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ZAJEDNIČKI I DOBROVOLJNO DO NAJBOLJIH ESG PRAKSI

Marina Papadakis
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Jedan od najvažnijih strateških pravca u narednom periodu za banke će biti primena ESG principa (Environmental, Social, Governance).

Reč je o održivosti poslovanja, koja je globalni trend i zadatak, a u bankarskom sektoru ona ima dodatnu težinu. Pred nama je ne samo da lično pokažemo privrženost ESG principima, već da kroz svoje poslovanje ovu praksu širimo na klijente i partnere, na celokupan spektar građana, privrede, društvenih institucija...

Svesne važnosti ovog projekta, banke u Srbiji zajedno sa našim Udruženjem i međunarodnom finansijskom organizacijom IFC već su učinile krupne prve korake. Jedan od njih je i usvajanje Smernica za jačanje kapaciteta za implementiranje ESG praksi.

Usvajanju Smernica prethodilo je sprovođenje upitnika tokom 2022. i 2023. godine. Ovo istraživanje jasno nam je pokazalo koliko je snažna potreba banaka za edukacijom u segmentu ESG i održivog finansiranja. Potreba za usvajanjem znanja postoji kod zaposlenih u bankama, ali i kod klijenata. Iz takve potrebe, u saradnji sa Međunarodnom finansijskom korporacijom, nastaju detaljne smernice koje ukazuju u kom pravcu svi mi možemo i treba da menjamo svoju svakodnevnu praksu.

Na dugačkoj listi kvalitetnih predloga između ostalog je i predlog bankama da obezbede integraciju ESG principa u svoje interne politike. Takođe se predlaže da i same imaju ESG strategiju, odnosno strategiju održivosti.

I u procedurama odobravanja finansiranja očekuje se tretiranje ESG principa. Banke na primer treba da uzmu u obzir ESG rizike prilikom procene rizika, odnosno da se kontrola upravljanja rizicima proširi i na rizike koji se pojavljuju u domenu ESG. Uticaji na klimu takođe treba da budu uzeti u obzir prilikom donošenja odluka o pozajmljivanju novca, odnosno ulaganjima i kreditima.

Kako bi se postiglo održivo finansiranje, smernice upućuju banke da svoje finansijske tokove usmeravaju na održiva sredstva i aktivnosti. Trebalo bi da postoji periodično praćenje ESG učinka portfolija zajmova odnosno investicija, odnosno politike i procedure koje će pratiti zelene, društvene proizvode, ili proizvode koji su usmereni na održivost.

Da bi klijenti sa razumevanjem pristupili ESG principima banke, poželjno je da banke imaju jedinstven pristup, odnosno da za klijente pripreme pojednostavljen i efikasan upitnik.

Kada je reč o klijentima banaka, predlog je da postoji redovna obuka o standardima i praksi ESG, uključujući zelene, društvene i održive proizvode. Motivacija za menadžere treba da se definiše kroz podsticaje da povećaju broj održivih kredita ili investicija u portfoliju.

Zašto u bankarstvu Srbije dajemo ovako veliki značaj održivom finansiranju?

Uključivanje ESG principa u donošenje odluka o investicijama centralni je deo dogovora EU i programa održivih finansija. Cilj je da se privatni finansijski tokovi usmere ka održivim investicijama. Posledica treba da bude podrška međunarodno dogovorenim ciljevima za smanjenje negativnih ekoloških i društvenih uticaja, ciljevima koji su propisani Pariskim sporazumom, ili Ciljevima održivog razvoja Ujedinjenih nacija.

Važno je istaći da Smernice predstavljaju dobrovoljni vodič za primenu ESG praksi. Na bankama je da odluče u kojoj meri će implementirati iznete predloge, koliko će neke od njih modifikovati u skladu sa svojim potrebama i specifičnostima.

Dobrovoljnost je važna, jer jedino ona obezbeđuje iskrenu posvećenost ESG principima. Zakon je jedno, on uvek predviđa i kaznenu politiku i njegovo poštovanje se ne dovodi u pitanje. Tek dobrovoljna primena održivog poslovanja pokazaće našu istinsku privrženost dobrobiti zajednice i očuvanju njenih najvećih vrednosti. To je put koji vodi ka održivom finansiranju.

GENERALNI SEKRETAR
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Marina Papadakis

Bankarstvo, 2023, Vol. 52, Issue 4

ACHIEVING ESG PRACTICES – VOLUNTARILY AND TOGETHER

Marina Papadakis
Secretary General of the
Association of Serbian Banks

The implementation of ESG principles (Environmental, Social, Governance) will be one of the most important strategic directions for banks in the coming period.

Business sustainability is a global trend and task, and in the banking sector it has additional weight. It is up to us not only to personally demonstrate our commitment to ESG principles, but to spread this practice to clients and partners through our business, as well as to the entire spectrum of citizens, businesses, social institutions...

Aware of the importance of this project, banks in Serbia, together with our Association, have already taken major first steps. One of those steps is the adoption of Guidelines for strengthening the capacity of the ASB and banks to implement ESG practices.

The adoption of the Guidelines was preceded by the implementation of questionnaires in 2022 and 2023. This research clearly showed us how strongly the banks need education in the segment of ESG and sustainable financing. The need to acquire knowledge is present both among bank employees and among clients. Thus, in cooperation with the International Financial Corporation, detailed Guidelines were created that indicate the direction in which we can and should change our daily practice.

