunal v. German Company X,* Supreme Court of Austria (Oberster Gerichtshof) – 1 Ob 253/17, 28.4.1998, ICCA Yearbook Commercial Arbitration 2001 – Volume XXVI, 221–228.

[12] JA, Article 7.

[13] J. Perović Vujačić, pp. 158–162.

[14] Ramón Mullerat, *The liability of arbitrators: a survey of current practice*, International Bar Association – Commission on Arbitration, Chicago 2006, p. 8. These individuals can be an arbitral institution (e.g., violation of mandatory rules and goodwill loss) or individuals such as attorneys-at-law and experts (e.g., unauthorized disclosure of secrets and information that the arbitrator learned about them).

are not contrary to their profession, such as acting as an arbitrator, they are liable under contractual liability because they enter into a contractual relationship as private individuals, not as holders of public-legal authorities.[15] Lawyers are liable in the same way, because they are in a contractual relationship with the parties when performing legal services, which includes, among other things, acting as arbitrators.[16]

The final conclusion of this segment is that arbitrators will certainly be liable under contractual liability, consistent with the judicial practice of other continental legal systems,[17] and in the event of damage occurred during the exercise of their "quasi-judicial" function, they will be liable for gross negligence and intent. This is important because the Insured will be obligated to compensate for damages resulting from ordinary negligence as well as gross negligence, which is a peculiarity of civic-legal liability insurance, as long as such gross negligence does not imply a gross violation of professional standards.[18] However, the insurance against intent cannot be obtained under any circumstances as it contradicts public policy since such type of insurance is imperatively prohibited.[19]

III. Damage caused by activities of arbitrator

It is necessary to examine whether there are any activities of an arbitrator that can be performed with a sufficiently low degree of negligence that could later qualify as an insured event.

One of the ways to cause damage is by the untimely issuance of an arbitration award, which is a well-known practice in both continental legal systems and common law jurisdictions.[20] Although due dates prescribed by arbitration rules can

[15] LNP, Articles 4, 5, and 58. Marija Karanikić Mirić, "Odgovornost javnih beležnika u srpskom građanskom pravu", *Pravni život*, No. 10/2014, pp. 569–571.

[16] As for the mentioned third parties, these third parties can be legal professionals who are neither lawyers nor notaries, such as law professors. It should be noted that these individuals do not necessarily have to be legal professionals. They can also be experts in other fields who can be very useful in disputes requiring technical knowledge (e.g., a civil engineer as an arbitrator in a dispute arising from a construction contract). All third parties acting as arbitrators are liable under the regime of contractual liability as private individuals.

[17] Gustaf Möller, "The Finnish Supreme Court and the Liability of Arbitrators", *Journal of International Arbitration*, No. 1/2006, pp. 95–99. *Roulas v. Professor J. Tepora; Mr. A – Chairman of arbitral tribunal v. German Company X*.

[18] Nataša Petrović Tomić, *Osnovi prava osiguranja*, Belgrade, 2021, p. 203.

[19] Law on Contracts and Totrs, *Official Gazette of the SFRY*, No. 29/78, 39/85, 45/89 – Decision of the Constitutional Court of Yugoslavia and 57/89, *Official Gazette of the FRY*, No. 31/93, *Official Gazette of Serbia and Montenegro*, No. 1/2003 – Constitutional Charter, *Official Gazette of the RS*, No. 18/2020, Article 920.

[20] Ahmed Fathy Mohamed el Shourbagy, *Arbitrator and Arbitral Institutions: Liability and Insurance*, Rotterdam, 2021, p. 134. The author refers to cases before the Cour de cassation (2006) and the Court of Appeal of Paris (2015) in which arbitrators had to reimburse costs incurred due to rendering a decision after the

be extended with the approval of an arbitration institution,[21] we may conclude that in the case of unreasonable delay in issuing an arbitration award, arbitrators may be required to compensate the parties for the inflicted damages.[22] Moreover, the author believes that such damages may arise from ordinary negligence and gross negligence of the arbitrator, not exclusively from intent.

Maintaing the independence and impartiality as specified under the Article 21 of the LA as an objective and subjective component, represents one of the duties manifested through the obligation of the arbitrator to disclose relevant facts. In the event that the arbitrator fails to disclose the relevant facts,[23] there may be subsequent damage in the form of additional costs incurred by the parties as a result of arbitration delay. Damage can also arise from the subsequent annulment of the arbitration award or its non-recognition and non-enforcement.[24] Various courts have established the civic-legal liability for breach of duties similar to those in the Article 21 of the LA based on general rules of the law of contract because the breach of such duty is the direct cause of increased costs or damage.[25] This leaves room for the breach of such duty through gross negligence, and perhaps even ordinary negligence. Situations indicating that this duty may be breached by lower degrees of negligence include those where the arbitrator finds it difficult to assess whether certain facts are relevant. One example is when the relevant circumstances do not

deadline. The third case was before the California Court of Appeal (1983), where it was established that timely rendering of arbitral decisions is not a component of the "quasi-judicial" function of arbitrators, and therefore, they do not have immunity.

[21] Chamber of Commerce and Industry of Serbia, Rulebook on International Commercial Arbitration – STA, Article 41. Belgrade Arbitration Center, Rulebook of Belgrade Arbitration Center (Belgrade Rules) – BAC, Article 32.

[22] Jelena Vukadinović Marković, Ivana Radomirović, "Pravo na naknadu štete kao posledica povrede *receptum arbitri* – građanskopravna odgovornost arbitara", *Prouzrokovanje* štete*, naknada* štete *i osiguranje* (editors Zdravko Petrović, Vladimir Čolović and Dragan Obradović), Belgrade – Valjevo, 2022, p. 242; J. Perović, p. 143.

[23] Gašo Knežević, Vladimir Pavić, *Arbitraža i ADR*, Belgrade, 2009, pp. 92 – 94; J. Perović Vujačić, pp. 149–152.

[24] J. Vukadinović Marković, I. Radomirović, p. 242.

[25] G. Möller, pp. 95 – 99. *Roulas v. Professor J. Tepora*. Interestingly, the Supreme Court of Finland asserts that if an arbitrator informs the parties of the reason for recusation and is not recused, and the decision is nevertheless annulled, they would not be held liable because there would be no causal chain. Furthermore, although the Helsinki Court of Appeal established the presence of culpa levis, which the Supreme Court of Finland did not dispute, it was found that as an expert, the arbitrator should have known that providing consulting services to banks owned by one of the parties in the arbitration proceedings could raise justified suspicions of the opposing party. *Mr. A – Chairman of arbitral tribunal v. German Company X.* A similar conclusion was reached by the Supreme Court of Austria in the aforementioned case, applying German law (BGB) and overturning the opinion of the Vienna Court of Appeal. The dispute arose because the presiding arbitrator failed to inform the parties that, at the request of the de facto owner of the Nuremberg company (which was in dispute with Company X), he had presided over the arbitration institution of that economic organization registered in Vienna.

fall within the *exempli causa* "orange" or "green" list that the IBA has adopted to prevent conflicts of interest among arbitrators.[26]

Another obligation of an arbitrator is to conscientiously and efficiently perform their duties.[27] Such obligation can be breached in two ways. The first is the arbitrator's voluntary withdrawal from the proceedings, albeit without justified reasons.[28] The question is whether the arbitrator can unreasonably withdraw and whether this falls within the realm of ordinary or gross negligence, allowing the Insurer to cover damages resulting from such circumstances.

The second way concerns the conduct of the arbitration process itself. Conscientiousness would involve adhering to all principles and rules of the arbitration procedure, meeting the parties demands, and ensuring the proper application of substantive law. This also includes the principle of equal treatment of the parties, where both parties have the opportunity to express their views and arguments on equal terms.[29] The hazard here arises not only from causing harm to the parties through poor conduct of the proceedings but also from the risk of annulment or non-recognition and non-enforcement due to inadequate decisions. Such circumstances would create additional costs for the parties in the arbitration dispute, for which the arbitrator would be liable.[30] The Supreme Court of the Netherlands has encountered such cases twice, applying the same standard but adopting different stances, depending on the reason for the subsequent annulment of the arbitration award.[31]

Damage can also occur is if the arbitrator breaches the principle of confidentiality by unauthorized disclosure of information to third parties that should not have access to the content or outcome of the proceedings or any information learned about the parties during the proceedings.[32] Such form of damage can occur intentionally or accidentally, due to the arbitrator's distraction in an informal atmosphere.

[26] IBA Council, *IBA Guidelines on Conflicts of Interest in International Arbitration*, International Bar Association, London, 2014, pp. 22–27.

[27] LA, Article 24 and 48; J. Perović Vujačić, pp. 136–139; Katarina Jovičić, "Pravna priroda odnosa između arbitara i stranaka: receptum arbitri", *Strani pravni život*, No. 1/2020, p. 24.

[28] LA, Article 25. G. Knežević, V. Pavić, p. 99; J. Vukadinović Marković, I. Radomirović, p. 242; J. Perović Vujačić, p. 148. Justified reason must arise from factual or legal circumstances.

[29] K. Jovičić, p. 24.

[30] J. Vukadinović Marković, I. Radomirović, p. 242; K. Jovičić, p. 24.

[31] *Qnow B.V. v. V* (chairperson), 30. 9. .2016, ECLI:NLHR:2016:2215. The Supreme Court of the Netherlands in the first case concluded that the presiding arbitrator is obliged to compensate for the damage because he failed to ensure that all arbitrators signed the arbitral award, thus rendering it unenforceable. *Greenwold v. NAI and Arbitrators,* 4. 12. 2009, ECLI:NL:PHR:2009:BJ7834. In the second case, the Arbitrators and NAI were sued for damages because they conducted the arbitration proceedings and rendered an arbitral award without the existence of an arbitration agreement, leading to the subsequent annulment of the arbitral award. However, the Supreme Court of the Netherlands found that this fact alone was not sufficient to establish liability.

[32] J. Vukadinović Marković, I. Radomirović, p. 242; K. Jovičić, p. 23; J. Perović Vujačić, p. 154.

It is reasonable to conclude that there are actions by which the arbitrator, through ordinary or gross negligence, can cause damage to the parties in the arbitration proceedings, which they would later have to compensate for. Therefore, from the standpoint of basic civic legal principles, the preconditions for the existence of professional liability insurance for arbitrators in the Republic of Serbia are met.

IV. Regulatory framework of professional liability insurance for arbitrators

1. Scope of mandatory professional insurance

To locate the regulatory framework, one needs to recall the initial division into lawyers, notaries public, and third parties. Notaries public and lawyers have a legal obligation to maintain an insurance coverage against civic-legal liability.[33] However, the regimes of their professional insurance differ.