Among other things, the long list of high-quality proposals includes a suggestion for banks to ensure the integration of ESG principles into their internal policies. Also, the proposal instructs them to have an ESG strategy, that is, a sustainability strategy.

ESG principles are also expected to be treated in financing approval procedures. Banks, for example, should take ESG risks into account when assessing risks, i.e., risk management control should be extended to include risks that appear in the ESG domain. Climate impacts should also be taken into account when making decisions about borrowing money, i.e., with investments and loans.

In order to achieve sustainable financing, the Guidelines instruct banks to direct their financial flows to sustainable assets and activities. ESG performance of the portfolio of loans or investments should be monitored periodically, including policies and procedures that will monitor green, social or sustainability-oriented products.

In order for clients to approach the bank's ESG principles with understanding, it is desirable for banks to have a unified approach, that is, to prepare a simplified and efficient questionnaire for clients.

When it comes to bank employees themselves, the proposal is to have regular training on ESG standards and practices, including green, social, and sustainable products. The motivation for managers should be defined through incentives to increase the number of sustainable loans or investments in the portfolio.

Why do we attach such great importance to sustainable financing in Serbian banking?

Incorporating ESG principles into investment decision-making is a central part of the EU Agreement and Sustainable Finance Agenda. The goal is to direct private financial flows towards sustainable investments. This should result in support for internationally agreed goals for reducing negative environmental and social impacts, goals prescribed by the Paris Agreement, or the Sustainable Development Goals of the United Nations.

It is important to point out that the Guidelines are a voluntary guide for the implementation of ESG practices. It is up to the banks to decide to what extent they will implement the presented proposals, and how much they will modify some of them in accordance with their needs and specifications.

The voluntary aspect is important, as it is that only way to ensure a sincere commitment to ESG principles. The law is a different matter, it always foresees a penal policy and the obligation to adhere to it is not questioned. Only the voluntary implementation of sustainable business will demonstrate our true commitment to the well-being of the community and the preservation of its greatest values. It is the path that leads to sustainable financing.

SECRETARY GENERAL OF THE
ASSOCIATION OF SERBIAN BANKS
Marina Papadakis

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UPRAVLJANJE PORESKIM RIZIKOM U MULTINACIONALNIM BANKAMA: POGLED IZ SRBIJE

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Rezime: S obzirom na značajnu različitost nacionalnih poreskih sistema između država, multinacionalne banke se suočavaju sa izazovom obezbeđenja usklađenosti sa poreskom regulativom u svakoj državi. S tim u vezi, multinacionalne banke teže da minimiziraju izloženost poreskom riziku, odnosno verovatnoću da će nacionalne poreske vlasti određeni poreski tretman proglasiti ilegalnim. U radu su ispitani osnovni izvori poreskog rizika u filijalama multinacionalnih banaka u Srbiji. Ukazano je na to da se banke suočavaju sa značajnim izazovima obezbeđenja usklađenosti sa poreskom regulativom, a posebno regulativom poreza na dodatu vrednost i poreza na dobitak. U radu je pokazano i da filijale multinacionalnih banaka u Srbiji i okolnim državama izuzetno skromno obelodanjuju informacije o poreskom riziku u napomenama uz finansijske izveštaje. Takođe, multinacionalne banke na različit način obelodanjuju informacije o poreskom riziku u različitim državama, što ukazuje na to da obelodanjivanja prilagođavaju procenjenom stepenu poreskog rizika u svakoj državi.

Ključne reči: poreski rizik, upravljanje rizikom, banke, multinacionalne kompanije, poreska regulativa.

JEL klasifikacija: G21, H25, H26, F23, K34, G32

Uvod

Iako je nakon velikih korporativnih skandala početkom XXI veka ukazano na potrebu unapređenja sistema upravljanja rizikom i internih kontrola, poreski rizik je jedna od oblasti upravljanja rizikom koja se često marginalizuje (Wunder, 2009). Poreski rizik se obično posmatra u kontekstu nesigurnih poreskih ishoda (Neuman i saradnici, 2020), odnosno ishoda poreskih kontrola, u smislu da je nekada teško sa potpunom sigurnošću odrediti poreski tretman transakcije. Tome doprinosi kompleksnost poreske regulative (Hoppe i saradnici, 2023), ali i nemogućnost poreske regulative da unapred jasno propiše poreski tretman svake moguće transakcije, usled velike raznovrsnosti poslovnih transakcija.

Poreski rizik u bankama često je posledica težnji vlasnika i menadžmenta banke za umanjenjem poreskog opterećenja. S jedne strane, poreska odeljenja banaka imaju zadatak da obezbede usklađenost sa poreskom regulativom, što neretko vodi većem poreskom opterećenju, ali, s druge strane, imaju zadatak i da vrše optimizaciju poreskog opterećenja u pravcu njegovog smanjenja (Hogsden, 2018). S tim u vezi, banke primenjuju strategije poreskog planiranja, kojima se koriste zakonom dozvoljeni poreski podsticaji i koje ne povećavaju značajnije poreski rizik banke. Ipak, banke mogu primenjivati i strategije izbegavanja poreza, kojima se koriste nesavršenosti poreskih zakona i koje mogu u značajnoj meri povećati izloženost banke poreskom riziku (Merks, 2006).

U cilju adekvatnog upravljanja rizikom, većina multinacionalnih banaka ima oformljena poreska odeljenja u okviru filijala u državama u kojima posluje. S tim u vezi, rukovodioci internih poreskih odeljenja neretko podnose značajan deo poreskog rizika kompanije (Wunder, 2009). Između ostalog, poreska odeljenja smanjuju pritisak na menadžment banke, koji dolazi od strane nacionalnih poreskih vlasti, ali i od strane javnosti (Bruhne i Schanz, 2022).

Predmet rada jeste upravljanje poreskim rizikom multinacionalnih banaka, shvaćeno kao skup aktivnosti usmerenih ka minimiziranju izloženosti poreskom riziku, odnosno minimiziranju verovatnoće da će nacionalne poreske vlasti određeni poreski tretman proglasiti ilegalnim. U vezi sa upravljanjem poreskim rizikom, moguće je identifikovati dva osnovna cilja rada. Prvi je analiziranje glavnih izvora poreskog rizika banaka, dok je drugi ispitivanje stepena u kojem banke vrše obelodanjivanja o poreskom riziku u napomenama uz finansijske izveštaje.

Istraživanje o poreskom riziku u multinacionalnim bankama može biti od koristi brojnim interesnim grupama. Identifikovanje glavnih izvora poreskog rizika, analiza mogućnosti za upravljanje poreskim rizikom i načini obelodanjivanja o poreskom riziku mogu biti od koristi zaposlenima u bankama u Srbiji – menadžmentu banaka, ali i zaposlenima u poreskim i komplajans odeljenjima i računovodstvu banaka.

Rad doprinosi nizu postojećih istraživanja o multinacionalnim bankama. Istraživanja o filijalama multinacionalnih banaka su posebno važna za tranzicione države, uključujući Srbiju, s obzirom na to da bankarskim sektorima ovih država dominiraju multinacionalne banke. Prema najboljim saznanjima autora, ovo je prvo istraživanje o upravljanju poreskim rizikom u filijalama multinacionalnih banaka u Srbiji.

Izuzev uvoda i zaključka, rad je sačinjen iz tri celine. U prvom delu rada je dat pregled literature o poreskom riziku u multinacionalnim bankama. U drugom delu rada su analizirani glavni izvori poreskog rizika u bankarskom sektoru Srbije, dok je u trećem delu rada sprovedeno empirijsko istraživanje o obelodanjivanju o poreskom riziku filijala multinacionalnih banaka u Srbiji i zemljama okruženja.

Pregled literature

U svim državama banke se suočavaju sa određenim stepenom poreskog rizika, primarno usled kompleksne poreske regulative, odnosno potencijalno različite interpretacije poreske regulative između nacionalnih poreskih vlasti i menadžmenta banke. Artemenko i saradnici (2017) identifikuju različite izvore poreskog rizika. Imajući u vidu da moraju da obezbede usklađenost sa poreskom regulativom velikog broja država, multinacionalne banke se nalaze u znatno težoj poziciji u odnosu na domaće banke (koje posluju u jednoj državi). Ovo važi za sve dobro poznate poreske oblike, a primarno porez na dodatu vrednost (PDV) i porez na dobitak.

Usled značajnih razlika između nacionalnih poreskih sistema, multinacionalne kompanije se u svakoj državi suočavaju sa specifičnim izazovima u vezi sa PDV-om (Xu i saradnici, 2018). U kontekstu banaka, u većini država važe specifična pravila vezana za PDV. Zapravo, većina finansijskih usluga koje pružaju banke je u najvećem broju država oslobođena PDV-a (Poddar i English, 1997), pa se banke suočavaju sa izazovom razdvajanja usluga na one koje su oporezive PDV-om i one koje nisu, ostvarivanja prava na korišćenje prethodnog PDV-a i slično.

Multinacionalne banke se suočavaju i sa značajnom disharmonijom po pitanju ostalih poreskih oblika, poput poreza na dobitak ili poreza na dohodak građana. Primera radi, u kontekstu poreza na dobitak, različite države primenjuju različita pravila za utvrđivanje oporezive osnovice, različite poreske stope i poreske podsticaje. Iako je u Evropskoj uniji bilo predloga da se pravila za utvrđivanje oporezive osnovice harmonizuju (Munin, 2011), kroz CCTB (engl. Common Corporate Tax Base) projekat, značajniji pomak još uvek nije ostvaren. Cnossen (2018) primećuje da bi ovakva harmonizacija dovela do smanjenja troškova usklađivanja sa poreskom regulativom za kompanije.

Kao rezultat značajne izloženosti poreskom riziku, multinacionalne kompanije upravljaju ovom vrstom rizika, i to u okviru specijalizovanih poreskih odeljenja unutar kompanije, ali i angažovanjem eksternih poreskih konsultanata. U vezi sa specijalizovanim poreskim odeljenjima unutar kompanije, Mulligan i Oats (2016) primećuju da su gotovo sve multinacionalne kompanije u poslednjih nekoliko decenija uključile specijalizovana poreska odeljenja u svoje organizacione strukture.