The issue arises due to the fact that because notarial insurance does not cover acting as an arbitrator, as it falls outside their scope of activity.[34] The Notary Public Act in Article 4 clearly defines the scope of notarial activities and does not mention the performance of arbitrator tasks. However, in the subsequent Article 5, which lists exceptions that are not incompatible with notarial activities, it includes the performance of arbitrator tasks[35] among others. Therefore, if a notary public acting as an arbitrator wanted to be insured against damages caused in their role as an arbitrator, they would need to obtain insurance separately.

The position of lawyers is significantly better, as professional insurance for lawyers is comprehensive. Within the definition of the activities of lawyers or provision of legal assistance, Article 3, paragraph 1, item 5 of the LPA explicitly includes "mediation for the purpose of concluding a legal transaction or peaceful resolution of disputes and controversial relations." Therefore, if we were to conclude that this mandatory insurance covers damage arising from the provision of legal assistance, it would ensue that it also covers damage arising from the performance of arbitrators tasks.[36]

Therefore, during the performance of arbitrator duties, all individuals except lawyers are not insured. Certain legal systems, such as the one in Spain, have introduced mandatory insurance for registered arbitrators,[37] and the ICC has recommended all

[33] LLP, Article 37, paragraph 1; LNP, Article 59, paragraph 1.
[34] M. Karanikić Mirić, p. 571.
[35] LNP, Article 4, Article 5, paragraph 2, item 4.
[36] LLP, Article 3, paragraph 1, item 5.
37 Spanish Arbitration Act of 2003 (Ley de Arbitraje; hereinafter referred to in footnotes as LA), Article 21, paragraph 1. Mandatory insurance was introduced in 2013.

arbitrators to obtain professional liability insurance.[38] In addition to the ICC, the LCIA and the NAI also provide insurance to their arbitrators.[39] The development of this practice is most noticeable in Spain, where various bar associations have included the performance of arbitrator tasks in the coverage for lawyers, and the arbitration institutions take out the insurance coverage for their arbitrators, while in the case of *ad hoc* arbitrations, arbitrators themselves conclude contracts for professional liability insurance or similar forms of guarantee.[40]

2. Procedure for claiming from insurers

When an arbitrator provokes damages to a client, it is crucial to address the matter of how the client will collect indemnity from the former's insurer upon insured occurrence. An insured occurrence is deemed an event causing damage to a third party, and from that moment on, the third party can submit a claim for indmenity or payment from the Insurer[41] within a subjective period of three, and/or an objective period of five years.

The claimant has to first determine the amount of the damage it has sustained. This amount is relatively easy to determine, as the damage often manifests as additional costs for conducting arbitration. Thereafter the claimant can approach the Insurer and demand indmenity for the damage sustained due to an event caused by the Insured, that is, the arbitrator. Of course, if the Insurer accepts the claim, they will only pay the claimant up to the sum insured.[42] For example, in the case of the Belgrade Bar Association, this sum equals €20,000,[43] which may be insufficient, especially in cases of high-value disputes, proportionally impacting the costs of the procedure, which, if increased by the arbitrator's actions, equate to the amount of the damage. Therefore, it is recommended that the arbitrator voluntarily enter into an insurance contract to cover potentially higher amounts of damage that they might have to compensate.

The Insurer accepts or denies the claim based on the likelihood of the Insured's actual liability and whether such liability may be proved. Another option is

[38] ICC Commission on International Arbitration, "Final Report on the Status of the Arbitrator", *ICC International Court of Arbitration Bulletin*, Vol. 7, No. 1/1996, p. 32.

[39] A. el Shourbagy, p. 190.

[40] María Pilar Perales Viscasillas, Liability Insurance in Arbitration: The Emerging Spanish Market and the Impact of Mandatory Insurance Regimes, 2014, *https://arbitrationblog.kluwerarbitration.com/2014/01/08/liability-insurance-in-arbitration-the-emerging-spanish-market-and-the-impact-of-mandatory-insurance-regimes/*, accessed on: 15. 12. 2023.

[41] N. Petrović Tomić, pp. 211-213. On the other hand, in common law systems, the claims-made system is often applied, where the insured event is considered to have occurred when the injured party files a lawsuit.

[42] Law on Contracts and Torts, Article 941, paragraph 1.

[43] Belgrade Bar Association, Professional Liability Insurance, 2021, *https://akbgd.org.rs/sr/osiguranje-od-profesionalne-odgovornosti/*, accessed on December 15, 2023.

for the claimant to directly approach the arbitrator, but there is a risk of the Insured's insolvency.[44] If the claimant opts for litigation, they must be prepared that both the Insurer and the Insured will be on the defendant's side as jointly interested parties based on the connection between the insurance subject matter and the subject matter of the dispute. If they are not formally jointly interesed parties, they are highly probable to be somehow involved in the proceedings, on the defendant's side.[45]

3. Specifics in case of arbitral tribunal

For the purpose of valid regulation of this institute, it is necessary to determine how the mentioned principles apply to the rights of the claimant in the case of existence of an arbitral tribunal composed of an odd number of arbitrators, usually three.[46]

The author believes that based on the Articles 206 and 208 of the Law on Contracts and Torts, they should be jointly liable, except under exceptional circumstances when it can be clearly established that one or more members of the arbitral tribunal did not participate in the decision-making process regarding a specific decision, and therefore did not contribute to the damage. If the claimant is compensated by a particular arbitrator or their insurer, such arbitrator shall be entitled to demand recourse from the other arbitrators or their insurers. Although such arbitrator does not represent a third-party claimant but rather one of the tortfeasors, it is necessary to recall that the function of joint liability is to protect the creditor, not to provide a tool for joint debtors to avoid recourse from other debtors.[47] Therefore, any objection that the arbitrator seeking recourse is not a third-party claimant would be unfounded.

An exception where co-arbitrators should not be liable is found in the case of damage caused by the chair of the arbitral tribunal. The Law on Arbitration stipulates that they preside over the tribunal, which typically means preparing the draft arbitral award, communicating the award, etc.,[48] without clearly defining their powers. However, their authority can be expanded by the arbitration agreement and the rules of the arbitral institution. The rules of the Belgrade Arbitration Center allow the arbitral tribunal to authorise their chair to independently make decisions managing the procedure.[49] Therefore, in some cases, the damage caused by the arbitral tribunal may be attributed to the chair of the tribunal. Accordingly, they would be individu liable, and the other members of the arbitral tribunal would not share the liability, as they did not participate in making those decisions.

[44] N. Petrović Tomić, p. 203.
[45] N. Petrović Tomić, p. 207.
[46] LA, Article 16.
[47] Law on Contracts and Torts, Articles 206, 208.
[48] G. Knežević, V. Pavić, p. 154.
[49] BAC, Article 29, para. 3.

Another exception that may be more common concerns an arbitrator who votes against the tribunal's decision, but regardless of their vote, the procedural act or final award stands. Therefore, it will be noted that the arbitrator voted against. Under certain circumstances, they may even refuse to sign the award. Additionally, they may draft a separate opinion, which, upon their request, can be provided to the arbitration parties.[50] In this way, the arbitrator distances themselves from liability towards the parties, as they have done everything in their power to prevent such a legal act from being made. Moreover, in the case of drafting a separate opinion, that arbitrator has done everything possible to draw attention to their colleagues why they believe that the arbitral award made was incorrect.

Since there is no chain of causation between such member of the arbitral tribunal and the damage inflicted on the parties, the member should not, under any circumstances, bear civic-legal liability. Accordingly, the claimant should not approach the Insurer of such mamber with a claim for damages. An interesting scenario may arise if the arbitral tribunal has a collective agreement with the Insurer. This raises new questions on how their level of negligence affects the sum insured and future premium levels.

We believe that finding an answer to whether such circumstances should affect the sum insured as more challenging and beyond the scope of this paper. However, we are certain that such member of the arbitral tribunal should not sustain any consequences in the future in terms of increased insurance premiums due to the occurrence of the insured event resulting from the actions of their co-insured.

V. Current state on international arbitration scene

The legal prerequisites for insuring arbitrators undoubtedly exist, but it is necessary to determine sustainability of such a service on the Serbian financial market. According to the findings from the Swiss Arbitration Association, more than 50% of arbitration institutions takes out an insurance coverage and offers it to arbitrators upon the latters' request, but few actually do request it. One of the reasons is that, in common law systems, arbitrators have immunity similar to judges. They consider that actions for which they are not held liable, similar to judges, cannot cause siginificant damage, so they do not take out an insurance coverage. Additionally, one of the problems is that this insurance service is not available on all markets.[51]

Furterhmore, insurers consider this to be an unexplored market, and in many countries, there is not a large clientele, i.e., the number of arbitrators. Many insurers

[50] LA, Articles 51, 52.

[51] Tadas Varapnickas, To Insure or Not to Insure: Should Arbitrators Be Obliged to Insure Their Civil Liability? 2019, *https://arbitrationblog.kluwerarbitration.com/2019/11/08/to-insure-or-not-to-insure-should-arbitrators-be-obliged-to-insure-their-civil-liability/*, accessed on: 15. 12. 2023. Maria Pilar Perales Viscasillas, "Arbitration insurance: an emerging market in Spain", *Revisita del Club Español de Arbitraje*, No. 20/2014, p. 74.

do not know much about arbitration and therefore are technically unprepared to develop a policy for them, let alone participate in such disputes. Even if they were to develop a policy, insuring arbitrators in high-value arbitrations might sometimes require reinsurance. Moreover, it is difficult to assess under which rules the next arbitration will be conducted and how that will affect the risk of the arbitrator, i.e., the Insured.[52] Yet, the ICC has succeeded in drafting a general insurance policy for its arbitrators, which has been applied twice in practice. They insure their arbitrators during the arbitration proceedure itself.[53] Nonetheless, some insurers prefer to conclude annual contracts with arbitrators. When assessing risk, they take into account the number of arbitrations per year, experience, the value of the dispute, the type of dispute, the industry to which the dispute relates as well as the stance of the arbitration institution and the country as to whose law applies to immunity of the arbitrator.[54]

One argument against introducing this institute is that by mandating compulsory insurance, the arbitrators would be burdened and discouraged. Advocates for compulsory insurance for arbitrators respond to this argument by stating that many other professionals need to be insured, without stressing that fact as a problem for their profession.[55] Yet another matter under consideration is whether insurance would create moral hazard among arbitrators. Again, the same could happen if arbitrators had too high immunity.[56] The author believes that there is not a significant risk of moral hazard, being convinced that an arbitrator whose awards often inflict damages to parties and thus makes the parties dissatisfied would not be able to remain competitive and that the market will sanction their behavior accordingly.