Multinacionalne banke obično imaju komplajans odeljenja, zadužena za obezbeđenje usklađenosti poslovanja banke sa regulativom, ali i zasebna poreska odeljenja. Izuzev minimiziranja izloženosti poreskom riziku i obezbeđenja usklađenosti sa poreskom regulativom, Crocker i Slemrod (2005) primećuju da se fokus ovakvih odeljenja stavlja i na aktivno upravljanje poreskim obavezama u cilju njihovog minimiziranja. Kako društvo način upravljanja porezima može posmatrati u kontekstu društveno (ne) odgovornog poslovanja (Dowling, 2014), Hogsden (2018) smatra da specijalizovana poreska odeljenja unutar preduzeća razvijaju strategije upravljanja porezima kojima se obezbeđuje usklađenost sa poreskim propisima, minimizira poresko opterećenje i eliminišu negativne reakcije javnosti.

Menadžeri specijalizovanih poreskih odeljenja unutar multinacionalnih kompanija se često nalaze u izazovnoj poziciji, s obzirom na to da moraju balansirati između minimiziranja poreskog rizika (što neretko podrazumeva sigurne i skuplje poreske strategije) i minimiziranja poreskog opterećenja (što neretko podrazumeva rizične, ali troškovno efikasnije poreske strategije). S tim u vezi, Robinson i saradnici (2010) pokazuju da se specijalizovana poreska odeljenja obično organizuju kao profitni centri, a ne centri troškova, što ukazuje na očekivanja vlasnika i menadžmenta kompanija da ovakva odeljenja učestvuju u smanjenju poreskog opterećenja i povećanju profitabilnosti kompanije.

Prisutni su, takođe nalazi, po kojima se performanse specijalizovanih poreskih odeljenja obično mere poreskim opterećenjem kompanije (Douglas i saradnici, 1996), odnosno nalazi o negativnoj povezanosti između naknade menadžerima ovakvih odeljenja i poreskog opterećenja kompanije (Armstrong i saradnici, 2012).

S druge strane, u sličnoj poziciji se mogu naći i eksterni poreski konsultanti. Od njih se očekuje da obezbede multinacionalnim kompanijama usklađenost poslovanja sa poreskom regulativom. Ipak, Hogan i Noga (2015) primećuju da angažovanje eksternih poreskih konsultanata obično dovodi do značajnog smanjenja poreskog opterećenja kompanije. Primera radi, eksterni poreski konsultanti mogu biti bolje upoznati sa poreskim podsticajima u državama u kojima multinacionalna kompanija posluje. Dodatno, objektivnije mogu izvršiti analizu poreskih posledica transfernih cena između povezanih preduzeća. Eksterni poreski konsultanti mogu, takođe, bolje tumačiti ugovore o izbegavanju dvostrukog oporezivanja kako bi multinacionalne kompanije izbegle plaćanje poreza po odbitku na transakcije između povezanih pravnih lica.

Sikka (2015) navodi da se kao eksterni poreski konsultanti obično angažuju računovodstvene kompanije koje pripadaju Big 4 grupi – Deloitte, EY, KPMG i PwC. S druge strane, multinacionalne kompanije nekada angažuju lokalne konsultantske kompanije u zemlji odredišta, s obzirom na to ovakve firme imaju uži fokus i ekspertizu za poreski sistem samo jedne države.

Značajan deo poreskog rizika multinacionalnih banaka potiče iz odnosa entitetima u poreskim rajevima – postojanja entiteta iz poreskog raja u vlasničkoj strukturi banke i transakcija sa rezidentima poreskih rajeva. Merz i Overesch (2016) primećuju da su banke sa međunarodnim prisustvom u mogućnosti da značajan deo dobitka usmere u poreske rajeve u cilju umanjenja poreskog opterećenja na globalnom nivou. S druge strane, prisustvo kompanije u poreskim rajevima i transakcije sa povezanim entitetima u poreskim rajevima značajno povećavaju verovatnoću naknadnih poreskih plaćanja prema državnim poreskim vlastima (Taylor i saradnici, 2018).

U vezi sa prisustvom multinacionalnih banaka u poreskim rajevima, važno je pomenuti da banke mogu koristiti ne samo tradicionalne poreske rajeve (na primer udaljena egzotična ostrva), već i brojne poreske rajeve unutar evropskog kontinenta (Rusina, 2020). Tako je značajan broj evropskih banaka registrovan u Holandiji ili Luksemburgu – državama koje su članice Evropske unije, ali i poznati poreski rajevi – iako su izvorno osnovane u drugim državama.

Rosing (2013) ukazuje na to da transferne cene predstavljaju izazov za mnoge multinacionalne kompanije. Vrednovanje transakcija između povezanih pravnih lica, posebno ukoliko se bar jedno nalazi u državi sa preferencijalnim poreskim sistemom, može biti predmet ispitivanja nacionalnih poreskih vlasti. Iako se transferne cene obično utvrđuju prema smernicama OECD-a (Behrens i saradnici, 2014), poreske vlasti različitih država mogu različito oceniti opravdanost izbora određene metode za njihovo utvrđivanje.

Takođe, multinacionalne banke mogu birati način nastupa u državi odredišta u cilju optimizacije poreskog opterećenja, birajući između filijale ili ogranka. S tim u vezi, Cerutti i saradnici (2007) pokazuju da banke češće posluju kao ogranci u državama sa većim poreskim opterećenjem nego u državama sa manjim poreskim opterećenjem.