[52] M. Pilar Perales Viscasillas, p. 74. Howard M. Holtzmann *et al*., "Matters Not Addressed in the Final Text of the 2006 Amendments to the UNCITRAL Model Law", *A Guide to the 2006 Amendments to the UNCITRAL Model Law on International Commercial Arbitration: Legislative History and Commentary* (editors Howard M. Holtzmann et al.), Alphen aan den Rijn, 2015, pp. 674, 695–696. Different regimes of civil liability for arbitrators are the reason why the UNCITRAL Model Law 2006 did not address this issue. The UNCITRAL Secretariat observed that common law countries grant arbitrators immunity similar to judicial immunity, while civil law countries treat them in accordance with contractual liability rules.

[53] A. el Shourbagy, p. 221, 227–229. In the case of *Landmark Venture Inc. v. Stephanie Cohen and The International Chamber of Commerce*, 25.11.2014, U.S. District Court Southern District of New York, 13 Civ. 9044 (JGK), the ICC insurer was willing to intervene in the dispute, but the lawsuit was not successful, while in another case, which the ICC president did not name in the interview, three London arbitrators used ICC insurance because it suited them more than the professional indemnity insurance they had maintained, after being sued.

[54] A. el Shourbagy, p. 227. Interestingly, some insurers do not cover arbitration in common law countries, especially in the USA, so arbitrators in those cases must obtain additional coverage.

[55] A. el Shourbagy, p. 189. The same discussion arose in the British *House of Lords* during the amendment of the English Arbitration Act. Lord David Hacking raised this argument for mandatory arbitrator insurance; however, mandatory arbitrator insurance was not included in the new law.

[56] R. Mullerat, p. 10.

VI. Conclusion

Further to above said, the author takes the stance that there is a need to have a harmonized regime for all arbitrators, when it comes to insurance coverage. Currently, it seems unfair and unacceptable that only tha ttorneys-at-law have insurance to cover their activities performed as arbitrators, while other individuals remain unprotected. Therefore, it is necessary to consider the idea of mandatory professional liability insurance for arbitrators and thereby standardize their status regardless of their core professions. Before introducing such an institute, it is vital to conduct research to show how often arbitrators cause damage and to assess whether introducing such institute is reasonable. If it turns out to be justified, it is necessary to adopt this norm in communication with the arbitration professional community, arbitration institutions, insurance companies, and associations, as well as with the competent regulator (NBS). Finally, in addition to collective dialogue, the Serbian legislator should examine the decades-long development of the mandatory insurance market for arbitrators in those countries that have implemented it. Guided by this, the legislator could take the appropriate steps that best suit the legal and economic environment of the Republic of Serbia.

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RANJIVI UČESNICI U SAOBRAĆAJU

STRUČNI RAD

Apstrakt

S razvojem saobraćaja i povećanjem mobilnosti stanovnika, sve zemlje sveta suočavaju se s problemom ugroženosti u saobraćaju, odnosno saobraćajnim nezgodama u kojima strada veliki broj lica uz ogromne materijalne štete. Svi učesnici u saobraćaju izloženi su riziku. Imajući to na umu ili ne, mi stalno donosimo odluke u vezi s rizikom. Tako ulaskom u autobus ili automobil mi prihvatamo određeni rizik, pri prelasku ulice ili vožnji bicikla takođe smo izloženi riziku, a da o tome često i ne razmišljamo. Autor se u ovom radu posebno bavi najranjivijim učesnicima u saobraćaju i predlaže osnovne smernice za rešavanje tog problema i podizanje opšteg nivoa bezbednosti u saobraćaju.

Ključne reči: *saobraćaj, ranjivi učesnici u saobraćaju, saobraćajne nezgode, bezbednost.*

I. Uvod

Rizik učestvovanja u saobraćaju višestruko se uvećava kada se u saobraćajnom toku nađu takozvani ranjivi učesnici, naročito deca. Ranjivi učesnici u saobraćaju su uglavnom i oni koji nisu zaštićeni spoljnim štitom, a to su pešaci i dvotočkaši (vozači bicikla, mopeda, motocikla i električnih trotineta).

Među ranjivim učesnicima u saobraćaju neki su ranjiviji od drugih, gde se izdvajaju starije osobe, hendikepirana lica i deca. Šta je još karakteristično za ranjive učesnike u saobraćaju? To je da veliki broj njih nisu ili ne moraju biti obučeni za učešće u saobraćaju (starije osobe, hendikepirana lica, deca i ostali pešaci, vozači

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trotineta), a manji broj njih su obučeni ili su prošli obuku za učešće u saobraćaju (vozači mopeda i motocikala).

II. Rizik učešća u saobraćaju

Stupanjem u saobraćajni tok, bilo kao pešaci bilo kao vozači, stalno smo izloženi određenom riziku od nastanka saobraćajne nezgode, odnosno povređivanja ili pričinjenja materijalne štete. Rizik se višestruko uvećava kada se u saobraćajnom toku nađu ranjivi učesnici, a pogotovo deca. Uočava se da ranjivi učesnici u saobraćaju ne predstavljaju jedan entitet, već okupljaju različite grupe ljudi s različitim sposobnostima, navikama, iskustvom, obrazovanjem i šablonima ponašanja, a zajedničko im je da su njihovi problemi vezani za saobraćajno okruženje, koje često nije oblikovano za njih. Veliki broj različitih faktora utiče na nastanak saobraćajnih nezgoda u kojima strada mnogo ljudi i nastaju ogromne materijalne štete. To zahteva proučavanje rizika učešća u saobraćaju i delovanje na faktore koji utiču na smanjenje i upravljanje tim rizicima. Rizik učešća u saobraćaju ne može se jednoznačno odrediti, a za potrebe upravljanja rizikom, rizik se može iskazati kao proizvod verovatnoće nastanka štetnog događaja i njegovih posledica (rizik = verovatnoća x posledice), što zahteva da, pored verovatnoće nastanka štetnog događaja (nezgode), poznajemo i posledice saobraćajnih nezgoda.

1. Karakteristike stradanja ranjivih učesnika u saobraćaju

1.1. Motocikli i mopedi

U periodu od 2018. do 2020. godine prema podacima[2] Agencije za bezbednost saobraćaja registrovano je 149 saobraćajnih nezgoda s poginulim licima motorizovanih dvotočkaša, od čega 30 sa mopedom i 120 sa motociklom. Ovde treba naglasiti da su u jednoj nezgodi s poginulim licima učestvovali moped i motocikl. U istom periodu desile su se 3.623 saobraćajne nezgode s povređenim licima u kojima su učestvovali motorizovani dvotočkaši. U tim nezgodama povređeno je 1.378 mopedista i 2.391 motociklista. Prema istom izvoru, poginuli vozači motorizovanih dvotočkaša čine 9% svih poginulih u saobraćajnim nezgodama, a povređeni čine 6% svih povređenih u saobraćajnim nezgodama za posmatrani period. Prema policijskim podacima, u polovini saobraćajnih nezgoda izazivači su vozači motocikala i mopeda usled nepoštovanja osnovnih saobraćajnih propisa, gde dominantno mesto zauzima neadekvatna brzina.

[2] Bezbednost vozača i putnika na mopedima i motociklima u Srbiji za period 2018–2020. godine, ABS, septembar 2021.

Statistički podaci iz drugih država su još drastičniji. Prema podacima Nacionalne agencije za bezbednost na putevima SAD, vozači motocikala su i dalje previše zastupljeni u saobraćajnim nezgodama sa smrtnim ishodom. Samo u 2022. godini, na putevima SAD poginulo je 6.218 motociklista, što je 15% svih poginulih u saobraćaju. To je najveći broj poginulih motociklista od 1975. godine, upozorila je nedavno ta agencija.[3] S druge strane, izveštaj Evropske komisije pokazuje da je su 2019. godini, 19% poginulih učesnika u saobraćajnim nezgodama činili vozači motocikala i mopeda.[4] Devet od deset poginulih motociklista su muškog pola. Od 2010. godine, po tom izveštaju, raste broj poginulih motociklista na putevima EU, a najveći broj poginulih je na putevima Grčke.

U oblasti bezbednosti saobraćaja dvotočkaši zauzimaju visoko mesto na skali rizika od stradanja. Uzroci stradanja dvotočkaša su u prvom redu nedozvoljena ili neprilagođena brzina, a zatim slede preticanja na nedozvoljenim mestima, preticanja vozila s desne strane, preticanje u slučajevima gde postoje dve ili više saobraćajnih traka za jedan smer čestim menjanjem traka (vožnja cikcak), a u pojedinim slučajevima i bahato ponašanje vozača. Osim toga, istraživanja su pokazala da su dvotočkaši teže uočljivi od ostalih motornih vozila. Vozači očekuju dva fara a kada se pojavi jedan, često ga ne opaze, pa je zbog toga vrlo česta saobraćajna nezgoda s naletanjem motocikla i mopeda na raskrsnici na bočnu stranu automobila. Činjenica je da najviše stradaju mladi vozači dvotočkaša, što ukazuje na neiskustvo, lošu obuku i nepoznavanje ili nepoštovanje saobraćajnih propisa.

Pored navedenog, uzroke stradanja motociklista treba tražiti u neadekvatnoj obuci, neiskustvu (većina stradali su dobi od 16 do 24 godine), oduzimanju prvenstva od strane drugih motornih vozila (naročito na raskrsnicama i pri skretanju motornog vozila kada ga pretiče motocikl ili mu dolazi u susret), neuočavanju motocikla od strane drugih učesnika u saobraćaju itd.

Verovatnoća povrede motocikliste koji učestvuje u nezgodi je vrlo visoka (gotovo 98% njih u toku nezgode zadobije neku povredu), a najčešće vrste povreda su:

- povrede stopala i skočnog zgloba (oko polovine svih povreda)
- kao najsmrtonosnije, povrede glave, grudnog koša i unutrašnja krvarenja
- manje povrede vrata kod motociklista koji su nosili kacigu.

Pomenuta Nacionalna agencija za bezbednost na putevima SAD upoređivala je pređenu kilometražu vozača motocikala i ostalih učesnika u saobraćaju i zaključila da je verovatnoća da će motociklista poginuti u sudaru s motornim vozilom bila oko 22 puta veća u odnosu na putnika u putničkom vozilu, dok je verovatnoća da će biti povređeni četiri puta veća.[5]

[3] *https://www.nhtsa.gov/road-safety/motorcycles,* pristupljeno: 14. 5. 2024.

[4] European Commission (2021) Facts and Figures Motorcyclist and moped riders. European Road Safety Observatory. Brussels, European Commission, Directorate General for Transport. *https://road-safety.transport.ec.europa.eu/document/download/24515fb9-a8b0-4096-b54c;* pristupljeno: 13. 5. 2024.

[5] *https://www.nhtsa.gov/road-safety/motorcycles;* pristupljeno: 14. 5. 2024.