Kompleksnost poreske regulative za banke u Srbiji

Za razliku od nekih drugih država, banke u Srbiji podležu istoj poreskoj regulativi kao i preduzeća iz realnog sektora – plaćaju iste poreske oblike i na njih se primenjuju iste poreske stope. Ipak, usled specifične prirode delatnosti, banke mogu imati određene poteškoće prilikom primene poreske regulative. Poput preduzeća iz realnog sektora, PDV, porez na dobitak i porez na dohodak građana predstavljaju poreske oblike koji im zadaju najviše poteškoća u obezbeđenju usklađenosti sa poreskom regulativom.

S obzirom na to da su osnovni (kreditni i depozitni) poslovi banke, kao i poslovi platnog prometa, oslobođeni PDV-a, ovaj poreski oblik je, na prvi pogled, od sekundarne važnosti za banke. Ipak, treba imati u vidu da su sve banke obveznici PDV-a, odnosno da su obavezne da mesečno ili tromesečno podnose poreske prijave za PDV nacionalnim poreskim vlastima. Na dan 30. septembar 2023. godine, u Srbiji je bilo aktivno dvadeset banaka, od kojih je njih dvanaest bilo jednomesečni, a njih osam tromesečni PDV obveznik.

Ipak, PDV je verovatno poreski oblik koji produkuje najviše specifičnosti za bankarski sektor. Pošto je najveći deo prometa banaka, po osnovu osnovnih bankarskih poslova, oslobođen PDV-a, banke mahom nemaju pravo da koriste prethodni PDV sadržan u primljenim računima. S druge strane, na neke usluge su banke dužne da obračunaju PDV. Tipičan primer jeste usluga zakupa sefova. Stoga, kada se vrši nabavka dobara ili usluga koji će biti korišćeni i za neoporeziv (na primer kreditiranje stanovništva i privrede) i za oporeziv promet (na primer izdavanje sefa u zakup), prethodni PDV se koristi delimično, odnosno vrši se podela prethodnog PDV-a prema ekonomskoj pripadnosti (na primer površina zakupljenog poslovnog prostora može biti osnova za podelu prethodnog PDV-a ukoliko je moguće utvrditi koliko se kvadratnih metara koristi za oporeziv promet, a koliko za promet oslobođen PDV-a). Ukoliko podela prema ekonomskoj pripadnosti nije moguća, vrši se srazmerni odbitak PDV-a.

Srazmerni odbitak PDV-a je uređen članom 30. Zakona o PDV (Službeni glasnik RS, 84/2004, 86/2004, ..., 138/2022). Procenat u kojem banka ima pravo da koriste prethodni PDV se utvrđuje stavljanjem u odnos prometa dobara i usluga sa pravom na odbitak prethodnog PDV-a (u koji nije uključen PDV) i ukupnog prometa dobara i usluga (u koji nije uključen PDV), posmatrano za period od 1. januara tekuće godine do isteka poreskog perioda za koji se poreska prijava podnosi.

Ovakve odredbe dovode do određenih specifičnih situacija u obračunu PDV-a u bankama. Primera radi, veliki broj banaka plaća usluge oglašavanja na društvenim mrežama, u kojima nude kredite ili štednju građanima i preduzećima. Kako su kreditni i depozitni poslovi oslobođeni PDV-a, banka (za razliku od preduzeća iz realnog sektora) neće imati pravo da koristi prethodni PDV po ovom osnovu. Pošto su društvene mreže u inostranom vlasništvu, pa je dobavljač usluge oglašavanja nerezidentno preduzeće, banka mora izvršiti interni obračun PDV-a, ali ga ne sme koristiti kao prethodni.

Nešto kompleksniji primer je kada banka plaća nadoknadu za korišćenje softvera nerezidentnom pravnom licu. U takvim uslovima je banka dužna da obračuna i porez po odbitku (kao vrstu poreza na dobitak), pri čemu porez po odbitku ulazi u osnovicu za interni obračun PDV-a. U zavisnosti od toga da li se softver koristi isključivo za promet oslobođen PDV ili i za promet na koji banka plaća PDV, interno obračunati PDV ne može koristiti kao prethodni ili se vrši srazmerni odbitak PDV-a.

Nešto manje specifičnosti se vezuje za oporezivanje dobitka banaka. Generalno, pravila za utvrđivanje osnovice za porez na dobitak su izuzetno slična onima za preduzeća iz realnog sektora.

Ova pravila su uređena Zakonom o porezu na dobit pravnih lica (Službeni glasnik RS, 25/2001, 80/2002, ..., 118/2021). Jedan važan izuzetak od opštih pravila, koji se odnosi na banke, je predviđen članom 62. ovog zakona. Tako, preduzećima iz realnog sektora se u poreskom bilansu priznaju rashodi kamate iz pozajmica od povezanih pravnih lica najviše do četvorostrukog iznosa sopstvenog kapitala preduzeća. Za banke je taj limit jednak desetostrukom iznosu sopstvenog kapitala.

U kontekstu poreza na dobitak, određene specifičnosti za bankarski sektor se javljaju u domenu poreskih podsticaja. S tim u vezi, glavni poreski podsticaj velikim preduzećima iz realnog sektora obično nije dostupan bankama. Radi se o poreskom podsticaju kod ulaganja u stalnu imovinu, gde se preduzeće oslobađa plaćanja poreza na dobitak (srazmerno ulaganju) u periodu od deset godina, ukoliko u stalnu imovinu uloži barem milijardu dinara i dodatno zaposli sto radnika. Imajući u vidu relativno malo učešće stalne imovine u ukupnoj imovini banke, nije iznenađujuće da veliki broj banaka ne koristi ovaj podsticaj.