1.2. Bicikli

Kada govorimo o Srbiji, u istom posmatranom periodu (2018–2020. god.) registrovana je 151 saobraćajna nezgoda sa smrtnim posledicama i 4.337 saobraćajnih nezgoda s povređenim licima, u kojima su učestvovali biciklisti. U tim saobraćajnim nezgodama poginulo je 145, a povređeno 4.317 biciklista. Poginuli biciklisti čine 9% svih poginulih u saobraćajnim nezgodama i oko 7% svih povređenih lica u saobraćajnim nezgodama.[6]

***Tabela 1**. Raspodela poginulih i povređenih biciklista prema svojstvu učešća i polu, u periodu 2018–2020. godine.*

Starosne grupe	POGINULI					POVREĐENI				
	M (broj)	M (%)	Ž (broj)	ž (%)	Ukupno (%)	M (broj)	M (%)	Ž (broj)	Ž (%)	Ukupno (%)
0-14	3	2%	0	0%	2%	431	10%	132	3%	13%
15-24	7	5%	2	1%	11%	363	8%	140	3%	21%
25-34	7	5%	0	0%		243	6%	140	3%	
35-44	9	6%	2	1%	39%	291	7%	160	4%	42%
45-54	7	5%	3	2%		313	7%	274	6%	
55-64	30	21%	5	3%		414	10%	366	8%	
65-74	36	25%	4	3%	48%	447	10%	239	6%	24%
75-84	20	14%	2	1%		254	6%	61	1%	
85+	7	5%	1	1%		47	1%	2	0%	
Ukupno	126	87%	19	13%	100%	2.803	65%	1.514	35%	100%

Saobraćajne nezgode s biciklistima češće imaju kao posledicu smrtni ishod u poređenju sa motorizovanim učesnicima u nezgodama koji imaju zatvorenu karoseriju. Razlozi su njihova ranjivost i pri manjim brzinama drugih učesnika u nezgodama, slaba uočljivost u noćnim uslovima, okruženje koje u većini slučajeva nije oblikovano za njihovo kretanje, to što biciklisti različite starosne dobi i pola imaju različite psihofizičke sposobnosti, a deca biciklisti nemaju iskustvo i znanje, dok starije osobe imaju smanjene fizičke sposobnosti, smanjenu moć opažanja i pokretljivost.

Biciklisti najčešće stradaju u nezgodama u kojima učestvuju putnička vozila (59%), zatim u nezgodama sa učešćem teretnih vozila (20%), u saobraćajnim nezgodama gde su biciklisti jedini učesnik u nezgodi gine oko 8% njih, dok oko 2% biciklista gine u sudaru s pešacima.

Bezbednost biciklista u velikoj meri zavisi od saobraćajnog okruženja, koje im najčešće nije prilagođeno. Oni su u velikoj meri primorani da se kreću kolovozom

[6] Bezbednost biciklista u saobraćaju, ABS, avgust 2021.

gde ih ostali vozači tretiraju kao „ometače", a ne kao sastavni deo saobraćajnog sistema. U tim slučajevima dolazi do „sukoba brzina" jer ostala vozila koja koriste kolovoz razvijaju veće brzine, s tim što tu treba dodati razliku u masama i nezaštićenost vozača bicikla, što dovodi do povreda ili smrtnog stradanja biciklista. Česte su saobraćajne nezgode u noćnim uslovima vožnje, gde bicikl nije osvetljen kako to propisuje ZoBS na putevima. U takvim uslovima bicikl i vozač na njemu predstavljaju neočekivanu i teško uočljivu prepreku na putu, koju vozači motornih vozila u velikom broju slučajeva ne mogu da izbegnu.

Jedan od češćih uzroka nezgoda biciklista, poslednjih nekoliko godina, jeste korišćenje mobilnih telefona tokom vožnje bicikla. Nedavno istraživanje za potrebe Evropske komisije, pokazalo je da mladi ljudi, uzrasta 12–17 godina češće koriste mobilne telefone dok voze bicikl nego odrasli.[7] I odrasli i mladi biciklisti su izjavili da najčešće koriste svoje telefone za čitanje poruka (38% odraslih i 55,5% mladih biciklista) ili za slanje poruka (33% naspram 55%)

Istraživanja u Velikoj Britaniji[8] koja su bazirana na podacima iz bolnica daju detaljne podatke o tipu i ozbiljnosti povreda ranjivih učesnika u saobraćaju, a kod biciklista srećemo sledeće:

- povrede glave su glavni uzrok smrti kod tri četvrtine biciklista koji su poginuli u saobraćajnim nezgodama:
- preko polovine žrtava nezgoda zadobile su umereno ozbiljne povrede lica ili lobanje, što je zahtevalo ostajanje u bolnici preko noći:
- povrede kičme, stomaka i grudnog koša bile su relativno retke, a kada su se dešavale, povrede grudnog koša bile su ozbiljne, dok su povrede kičme i stomaka bile manje;
- dve petine biciklističkih žrtava nezgoda pretrpele su povrede donjih ekstremiteta, uključujući i povrede bedrene kosti, iščašenje kukova, kolena i povrede članaka;
- preko polovine žrtava nezgoda pretrpele su povrede gornjih ekstremiteta, iako su one retko bile ozbiljne;
- tri četvrtine žrtava biciklističkih nezgoda bile su zadržane u bolnici duže vreme (u proseku 21 dan).

Oktobra 2023. godine, Evropska komisija predstavila je predlog za Evropsku deklaraciju o biciklizmu u cilju poboljšanja bezbednosti na putevima i kvaliteta i kvantiteta biciklističke infrastrukture širom EU. Nacrt deklaracije prepoznaje bicikl kao održivo, dostupno, inkluzivno, pristupačno i zdravo prevozno sredstvo, sa sna-

[7] *European Commission (2024). Road safety thematic report – Cyclists. European Road Safety Observatory. Brussels, European Commission, Directorate General for Transport*, 2024, https://road-safety.transport.ec.europa.eu/european-road-safety-observatory/data-and-analysis/thematic-reports_en pristupljeno: 13. 5. 2024. str. 12

[8] Scientific Expert Group on the Safety of Vulnerable Road Users (RS7), 1998.

žnom dodatnom vrednošću za ekonomiju EU.[9] Jedna od glavnih poruka predložene deklaracije jeste fizičko razdvajanje biciklista i motornih vozila. Tamo gde moraju da se sretnu, na primer na putevima bez odvojenih staza za bicikle ili na raskrsnicama, brzina motornih vozila mora biti veoma mala.

1.3. Električni trotineti

Što se tiče vožnje električnih trotineta, to pitanje donedavno u Srbiji nije bilo regulisano. Korisnici trotineta mogli su da učestvuju u saobraćaju i upravljaju svojim dvotočkašima bez propisanih pravila i zakonskih odredaba. Izmenama i dopunama Zakona o bezbednosti saobraćaja na putevima koje su stupile na snagu 15. septembra 2023. godine, u velikoj meri propisano je njihovo kretanje u saobraćaju i toga će vozači električnih trotineta morati da se pridržavaju.

Tim izmenama, između ostalog, propisano je sledeće:

- vožnja električnih trotineta zabranjena je po trotoarima (mogu se voziti po biciklističkim stazama, pešačko-biciklističkim stazama, biciklističkim trakama, a u slučaju kada tih staza nema kreću se putevima na kojima je brzina ograničena na 50 km/h, zauzimajući maksimalno 1 m od desne ivice kolovoza izuzev ispred raskrsnice ako vrše npr. skretanje ulevo);
- brzina kretanja električnih trotineta limitirana je na 25 km/h, a masa je ograničena na 35 kg;
- upravljanje električnim trotinetima zabranjeno je za mlađe od 14 godina;
- osobama od 14 do 18 godina dozvoljena je vožnja na putevima na kojima je brzina ograničena na 30 km/h;
- nošenje biciklističkih kaciga obavezno je za sve vozače električnih trotineta, a nošenje reflektujućeg prsluka obavezno je za maloletna lica u svim uslovima, dok ih ostali moraju nositi kada se kreću po putevima;
- vozači električnih trotineta ne smeju za vreme vožnje imati slušalice u ušima, a prilikom prelaska kolovoza na pešačkim prelazima moraju sići sa trotineta i kolovoz preći kao pešaci;
- na električnim trotinetima mora postojati nalepnica koju izdaje Agencija za bezbednost saobraćaja.

Nema podataka o broju električnih trotineta u Srbiji. U MUP-u procenjuju da ih je između 250.000 i 400.000, ali podataka o broju saobraćajnih nezgoda sa učešćem električnih trotineta za sada nema. Međutim, ima saobraćajnih nezgoda pa se mogu videti naslovi u novinama kao što su: „Vozite oprezno, sve više teških

[9] *European Commission (2024). Road safety thematic report – Cyclists. European Road Safety Observatory. Brussels, European Commission, Directorate General for Transport*, 2024, https://road-safety.transport.ec.europa.eu/european-road-safety-observatory/data-and-analysis/thematic-reports_en pristupljeno: 13. 5. 2024. str. 5

nesreća sa e-trotinetima" ili „Vozači električnih trotineta opasni po sebe i sve ostale" ili „Vozač e-trotineta udario Novosađanku" i sl.

Rezultati ankete koja je sprovedena na portalu Mondo[10] kažu da 44% ispitanika smatra da su vozači električnih trotineta bahati i da ih nerviraju, 22% ispitanika smatra da je to odličan vid prevoza, dok 34% njih razmišlja da ih kupi.

1.4. Pešaci

Pešaci za svoje kretanja obično biraju najkraće putanje i na tom putu ne žele da provedu više vremena nego što je neophodno. Razmišljajući o najkraćoj putanji, pešaci često ne koriste pešačke prelaze i podzemne prolaze, a čekanje na pojavu zelenog svetla za njih je često, izgleda, predugo, pa se ni semafor ne poštuje. Tako pešaci, krećući se poznatim i ustaljenim putanjama, poklanjaju manje pažnje saobraćajnoj signalizaciji i saobraćaju uopšte nego kada se kreću manje poznatim putevima.

U proseku, u Srbiji, godišnje pogine oko 150 pešaka, a bude povređeno oko 2.900.[11] Broj poginulih pešaka čini oko 25% svih poginulih u saobraćajnim nezgodama, a broj teško povređenih pešaka čini oko 24% svih teško povređenih u saobraćajnim nezgodama, dok broj lako povređenih pešaka doseže 13%. Treba naglasiti da najveći broj pešaka strada u naselju (oko 95%), a najčešće mesto pogibije je van raskrsnice (85%), dok u raskrsnici pogine oko 15% pešaka. Najugroženija kategorija pešaka su lica starija od 65 godina, a zatim se kao druga po ugroženosti izdvaja grupa dece, gde oko 30% poginule dece stradaju kao pešaci.

Ponašanje dece vrlo često je nepredvidivo i zavisi od raznih faktora koji su posledica ponašanja kod kuće ili u školi. Po izlasku iz škole deca često trče, igraju se ili guraju, tako da neoprezno stupaju na kolovoz. Neretko se javlja i međusobno dokazivanje i takmičenje dece, ko će brže da pretrči kolovoz itd.

Od 2016. do 2018. godine poginulo je 41 dete, a prikaz stradanja dece po svojstvima učešća u saobraćaju prikazan je u Tabeli 2:[12]

[10] NG portal, „U čemu je problem sa električnim trotinetima", pristupljeno: 10. 10. 2020.
[11] Bezbednost pešaka u saobraćaju, ABS, oktobar 2018.
[12] Analiza stradanja dece u periodu 2016–2018. godine na teritoriji Republike Srbije, ABS, maj 2019.

Tabela 2. *Prikaz stradanja dece u periodu 2016–2018. godine prema svojstvu učešća u saobraćaju*

	POGINULA DECA					POVREĐENA DECA				
Godina	Vozač bicikla	Vozač mot. ili zaprežnog vozila	Putnik	Pešak	Ukupno POG	Vozač bicikla	Vozač mot. ili zaprežnog vozila	Putnik	Pešak	Ukupno POV
2016	1	0	7	4	**12**	211	18	879	526	**1634**
2017	2	0	10	5	**17**	171	16	805	507	**1499**
2018	0	0	5	7	**12**	170	12	813	468	**1463**
Total	3	0	22	16	**41**	552	46	2497	1501	**4596**

Posmatrano po svojstvima učešća u saobraćaju, deca putnici čine 54%, deca pešaci 39%, a deca biciklisti 7% od ukupnog broja poginule dece. Kod povređene dece, putnici čine 54%, pešaci 33%, biciklisti 12%, a vozači motornog vozila 1% od ukupnog broja povređene dece.

Gorenavedena strana istraživanja koja su bazirana na obradi podataka iz bolnica ukazuju na dva najdominantnija faktora ozbiljnosti povreda pešaka, a to su:

- povrede glave se najčešće dešavaju i glavni su uzrok smrti i smeštanja u bolnicu;
- sledeće po učestalosti su povrede nogu i ruku.

III. MERE ZA UNAPREĐENJE BEZBEDNOSTI RANJIVIH UČESNIKA U SAOBRAĆAJU

Prvi korak je proces identifikacije lokacija ili oblasti na kojima je potrebno poboljšati bezbednost usled velikog broja saobraćajnih nezgoda s ranjivim učesnicima u prošlosti, kao i zbog mogućnosti da se to nastavi i u budućnosti. Obeležavanje tih lokacija s prijavljenim saobraćajnim nezgodama u kojima stradaju ranjivi učesnici u saobraćaju daje mogućnost da se utvrde inženjerske, edukativne i zakonske metode i mere koje bi bile najefikasnije.

Kod vozača mopeda i motocikala prvenstveno treba raditi na boljoj obuci. Naime, vozači mopeda dobijaju dozvolu samo na osnovu poznavanja saobraćajnih propisa, dok kod vozača motocikala gotovo da nema auto-škole gde instruktor s drugim motociklom prati i usmerava kandidata za vozača motocikla, već kandidat posle teoretske nastave dobija „L" tablicu i instruktor ga prati iz putničkog vozila obučavajući ponekad istovremeno i drugog kandidata. Osim toga, potrebno je posvetiti veću pažnju da bi im se ukazalo na opasnosti kojima su izloženi, na uticaj

brzine na težinu posledica, na značaj zaštitne opreme i na to da su oni manje uočljivi od vozača putničkih, teretnih vozila i autobusa. Takođe, potrebno je podići svest o značaju poštovanja saobraćajnih propisa pogotovo kada je u pitanju brzina, preticanje i promena pravca kretanja.

Vozači bicikala i električnih trotineta ne prolaze nikakvu obuku, a učestvuju u saobraćaju, često u okruženju koje im nije prilagođeno. Zato je neophodno edukovati te učesnike u saobraćaju, putem sredstava javnog informisanja, putem tribina i preko udruženja ili klubova biciklista o opasnostima kojima su izloženi i značaju poštovanja saobraćajnih propisa (nepoznavanje saobraćajnih propisa ih ne oslobađa odgovornosti). Osim toga, ukazivati im na značaj izreke „Videti i biti viđen", što se naročito odnosi na noćne uslove vožnje. U infastrukturnom smislu obezbediti što veći broj i dužinu biciklističkih staza i biciklističkih traka, a iznalaziti mogućnost, kada je to ostvarljivo, razdvajanja biciklističkog saobraćaja od ostalih motorizovanih učesnika u saobraćaju, smanjiti broj ukrštanja ovog i motornog saobraćaja (smanjiti broj potencijalnih konfliktnih tačaka) uz ukazivanje na značaj nošenja zaštitne opreme.

Kad je o pešacima reč, treba im, prvenstveno kroz razne akcije i preko sredstava informisanja, ukazivati na potrebu poštovanja saobraćajnih propisa i na opasnosti kojima su kao najranjiviji učesnici u saobraćaju izloženi. Kada je reč o uvažavanju saobraćajnih propisa, treba im ukazati da na pešački prelaz ne stupaju iznenadno i bez provere stanja saobraćaja na kolovozu (postoje situacije gde vozač, bez obzira na brzinu kretanja, ne može da spreči nezgodu), da po izlasku iz autobusa ne prelaze kolovoz iza autobusa jer tada vozač ne može da ih uoči na vreme, da ne istrčavaju na kolovoz, da budu strpljivi na semaforu i ne prelaze kolovoz kada im to nije dozvoljeno, da na kolovozu sa više saobraćajnih traka ne prelaze celu kolovoznu traku bez provere, bez obzira na to što je vozilo u prvoj traci stalo, pri kretanju pešaka duž kolovoza u noćnim uslovima da nose fluorescentnu odeću ili svetlo... Treba ukazivati pešacima, pogotovo kad je reč o noćnim uslovima kretanja, da oni imaju daleko veće mogućnosti da uoče vozilo nego što to ima vozač da uoči pešaka, te da odustajanjem od prelaska kolovoza, dok se ne stvore bezbedni uslovi, mogu sprečiti mogući udes. Kod infrastrukturnih mera, treba voditi računa o tome da se obezbede odgovarajući kapaciteti za pešake, kao što su trotoari i pešački prelazi, a gde je to moguće, treba denivelisati pešačke i motorne tokove, primeniti kontrolne i inženjerske mere, kao što su uređaji za kontrolu saobraćaja, osvetljenje, konstrukcija kolovoza (suženje kolovoza, ležeći policajci) za kretanje vozila i pešaka. Treba posvetiti pažnju i konstrukciji vozila koja se odnosi na pasivnu bezbednost prilikom udara u pešaka, kako bi se minimizirale povrede pešaka. Tu se pre svega misli na oblik prednjeg dela karoserije (zaobljeni plastični branici i farovi od lako deformitabilnog materija, kako bi se amortizovao udar), plastični retrovizori koji se sklapaju prilikom udara, uvučene brave na vratima i sl.

Posebnu pažnju treba posvetiti deci pešacima i osobama starijim od 65 godina. Kao što je poznato, kod starijih osoba opada sposobnost da se izbore sa

složenim saobraćajnim situacijama i gustim saobraćajem. To stanje se pogoršava s godinama, a u skladu s tim menja se i njihovo ponašanje u saobraćaju. Vežba i rutina pomažu da se to ublaži i uspori.

Deca predškolskog i ranog školskog uzrasta predstavljaju najranjivije učesnike u saobraćaju. U tom uzrastu počinju da se osamostaljuju kao pešaci, vozači bicikla, rolera, sanki, skejta… Bez pratnje odraslih počinju da izlaze na igrališta, trotoare, obezbeđene i neobezbeđene terene za igru, počinju da idu u prodavnicu, vrtić, školu, bez pratnje odraslih osoba, a od šeste godine njihovo pojavljivanje postaje masovnije, detetu ovog uzrasta otežano je donošenje ispravnih odluka, pogotovo u složenim saobraćajnim situacijama. Pored brojnih utisaka koji mu odvlače pažnju, dete ne ume da odvoji bitno od nebitnog. Usmeravanje pažnje na bitne i ignorisanje nebitnih informacija može se očekivati tek u uzrastu od 11 godina. Zato dete treba osposobiti da izdvoji najvažnije podatke kako bi moglo doneti ispravnu odluku. Tu je najvažnije naglasiti:

- lični primer roditelja i dosledno ponašanje odraslih
- usvajanje znanja i formiranje osnovnih pojmova iz saobraćajne kulture
- praktično vežbanje i ponavljane
- podsticanje razvoja misaonih procesa i sposobnosti kojima se stvara osnova za povećanje sigurnosti dece u saobraćaju, i
- izgradnja stava kod dece „Moja bezbednost je važnija od svih nagrada i kazni".

Lični primer roditelja i odraslih osoba je značajan izvor informacija za dete. Kada u prisustvu deteta roditelj ili druga odrasla osoba donese odluku i postupi protivno saobraćajnim pravilima, ona mu šalje skrivene poruke:

- ništa se neće desiti ako kolovoz prelaziš van pešačkog prelaza;
- pravila postoje, ali ona nisu toliko važna;
- ne moraš sam da vodiš računa, vozač mora da pazi; i
- neće se baš meni desiti.

Nasuprot ovome, kada odrasli poštuju pravila saobraćaja, detetu šalju poruke:

- moram da poštujem pravila saobraćaja, jer moja bezbednost je najvažnija; i
- ne postoji dovoljno dobar razlog da sebe dovedem u opasnost.

Obuka za bezbedno učešće dece u saobraćaju mora početi od najranijeg dečjeg uzrasta, kroz igru u vrtićima, popunjavanje (bojenje) slika u brošurama koje su namenjene bezbednom učešću dece u saobraćaju („Saobraćajko", video-igrice i crtani i drugi filmovi za tu namenu...). Sistem vrednosti dete izgrađuje poštujući zahteve roditelja i drugih odraslih osoba. Veoma rano od njega se traži odgovornost u odnosu na lične stvari (obuću, odeću, igračke) i postupke (ne smeš da kasniš, moraš da se vratiš u dogovoreno vreme). Za sigurnost u saobraćaju važno je da dete nauči da svoj život ne sme dovesti u opasnost spasavajući kućnog ljubimca, loptu ili kliker. Primeri roditelja i drugih odraslih osoba detetu šalju skrivene poruke koje mogu imati odlučujući uticaj na dete i njegovo ponašanje u saobraćaju.