S druge strane, banke u mnogo većoj meri koriste prihode od kamata na državne dužničke hartije od vrednosti za svrhe umanjenja opterećenja porezom na dobitak. Ovi prihodi, kao i prihodi od dividendi isplaćeni od strane rezidentnih obveznika, su oslobođeni poreza na dobitak. Ovi prihodi predstavljaju glavni izvor umanjenja efektivne stope poreza na dobitak u bankarskom sektoru. Takođe, bankama je na raspolaganju poreski kredit po osnovu Zakona o konverziji stambenih kredita indeksiranih u švajcarskim francima (Službeni glasnik RS, 31/2019).

Značajnu pažnju banke moraju posvetiti izloženosti poreskom riziku po osnovu povezanosti sa poreskim rajevima. Neke banke u Srbiji su u vlasništvu entiteta koji su rezidenti poreskih rajeva. Primera radi, srpska filijala jedne velike italijanske multinacionalne bankarske grupe je u stoprocentnom vlasništvu entiteta registrovanog u Luksemburgu. Iako se nalazi u Evropskoj uniji, Luksemburg važi za jedan od poznatijih poreskih rajeva. Svakako, postojanje entiteta iz poreskog raja u vlasničkoj strukturi ne znači ništa ilegalno per se, ali ga nacionalne poreske vlasti mogu smatrati kao važno upozorenje.

Pored toga, banke moraju posvetiti pažnju transakcijama sa, povezanim ili nepovezanim, entitetima iz poreskih rajeva. S tim u vezi, član 40. Zakona o porezu na dobit pravnih lica predviđa plaćanje poreza po odbitku za određena plaćanja nerezidentima, poput isplate dividendi, kamata, naknada za korišćenje intelektualne svojine i slično. Standardna stopa poreza po odbitku iznosi 20%, ali ukoliko se isplata (izuzev isplate dividendi) vrši rezidentima poreskih rajeva (prema Pravilniku o listi jurisdikcija sa preferencijalnim poreskim sistemom, Službeni glasnik RS, 122/12), stopa poreza po odbitku iznosi 25%. Dodatno, specifičnost banaka se ogleda u tome što one imaju dvostruku odgovornost po pitanju transakcija sa poreskim rajevima – moraju obezbediti usklađenost svojih transakcija sa poreskom regulativom, ali, takođe, ne smeju biti facilitatori poreske evazije koju bi vršili njihovi klijenti kroz transakcije sa poreskim rajevima.

Banke u Srbiji se, takođe, suočavaju sa relativno kompleksnom regulativom po pitanju poreza na dohodak građana. Ipak, treba istaći da u ovom domenu nema izraženijih razlika između oporezivanja preduzeća iz realnog sektora i banaka. S druge strane, česte promene Zakona o porezu na dohodak građana (Službeni glasnik RS, 24/2001, 80/2002, ..., 6/2023) i njegova obimnost dovode do toga da je ovo verovatno najkompleksniji poreski oblik u Srbiji. Obračun osnovne zarade zaposlenima u bankama je relativno jednostavan, premda je potrebno kontinuirano pratiti promene stopa poreza na zarade i doprinosa za obavezno socijalno osiguranje, kao i promenu iznosa poreske olakšice.

Osim ugovora o radu, banke u Srbiji zaključuju veliki broj ugovora o radnom angažovanju lica bez zaposlenja. Takvi su, primera radi, ugovor o delu ili ugovor o autorskom delu i njihov poreski tretman je značajno različit u odnosu na poreski tretman osnovne zarade. Takođe, veliki broj banaka organizuje rekreaciju i team building aktivnosti za svoje zaposlene. Od 2019. godine, ove aktivnosti imaju poseban poreski tretman, koji je propisan Pravilnikom o ostvarivanju prava na poresko oslobođenje po osnovu organizovanja rekreacije, sportskih događaja i aktivnosti za zaposlene (Službeni glasnik RS, 50/2019).

Značajan porez na dohodak građana banke u Srbiji plaćaju po osnovu transakcija sa svojim depozitarima. Prihod od kamate koji stanovništvo ostvari po osnovu dinarske štednje je neoporeziv, ali je prihod od kamate na deviznu štednju oporeziv porezom na prihode od kapitala po stopi od 15%. Ovaj porez je vrsta poreza po odbitku, što znači da ga banka plaća u ime depozitara.

Istraživanje na srpskim bankama u periodu od 2018. do 2020. godine (Vržina, 2021) je pokazalo da nešto više od polovine banaka obelodanjuje informacije o poreskom riziku u napomenama uz finansijske izveštaje, mada većina njih to radi na relativno formalan i uopšten način. Štaviše, uočen je značajan broj banaka koji o poreskom riziku izveštava na potpuno isti način. U istraživanju je pokazano da je verovatnoća obelodanjivanja informacija o poreskom riziku statistički značajno manja kod banaka u stranom vlasništvu u Srbiji u odnosu na banke u domaćem vlasništvu. Ovaj nalaz je delimično objašnjen činjenicom da većina stranih banaka, zapravo, predstavlja filijale multinacionalnih bankarskih grupa, koje ne anticipiraju mogućnost plaćanja poreskih kazni usled veličine i jake pregovaračke moći bankarske grupe kojoj pripadaju. Takođe, istraživanje je pokazalo i da je verovatnoća obelodanjivanja informacija o poreskom riziku statistički značajno veća kod manje profitabilnih banaka i banaka sa manjim opterećenjem porezom na dobitak.