IV. ZAKLJUČCI I PREPORUKE

Dva ključna aspekta problema učešća ranjivih učesnika u saobraćaju ogledaju se u sledećem:

- prvo, kako motorizovani učesnici u saobraćaju vide potrebe ranjivih učesnika u saobraćaju, kakav je njihov stav prema ovim učesnicima i kakve su im odgovornosti prema njima; zatim kako sve to uzeti u obzir pri njihovoj edukaciji, obuci i javnim kampanjama;
- kakve obaveze imaju ranjivi učesnici u saobraćaju u smislu sopstvene bezbednosti i kako njihovu bezbednost povećati kroz edukaciju, obuku i javne kampanje.

Sagledavanjem i proučavanjem tih aspekata i ocenom rizika donosimo odluke o sprovođenju mera za unapređenje bezbednosti ovih učesnika u saobraćaju, a one se grubo mogu podeliti na dve komplementarne grupe:

- infrastrukturne, koje se zasnivaju na planiranju puteva, saobraćaja i okruženja, i
- neinfrastrukturne, koje utiču na ponašanje učesnika u saobraćaju (obrazovanje, obuka, usvajanje znanja, formiranje stavova o bezbednom učešću u saobraćaju...).

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VULNERABLE ROAD USERS

PROFESSIONAL PAPER

Abstract

With the development of traffic and increased mobility of their population, all the countries in the globe have faced the problem of vulnerability in traffic, that is, traffic accidents involving large number of injuries and significant material damages. All road users are exposed to risk. Whether consciously or not, we constantly make risk-related decisions. By getting on a bus or into a car, we accept to be exposed to a particular risk. Crossing over the street or riding a bicycle makes us exposed to a risk, often without even thinking about it. In this paper, the author specifically addresses the most vulnerable road users and proposes basic guidelines for solving that problem and raising the overall level of traffic safety.

***Keywords**: traffic, vulnerable road users, traffic accidents, safety.*

I. Introduction

The risk of using a road increases multiple times when the so-called vulnerable road users, especially children, are involved. Vulnerable road users are primarily those who are not protected by an external shield, meaning the pedestrians and two-wheelers (bicyclists, moped riders, motorcyclists, and electric scooter riders).

Amongst the vulnerable road users, some are more vulnerable than others, and these include the elderly adults, disabled individuals, and children. What else is a characteristic of vulnerable road users? Many of them are not or may not be trained for participating in traffic (elderly adults, disabled individuals, children, and other

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pedestrians, scooter riders), while a smaller number are trained or have undergone training for taking part in the traffic (moped and motorcycle riders).

II. Risk of using the road

By entering the traffic flow, either as pedestrians or drivers, we are constantly exposed to a certain risk of incurring the traffic accidents, injuries, or material damages. The risk increases significantly when vulnerable road users are present, especially children. It may be observed that vulnerable road users do not represent a single entity, but encompass various groups of people with different abilities, habits, experience, education, and behaviour patterns, united by their problems related to the traffic environment - often not designed for them. A large number of different factors bring about the occurrence of traffic accidents, with many people injured, and significant material damage incurred. This necessitates studying the risk of participating in traffic and acting on factors that spur the risk mitigation and management. The risk of participating in traffic cannot be unambiguously established, and for risk management purposes, the risk can be expressed as the product of the probability of the occurrence of an adverse event and the consequences of its occurrence (risk = probability x consequences), which requires knowledge of both the probability of occurrence of accidents and the consequences thereof.

1. Typical accidents affecting vulnerable road users

1.1. Motorcycles and Mopeds

In the period 2018 to 2020, observed from the data[2] obtained from the Traffic Safety Agency, there were 149 traffic accidents involving fatalities of motorized two-wheelers, of which 30 involved mopeds and 120 involved motorcycles. It is worth noting that one accident involving fatalities concerned both a moped and a motorcycle. During the same period, there were 3,623 traffic accidents involving injuries to individuals, the motorized two-wheelers. In these accidents, 1,378 moped riders and 2,391 motorcyclists were injured. According to the same source, fatalities of motorized two-wheeler drivers accounted for 9% of all fatalities in traffic accidents, while injuries accounted for 6% of all injuries in the traffic accidents during the observed period. According to police data, the causative factors in half of the traffic accidents were motorcycle and moped drivers who failed to comply with basic traffic rules, the excessive speed being the predominant factor.

[2] Safety of riders and passengers on mopeds and motorcycles in Serbia for the period 2018–2020, ABS, September 2021.

Statistical data from other countries are even more alarming. According to the National Highway Traffic Safety Administration (NHTSA) data from the USA, motorcycle riders are still too much present in fatal traffic accidents. In 2022 alone, 6,218 motorcyclists were killed on the US roads, accounting for 15% of all traffic fatalities. This is the highest number of motorcycle fatalities since 1975, as recently warned by the Agency.[3] On the other hand, the report from the European Commission shows that in 2019, 19% of fatalities in traffic accidents were accounted for by the motorcycle and moped riders.[4] Nine out of ten motorcycle fatalities were male. According to the report, since 2010, the number of motorcycle fatalities on the EU roads has been increasing, with the highest number of fatalities occurring on the Greek roads.

In the field of traffic safety, two-wheelers rank high on the risk scale of fatalities. The causes of two-wheeler fatalities primarily involve speeding, followed by illegal or improper passing, passing vehicles on the right side, passing in cases where there are two or more traffic lanes in one direction with frequent lane changes (weaving), and in some cases, reckless driving. Additionally, research has shown that two-wheelers are less visible than other motor vehicles. Drivers expect to see two headlights, and when only one appears, they often fail to notice it, which leads to frequent accidents where motorcycles and mopeds collide with the side of the vehicles at intersections. It is a fact that young motorcycle riders are most affected, which points to the inexperience, poor training, and lack of knowledge or disregard of traffic regulations.

In addition to the above mentioned, the causes of motorcycle rider fatalities might be found in the inadequate training, inexperience (most fatalities occur between the ages of 16 and 24), failure to yield by other motor vehicles (especially at intersections and when turning when a motorcycle is passing or approaching), failure to spot the motorcycles by other road users, etc.

The probability of injury for a motorcycle rider involved in an accident is very high (almost 98% of them sustain some form of injury in an accident), and the most common types of injuries are:

- Foot and ankle injuries (accounting for about half of all the injuries),
- Head injuries, chest injuries, and internal bleeding (which are the most lethal)
- Minor neck injuries in motorcycle riders wearing helmets.

The mentioned National Highway Traffic Safety Administration (NHTSA) conducted a comparison of the mileage travelled by motorcycle riders and other road users and concluded that the probability of a motorcycle rider being killed in a collision with a motor vehicle was about 22 times higher than that of a passenger in a passenger vehicle, while the probability of being injured was four times higher.[5]

[3] *https://www.nhtsa.gov/road-safety/motorcycles,* accessed on 14 May 2024.

[4] European Commission (2021) Facts and Figures Motorcyclist and moped riders. European Road Safety Observatory. Brussels, European Commission, Directorate General for Transport. *https://road-safety.transport.ec.europa.eu/document/download/24515fb9-a8b0-4096-b54c;* accessed on: 13 May 2024.

[5] *https://www.nhtsa.gov/road-safety/motorcycles;* accessed on: 14. 5. 2024.

1.2. Bicycles

When it comes to Serbia, during the same observed period of 2018 to 2020, there were 151 traffic accidents resulting in fatalities and 4,337 traffic accidents resulting in injuries involving cyclists. In these traffic accidents, 145 cyclists were killed, and 4,317 were injured. The fatalities of cyclists account for 9% of all fatalities in traffic accidents and approximately 7% of all the injured individuals in traffic accidents.[6]

Table 1. Distribution of fatalities and injuries among cyclists by status of participation and gender, during the period 2018–2020.

Age groups	Fatalities					Injured				
	M (number)	M (%)	F (number)	F (%)	Total (%)	M (number)	M (%)	F (number)	F (%)	Total (%)
0-14	3	2%	0	0%	2%	431	10%	132	3%	13%
15-24	7	5%	2	1%	11%	363	8%	140	3%	21%
25-34	7	5%	0	0%		243	6%	140	3%	
35-44	9	6%	2	1%	39%	291	7%	160	4%	42%
45-54	7	5%	3	2%		313	7%	274	6%	
55-64	30	21%	5	3%		414	10%	366	8%	
65-74	36	25%	4	3%	48%	447	10%	239	6%	24%
75-84	20	14%	2	1%		254	6%	61	1%	
85+	7	5%	1	1%		47	1%	2	0%	
Total	126	87%	19	13%	100%	2.803	65%	1.514	35%	100%

Traffic accidents involving cyclists more often result in fatalities relative to motorized participants in the accidents who are riding in a kind of an enclosured body. The reasons for this comprise the following: their vulnerability, leading to more severe consequences even at lower speeds of other accident participants, poor visibility in nighttime conditions, environmental conditions that are often not designed for their movement, and the fact that cyclists of different ages and genders have varying psychophysical abilities. Children cyclists lack experience and knowledge, while older individuals possess reduced physical capabilities, diminished perception and mobility.

Cyclists most often get killed in the accidents involving passenger vehicles (59%), followed by accidents involving commercial vehicles (20%). In accidents where cyclists are the sole participant, approximately 8% of them are killed, while about 2% of cyclists are killed in collisions with pedestrians.

The safety of cyclists largely depends on the traffic environment, which is often not tailored to their needs. They are frequently forced to travel on roads

[6] Safety of cyclists in traffic, ABS, August 2021.

where car drivers treat them as an "obstacle" rather than integral parts of the traffic system. In such cases, there is a "conflict of speeds" because other vehicles on the road are traveling at higher speeds and coupled with the difference in mass and lack of protection for cyclists, that leads to injuries or fatalities.

Accidents involving cyclists are frequent in nighttime conditions when bicycles are not illuminated as required by road regulations. In such conditions, bicycles and their riders become unexpected and difficult-to-spot obstacles on the road, impossible to avoid by many vehicle drivers.

One of the more common causes of cyclist accidents in recent years is the use of mobile telephones while cycling. A recent study conducted for the European Commission revealed that young people aged 12–17 are more likely to use mobile telephones while riding a bicycle than the adults.[7] Both the adults and young cyclists stated that they primarily used their phones for reading messages (38% of adults and 55.5% of young cyclists) or sending messages (33% and 55%, respectively).

Research in the United Kingdom,[8] relying on the data from hospitals, provides detailed information on the type and severity of injuries sustained by vulnerable road users, including the cyclists. The following are some common injuries among cyclists:

- Head injuries are the leading cause of death in three-quarters of cyclists getting killed in traffic accidents.
- Over half of the accident victims sustain moderately serious injuries to the face or skull, requiring overnight hospital stays.
- Injuries to the spine, abdomen, and chest are relatively rare, but when they do occur, chest injuries are serious, while spinal and abdominal injuries are less common.
- Two-fifths of cyclist accident victims sustained lower limb injuries, including fractures of the femur, hip dislocations, knee injuries, and ankle injuries.
- Over half of the accident victims sustained the upper limb injuries, although they were rarely severe.
- Three-quarters of cyclist accident victims were hospitalized for an extended period (on average 21 days).

In October 2023, the European Commission presented a proposal for the European Cycling Declaration aimed at improving road safety and the quality and quantity of cycling infrastructure across the EU. The draft declaration recognizes cycling as a sustainable, accessible, inclusive, affordable, and healthy mode of transportation,

[7] *European Commission (2024). Road safety thematic report – Cyclists. European Road Safety Observatory. Brussels, European Commission, Directorate General for Transport*, 2024, https://road-safety.transport.ec.europa.eu/european-road-safety-observatory/data-and-analysis/thematic-reports_en accessed on: 13. 5. 2024, p. 12.

[8] Scientific Expert Group on the Safety of Vulnerable Road Users (RS7), 1998.

with significant added value for the EU economy[9]. One of the key messages of the proposed Declaration is the necessity of physical separation between the cyclists and motor vehicles. Where they must intersect, for example on roads without separate bike lanes or at intersections, the speed of motor vehicles must be very low.

1.3. Electric Scooters

The issue of the use of electric scooters has not been regulated in Serbia, until recently. The electric scooter users could participate in traffic and operate their two-wheelers without prescribed rules and legal provisions. With the amendments to the Law on Road Traffic Safety that came into force on September 15, 2023, their movement in traffic has been largely regulated, and electric scooter riders will have to adhere to these regulations.

Among other things, these amendments prescribe the following:

- Riding electric scooters is prohibited on sidewalks (they can be ridden on bike lanes, pedestrian-cycling paths, bike tracks and in cases where these tracks are not available, they can be ridden on roads with a speed limit of 50 km/h, occupying a maximum of 1 m from the right edge of the road except in front of intersections if they are making a left turn, for example).
- The speed limit for electric scooters is capped at 25 km/h, and the weight limit is set at 35 kg.
- Operating electric scooters is prohibited for the younger than 14.
- Individuals aged 14 to 18 are allowed to ride on roads with a speed limit of 30 km/h.
- Wearing bicycle helmets is mandatory for all electric scooter riders, and wearing a reflective vest is mandatory for minors in all conditions, while others must wear them when riding on roads.
- Electric scooter riders are not allowed to wear headphones while riding. When crossing roads at pedestrian crossings, they must dismount from the scooter and cross the road as pedestrians.
- Electric scooters must have a sticker issued by the Traffic Safety Agency.

There is no data on the number of electric scooters in Serbia. The Ministry of Interior estimates that there are between 250,000 and 400,000, but there is currently no data on the number of traffic accidents involving electric scooters. However, there are traffic accidents, as seen in the newspaper headlines such as "Drive carefully, an increasing number of serious accidents with e-scooters" or "Electric scooter drivers

[9] *European Commission (2024). Road safety thematic report – Cyclists. European Road Safety Observatory. Brussels, European Commission, Directorate General for Transport*, 2024, https://road-safety.transport.ec.europa.eu/european-road-safety-observatory/data-and-analysis/thematic-reports_en accessed on: 13. 5. 2024, p. 5.

dangerous to themselves and everyone else" or "E-scooter driver hits a woman in Novi Sad", and so on.

The results of a survey conducted on the Mondo[10] portal show that 44% of respondents believe that electric scooter drivers are reckless and annoying, 22% believe that it is an excellent mode of transportation, while 34% are considering purchasing one.

1.4. Pedestrians

Pedestrians usually choose the shortest routes for their walk and do not want to spend more time on their way than necessary. Thinking about the shortest route, pedestrians often do not use pedestrian crossings and underpasses, and waiting for the green light seems too long for them, so even traffic lights are often disregarded. Thus, the pedestrians, moving along familiar and established paths, pay less attention to traffic signals and traffic in general than when they move along less familiar paths.

On average, in Serbia, around 150 pedestrians die annually, and about 2,900 get injured.[11] The number of pedestrian fatalities accounts for about 25% of all fatalities in traffic accidents, and the number of seriously injured pedestrians accounts for about 24% of all seriously injured people in traffic accidents, while the number of lightly injured pedestrians reaches 13%. It should be highlighted that the majority of pedestrians get killed in urban areas (about 95%), with the most common place of death being outside intersections (85%), while about 15% of pedestrians are killed within intersections. The most vulnerable category of pedestrians is individuals over 65 years of age, followed by children, with about 30% of all the deceased children are killed in traffic, as pedestrians.

Children's behaviour is often unpredictable and depends on various factors that result from behaviour at home or at school. After leaving school, children often run, play, or push each other, so they inadvertently step onto the road. There is often mutual proving and competition among children, such as who can cross the road faster, etc.

From 2016 to 2018, 41 children died, and the breakdown of child fatalities by traffic participation type is shown in Table 2:[12]

[10] NG portal, "What's the problem with electric scooters", 10 October 2020.
[11] Pedestrian safety in traffic, ABS, October 2018.
[12] Analysis of child fatalities in the period 2016–2018 in the territory of the Republic of Serbia, ABS, May 2019.

Table 2. *Share of Child Fatalities in Traffic Accidents from 2016 to 2018, by Participation Type*

	DEATH					INJURIES				
Year	Bicycle rider	Driver of a motor or animal-drawn vehicle	Passenger	Pedestrian	Total fatalities	Bicycle rider	Driver of a motor or animal-drawn vehicle	Passenger	Pedestrian	Total fatalities
2016	1	0	7	4	**12**	211	18	879	526	**1634**
2017	2	0	10	5	**17**	171	16	805	507	**1499**
2018	0	0	5	7	**12**	170	12	813	468	**1463**
Total	3	0	22	16	**41**	552	46	2497	1501	**4596**

According to the type of participation in traffic, children as passengers constitute 54%, pedestrians 39%, and cyclists 7% of the total number of child fatalities. Among injured children, passengers constitute 54%, pedestrians 33%, cyclists 12%, and motor vehicle drivers 1% of the total number of injured children.

The aforementioned research based on hospital data processing indicates two predominant factors in the severity of pedestrian injuries:

- Head injuries are the most common and the main cause of death and hospitalization.
- Following in frequency are injuries to the legs and arms.

III. Measures to improve safety of vulnerable road users

The first step is the process of identifying locations or areas where safety needs to be improved due to a high number of traffic accidents involving vulnerable road users in the past, as well as the possibility of this continuing in the future. Marking these locations with reported traffic accidents involving vulnerable road users provides an opportunity to determine the most effective engineering, educational, and legislative methods and measures.

For moped and motorcycle riders, the focus should primarily be on improving training. Currently, moped riders only receive a license based on their knowledge of traffic regulations, while there are almost no motorcycle driving schools where an instructor accompanies and guides the candidate on another motorcycle. Instead, after theoretical instruction, the candidate receives an "L" plate and the instructor follows them from a passenger vehicle, sometimes simultaneously instructing another candidate. Additionally, greater attention needs to be paid to educating these traffic participants about the dangers they face, the impact of speed on the severity of consequences, the importance of protective equipment, and the fact that

they are less visible than drivers of passenger cars, trucks, and buses. Furthermore, awareness should be raised about the importance of respecting traffic regulations, especially regarding speed, overtaking, and changing direction.

Bicycle and electric scooter riders do not undergo any training but they do nevertheless participate in traffic, often in environments not adapted to them. Therefore, it is necessary to educate them in traffic safety through campaigns for raising public awareness, seminars, and associations or cycling clubs about the dangers they face and the importance of respecting traffic regulations (lack of knowledge of traffic regulations does not exempt them from responsibility). Additionally, they should be informed about the importance of the saying "To see and be seen", especially in nighttime riding conditions. In terms of infrastructure, efforts should be made to provide a greater number and length of bicycle lanes and paths, and where possible, to separate bicycle traffic from other motorized traffic, reduce the number of intersections between bicycle and motor traffic (reduce the number of potential conflict points), while emphasizing the significance of wearing protective equipment.

When it comes to pedestrians, they should primarily be informed through various campaigns and media about the need to respect traffic regulations and the dangers they face as the most vulnerable participants in traffic. Regarding compliance with traffic regulations, pedestrians should be reminded not to step onto pedestrian crossings suddenly and without checking the traffic on the road (there are situations where a driver, regardless of their speed, cannot prevent an accident), nor to cross the road behind a bus after exiting the bust because the driver may not spot them in time, or dash onto the road, to be patient at traffic lights and not to cross the road when it is not allowed, not to cross the entire road with multiple lanes without checking, regardless of whether a vehicle in the first lane has stopped, and when walking along the road at night, to wear fluorescent clothing or carry a light. Pedestrians should be reminded, especially in nighttime conditions, that they have much greater chances of spotting a vehicle than a driver has of spotting a pedestrian, and that potential accidents can be prevented by refraining from crossing the road until safe conditions are met. In terms of infrastructure measures, care should be taken to provide adequate facilities for pedestrians, such as sidewalks and pedestrian crossings, and where possible, pedestrian and motor traffic flows should be separated, and control and engineering measures applied, such as traffic control devices, lighting, road construction (narrowing the road, speed bumps) for the movement of vehicles and pedestrians. Attention should also be paid to vehicle design related to passive safety in pedestrian impacts to minimize pedestrian injuries. This primarily includes the shape of the front of the body (rounded plastic bumpers and headlights made of easily deformable material to absorb impact), folding plastic mirrors upon impact, recessed door locks, etc.

Special attention should be paid to child pedestrians and elderly individuals over 65 years of age. As is known, the elderly have a diminished ability to cope with complex traffic situations and heavy traffic. This condition worsens with age, and accordingly, their behaviour in traffic changes. Practice and routine help mitigate and slow down these changes.

Children of preschool and early school age are the most vulnerable participants in traffic. At this age, they begin to become independent as pedestrians, cyclists, roller skaters, sledders, skateboarders, etc. Without adult supervision, they start going to playgrounds, sidewalks, supervised and unsupervised play areas. They begin to go to shops, kindergartens, school, without adult supervision, and from the age of six, their presence becomes more common. Children of this age find it difficult to make correct decisions, especially in complex traffic situations. Besides the numerous distractions that divert their attention, children cannot distinguish between what is important and what is not. Focusing attention on important information and ignoring irrelevant information can be expected only around the age of 11. Therefore, children need to be trained to identify the most important information so they can make the right decisions. The following points are crucial:

- Personal example of parents and consistent behaviour of adults,
- Acquisition of knowledge and formation of basic concepts of traffic culture,
- Practical training and repetition,
- Encouragement of the development of cognitive processes and abilities that form the basis for increasing children's safety in traffic, and
- Instilling in children the attitude "My safety is more important than any rewards or punishments."