Empirijsko istraživanje o obelodanjivanju o poreskom riziku Metodologija istraživanja

Većina banaka u Srbiji i državama okruženja se nalazi u stranom vlasništvu. Obično se radi o multinacionalnim bankarskim grupama, koje posluju u više država Balkana. Za svrhe ovog rada, posmatrane su prakse obelodanjivanja o poreskom riziku u napomenama uz finansijske izveštaje u Srbiji i četiri države bivše Socijalističke Federativne Republike Jugoslavije: Bosni i Hercegovini, Crnoj Gori, Hrvatskoj i Severnoj Makedoniji. Praćene su prakse obelodanjivanja o poreskom riziku filijala multinacionalnih banaka u različitim državama, kako bi se ispitalo da li prakse obelodanjivanja iste multinacionalne banke razlikuju po državama.

Uzorkovane su isključivo banke koje predstavljaju filijale multinacionalnih bankarskih grupa. Drugim rečima, uzorkovane su multinacionalne bankarske grupe čija se matična kompanija ne nalazi ni u jednoj od uzorkovanih država. Na taj način je formiran uzorak od osam bankarskih grupa, pri čemu se matične kompanije svake od njih nalaze na teritoriji Evropske unije (Austrija, Italija, Mađarska, Nemačka i Slovenija). Ukupno je uzorkovano 28 banaka, koje predstavljaju filijale osam bankarskih grupa. Uzorak je formiran na dan 30. septembar 2023. godine, a spisak uzorkovanih banaka prema pripadnosti bankarskoj grupi i državi u kojoj posluju je prikazan u Tabeli 1.

Tabela 1: Spisak uzorkovanih banaka

	Srbija	Hrvatska	Bosna i Hercegovina	Crna Gora	Severna Makedonija	Ukupno
Bankarska grupa 1	√	√	√	√		4
Bankarska grupa 2	√	√	√			3
Bankarska grupa 3	√	√	√	√	√	5
Bankarska grupa 4	√		√	√	√	4
Bankarska grupa 5	√	√		√		3
Bankarska grupa 6	√		√		√	3
Bankarska grupa 7	√	√	√			3
Bankarska grupa 8	√	√	√			3
Ukupno	8	6	7	4	3	28

Podaci iz napomena uz finansijske izveštaje su preuzeti sa zvaničnih internet prezentacija banaka. U radu su korišćeni podaci iz pojedinačnih finansijskih izveštaja, kako bi se minimizirao uticaj nerezidentnih pravnih lica i uticaj nebankarskih povezanih pravnih lica. Korišćeni su finansijski izveštaji za 2022. godinu, kao poslednju dostupnu godinu u momentu sprovođenja istraživanja.
Praksa obelodanjivanja o poreskom riziku banaka nije unificirana. S tim u vezi, banke najčešće obelodanjuju informacije o poreskom riziku na neki od sledećih načina:

- obelodanjivanje informacija o poreskom riziku kao zasebna tačka napomena uz finansijske izveštaje;
- obelodanjivanje informacija o poreskom riziku u okviru sekcije upravljanje rizicima (zajedno sa ostalim vrstama rizika, poput kreditnog, kamatnog ili deviznog rizika) i
- obelodanjivanje informacija o poreskom riziku u okviru sekcije potencijalne i preuzete obaveze.

S druge strane, veliki broj banaka ne obelodanjuje direktno informacije o poreskom riziku, ali obelodanjuje informacije o određenim elementima poreskog rizika, poput poreskih inspekcija. Ovakva obelodanjivanja se obično vrše na neki od sledećih načina:

- u okviru svođenja dobitka pre oporezivanja (iz bilansa uspeha) na oporezivi dobitak (iz poreskog bilansa);
- u okviru analize ključnih izvora procene neizvesnosti i
- u okviru obelodanjivanja računovodstvenih politika.

Rezultati istraživanja

U Tabeli 2 su predstavljene prakse obelodanjivanja o poreskom riziku u napomenama uz finansijske izveštaje za svih osam uzorkovanih bankarskih grupa. U tabeli su rangirane prakse obelodanjivanja o poreskom riziku od najmanje sofisticirane (0 – bez obelodanjivanja o poreskom riziku) od najsofisticiranije (6 – najkompletnije obelodanjivanje o poreskom riziku).

Tabela 2: Model obelodanjivanja o poreskom riziku u napomenama uz finansijske izveštaje

	Srbija	Hrvatska	Bosna i Hercegovina	Crna Gora	Severna Makedonija
Bankarska grupa 1	0	1	2	0	
Bankarska grupa 2	4	2	2		
Bankarska grupa 3	4	0	0	6	6
Bankarska grupa 4	4		2	3	1
Bankarska grupa 5	4	2		6	
Bankarska grupa 6	0		2		3
Bankarska grupa 7	0	2	2		
Bankarska grupa 8	0	0	2		

Napomena: 0 – ne obelodanjuje; 1 – u okviru računovodstvenih politika; 2 – u okviru ključnih izvora procene neizvesnosti; 3 – u okviru svođenja dobitka pre oporezivanja na oporezivi dobitak; 4 – u okviru potencijalnih i preuzetih obaveza; 5 – u okviru upravljanja rizicima; 6 – zasebna tačka u napomenama uz finansijske izveštaje.