The personal example of parents and adults is a significant source of information for children. When a parent or another adult decides and acts contrary to traffic rules in the presence of a child, they send hidden messages:

- Nothing will happen if you cross the road outside of a pedestrian crossing,
- Rules exist, but they are not that important,
- You don't have to be careful yourself, the driver must watch out, and
- It won't happen to me.

In contrast, when adults respect traffic rules, they send messages to the child:

- I must respect traffic rules because my safety is the most important, and
- There is no good reason to put myself in danger.

Training for safe participation of children in traffic must start from the earliest childhood, through play in kindergartens, filling in (colouring) pictures in brochures designed for safe participation of children in traffic ("Traffic buddy", video games, cartoons, and other films for this purpose). The child builds their value system by respecting the demands of parents and other adults. Very early on, they are required to take responsibility for personal belongings (footwear, clothing, toys) and actions

(you must not be late, you must return at the agreed time). For safety in traffic, it is important for children to learn not to endanger their lives by saving a pet, a ball, or marbles. Examples set by parents and other adults send hidden messages to the child that can have a decisive influence on the child's behaviour in traffic.

IV. CONCLUSIONS AND RECOMMENDATIONS

We may outline two crucial aspects of the problem of vulnerable road users' participation in traffic, as follows:

- First, the way in which motorized road users perceive the needs of vulnerable road users, what their attitude towards these participants is, and what responsibilities they have towards them. Then, how to take all of this into account in their education, training, and public campaigns;
- Second, what obligations vulnerable road users have in terms of their own safety and how to increase their safety through education, training, and public campaigns.

By considering and studying these aspects and assessing the risks, we make decisions regarding the implementation of measures to improve the safety of these participants in traffic. These measures can broadly be split divided into two complementary groups:

- Infrastructure-measures, which are based on road, traffic, and environmental planning.
- Non-infrastructure-related measures, which affect the behaviour of road users (education, training, knowledge acquisition, formation of attitudes about safe participation in traffic, etc.).

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Primer:

I Podela osiguranja
1. Osiguranje imovine i osiguranje lica
1.1. Razlike između osiguranja imovine i osiguranja lica
1.1.1. Princip obeštećenja

Puno ime autora i srednje slovo njegovog imena, kao i akademsko zvanje treba navesti iznad naslova rada kurzivom, tj. italikom.

Afilijacija i i-mejl adresa autora navodi se u prvoj fusnoti.

Apstrakt treba napisati ispod naslova. Apstrakt ne bi trebalo da bude duži od 150 reči i treba da sadrži kratak pregled sadržaja i zaključke rada, tako da se može koristiti prilikom indeksiranja u referentnim periodičnim publikacijama i bazama podataka.

Ključne reči navode se u posebnom redu iza apstrakta, kurzivom, tj. italikom. Ključne reči moraju biti relevantne za temu i sadržaj rada. Rad ne treba da sadrži više od deset ključnih reči na srpskom ili engleskom jeziku.

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Referencije (literatura korišćena prilikom pisanja rada) navode se na jeziku na kom su objavljene.

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1. Knjige

a) Knjige se citiraju na sledeći način:

Ime i prezime autora, naslov knjige kurzivom, tj. italikom, redni broj izdanja, mesto i godina izdanja, broj strane.

Primer:

Nebojša Žarković, *Pojmovnik osiguranja*, Novi Sad, 2013, str. 100.

b) Kad se citira knjiga više autora, njihova imena i prezimena razdvajaju se zarezom.

Primer:

Marjan Ćurković, Vladimir Miletić, *Pravo osiguranja Europske ekonomske zajednice*, Croatia osiguranje d. d., Zagreb, 1993.

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Primer:

Mirko Vasiljević (urednik), *Akcionarska društva, berze i akcije*, Beograd, 2006, 30.

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Primer:

N. Žarković, str. 125.

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Primer:

N. Žarković (2013), str. 25.

2. Članci

Članci se citiraju na sledeći način

a) Ime i prezime autora, naziv članka pod navodnicima, naziv časopisa kurzivom, broj i godina izdanja, broj strane.

Primer:

Jasna Pak, „Pravna zaštita korisnika usluga osiguranja“, *Privreda i pravo u tranziciji*, Palić, 2004, str. 35.

b) Kada se citira članak više autora, njihova imena i prezimena odvajaju se zarezom.

Primer:

Jelena Kočović, Marija Jovović, „Uticaj liberalizacije i privatizacije na razvoj tržišta osiguranja u Srbiji", *Tokovi osiguranja*, br. 1/2016, str. 5.

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Primer:

Vladimir Kovčić, „Stečaj akcionarskog društva za osiguranje", *Pravo osiguranja u tranziciji* (urednici Predrag Šulejić i Jovan Slavnić), Palić, 2003, str. 56.

d) Kada se citira jedan članak određenog autora, prilikom ponovljenog citiranja navodi se prvo slovo imena s tačkom i prezime, a potom broj strane.

Primer:

Jasna Pak, str. 57.

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Primer:

Zakon o obaveznom osiguranju u saobraćaju, *Službeni glasnik RS*, br. 51/09, čl. 15.

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Primer:

Zakon o osiguranju – ZO, *Službeni glasnik RS*, br. 55/04, čl. 38, st. 2.

c) Član, stav i tačka propisa označavaju se skraćenicama čl., st., tač., a paragraf skraćenicom par.

Primer:

čl. 35 st. 5 tač. 8 ili par. 8.

d) Prilikom ponovljenog citiranja određenog propisa navodi se njegov pun naziv ili skraćenica uvedena prilikom prvog citiranja, skraćenica čl., tač. ili par. i broj odredbe.

Primeri:

Zakon o osiguranju, čl. 15.

ZO, čl. 15.

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na originalnom jeziku u zagradi, kurzivom, tj. italikom, eventualno skraćenica pod kojom će se propis dalje pojavljivati, skraćenica čl., st., tač. ili par.

Primeri:

nemački Trgovački zakonik iz 1897. godine (*Handelsgesetzbuch*), par. 29.

britanski Kompanijski zakon iz 2006. godine (*Companies Act*; dalje u fusnotama: CA), čl. 53.

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a) Izvori sa interneta citiraju se na sledeći način: ime i prezime autora, odnosno organizacije koja je pripremila tekst, naslov teksta, eventualno mesto i godina objavljivanja, adresa internet stranice kurzivom, datum pristupa stranici i broj strane.

Primer:

Christos Gortsos, The Supervision of Financial Conglomerates under European Financial Law (Directive 2002/87/EC), 2010,

http://fic.wharton.upenn.edu/fic/papers/09/0936.pdf, pristupljeno: 16. 7. 2016, str. 2

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Primer:

C. Gortsos, The Supervision of Financial Conglomerates under European Financial Law (Directive 2002/87/EC), str. 12.

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Primer:

Žarković, N., *Pojmovnik osiguranja*, Novi Sad, 2013, str. 100.

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Example:

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1. Insurance of property and persons
1.1. Differences between insurance of property and insurance of persons
1.1.1. Indemnity principle

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a) The books should be cited, as follows:

First and last name of author, book title in italics, edition number in ordinal form, place and year of publication, page number.

Example:

Nebojša Žarković, *Glossary of Insurance Terms,* Novi Sad, 2013, pp. 100

b) When a book has multiple authors, their first and last names are separated with a comma.

Example:

Marjan Ćurković, Vladimir Miletić, *Pravo osiguranja Europske ekonomske zajednice,* Croatia osiguranje d. d., Zagreb, 1993.

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Example:

Mirko Vasiljević (urednik), *Akcionarska društva, berze i akcije*, Beograd, 2006, 30.

d) Repeated citations from the same author should include only the first initial and a full stop before the last name of the author and the number of the page.

Example:

N. Žarković, pp. 125

e) If two or more references to the same author are cited, the first initial and a full stop should be included before the last name of the author, and then the year of publication in brackets and the page number.

Example:

N. Žarković (2013), pp. 25

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Articles are cited, as follows:

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Jasna Pak, „Pravna zaštita korisnika usluga osiguranja", *Privreda i pravo u tranziciji*, Palić, 2004, str. 35.

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Example:

Jelena Kočović, Marija Jovović, „Uticaj liberalizacije i privatizacije na razvoj tržišta osiguranja u Srbiji", *Tokovi osiguranja*, br. 1/2016, str. 5

c) The article published in edited conference proceedings or a book is cited as follows: first and last name of author, title of article enclosed in quotation marks, title of book or proceedings written in italics, word *editor* or *sub-editor,* fist and last name of editor typed in parenthesis, edition number in ordinal form, place and year of publication, page number.

Example:

Vladimir Kovčić, „Stečaj akcionarskog društva za osiguranje", *Pravo osiguranja u tranziciji* (urednici Predrag Šulejić i Jovan Slavnić), Palić, 2003, str. 56.

d) Repeated citations from the same author should include only the first initial followed by a full stop before the last name of the author and the number of the page.

Example:

Jasna Pak, pp. 57

3. Regulations

a) The regulations are cited as follows: full title of regulation, gazette in which the regulation was published typed in italics, gazette number and year of publishing, abbreviations art., par., item and/or par. and regulation number.

Example:

Law on Compulsory Traffic Insurance, *Official Gazette of the Republic of Serbia,* no.51/09, art.15

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Example:

Insurance Law – IL, *Official Gazette of the Republic of Serbia*, no.55/04, art.38, par.2

c) Article, paragraph and item of a regulation are referred to as abbreviations art., par., item

Example:

art.35, par.5 item 8 or par.8

d) when repeating the reference to a specific regulation, please specify its full title or abbreviation introduced during the first citing, abbreviation art., item or par. and number of regulation.

Examples:
Insurance Law, art.15
IL, art.15

e) The regulations written in a language other than Serbian should be cited as follows: full title of regulation translated into the Serbian language, year of publishing and/or adoption, full title of regulation in original language, typed in italics, enclosed in brackets, optionally, the abbreviation under which the regulation will be referred to further in the text, abbreviation art., par., item or par.

Examples:
German Commercial Code 1897 (*Handelsgesetzbuch*), par. 29.
British Companies Act 2006 (*Companies Act*; referred in footnotes as: CA), art.53

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Example:
Christos Gortsos, The Supervision of Financial Conglomerates under European Financial Law (Directive 2002/87/EC), 2010, *http://fic.wharton.upenn.edu/fic/papers/09/0936.pdf,* accessed on: 16/7/2016, pp. 2

b) For repeated citations from the Web source, the first initial followed by a full stop before the last name of the author should be included, that is, the name of organization from which the paper originates, the paper title and page number.

Example:
C. Gortsos, The Supervision of Financial Conglomerates under European Financial Law (Directive 2002/87/EC), pp. 12.

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Example:
Žarković, N., *Glossary of Insurance Terms,* Novi Sad, 2013, pp. 100

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