Generalno, moguće je primetiti da se prakse obelodanjivanja o poreskom riziku značajno razlikuju između filijala u okviru jedne bankarske grupe. Ni jedna uzorkovana bankarska grupa nema unificiranu praksu obelodanjivanja o poreskom riziku u svim državama u kojima posluje. To može ukazivati na to da bankarske grupe prilagođavaju obelodanjivanja o poreskom riziku u skladu sa procenjenim poreskim rizikom u državi u kojoj posluju.

Dodatno, interesantno je primetiti da samo tri uzorkovane bankarske grupe obelodanjuju bilo kakve informacije o poreskom riziku u svim uzorkovanim državama. Interesantan je i primer bankarske grupe 3, koja u Hrvatskoj ne obelodanjuje informacije o poreskom riziku, ali obelodanjuje informacije o upravljanju porezima kao delu društveno odgovornog poslovanja, na sledeći način:

Banka je oduvek vodila brigu o poreskoj usklađenosti, te o poštovanju i doslednoj primeni poreskih propisa. Banci je kao društveno odgovornom preduzetniku stalo da se javne potrebe države u kojoj radi uredno podmiruju i da banka plaća pošten iznos poreza, odnosno iznos poreza koji je dužna da plati prema poreskim propisima. U tu svrhu, od marta 2017. godine, u banci deluje odeljenje za poreze banke u Hrvatskoj.

Srbija i Bosna i Hercegovina su specifične države sa aspekta obelodanjivanja o poreskom riziku, usled činjenice da se (izuzev odsustva obelodanjivanja o poreskom riziku) informacije o poreskom riziku obelodanjuju na samo jedan način – u Srbiji u okviru potencijalnih i preuzetih obaveza, a u Bosna i Hercegovini u okviru ključnih izvora procene neizvesnosti.

U Tabeli 3 je predstavljena struktura uzorkovanih banaka prema modelu obelodanjivanja o poreskom riziku. Primetno je da najveći deo banaka obelodanjuje informacije o poreskom riziku u okviru ključnih izvora procene neizvesnosti.

S druge strane, oko svega 10% uzorkovanih banaka obelodanjuje informacije o poreskom riziku na najsofisticiraniji način – kao zasebnu tačku u napomenama uz finansijske izveštaje. Iznenađujuće je primetiti da ni jedna banka ne obelodanjuje informacije o poreskom riziku u okviru sekcije o upravljanju rizicima.

Tabela 3: Distribucija banaka prema modelu obelodanjivanja o poreskom riziku

	Model obelodanjivanja	Broj banaka	Procenat banaka
0	Bez obelodanjivanja o poreskom riziku	8	28,57%
1	U okviru računovodstvenih politika	2	7,14%
2	U okviru ključnih izvora procene neizvesnosti	9	32,14%
3	U okviru svođenja dobitka pre oporezivanja na oporezivi dobitak	2	7,14%
4	U okviru potencijalnih i preuzetih obaveza	4	14,29%
5	U okviru upravljanja rizicima	0	0,00%
6	Zasebna tačka u napomenama uz finansijske izveštaje	3	10,71%
Ukupno		28	100,00%

Važno je primetiti da čak 75% uzorkovanih banaka ne obelodanjuje informacije o poreskom riziku ili koristi manje sofisticirane modele obelodanjivanja (u okviru računovodstvenih politika, ključnih izvora procene neizvesnosti ili svođenja dobitka pre oporezivanja na oporezivi dobitak). Ovakva praksa je posebno izražena kod banaka u Bosni i Hercegovini i Hrvatskoj.

Generalno, obelodanjivanja o poreskom riziku uzorkovanih banaka (nezavisno od izabranog modela obelodanjivanja) su relativno skromna. U vezi sa obelodanjivanjem u okviru računovodstvenih politika ili ključnih izvora procene neizvesnosti, banke obično obelodanjuju jedan pasus u okviru kojeg konstatuju mogućnost naknadnih kontrola od strane nacionalnih poreskih vlasti. Drugim rečima, poreski rizik se ni ne pominje kao posebna sintagma, već se isključivo govori o mogućnosti naknadnih dodatnih poreskih plaćanja. Tipičan primer ovakvog obelodanjivanja je prikazan u nastavku:

Poreske prijave podležu proveri Poreske uprave. Zbog činjenice da je sprovođenje poreskih zakona i poreske regulative različitih transakcija podložno različitim interpretacijama, iznosi prikazani u finansijskim izveštajima se mogu naknadno promeniti, u zavisnosti od konačnih nalaza Poreske uprave.

S druge strane, banke koje koriste sofisticiranije modele obelodanjivanja o poreskom riziku (u okviru potencijalnih i preuzetih obaveza, u okviru upravljanja rizicima ili kao zasebna tačka u napomenama uz finansijske izveštaje) pružaju nešto više podataka, ali su njihova obelodanjivanja, takođe, izuzetno štura. Tipičan primer takvog obelodanjivanja je prikazan u nastavku:

Poreski sistem države u kojoj banka posluje je u procesu kontinuirane revizije i izmena. U državi u kojoj banka posluje poreski period je otvoren tokom perioda od pet godina. U različitim okolnostima, poreske vlasti mogu imati različite pristupe određenim pitanjima i mogu utvrditi dodatne poreske obaveze zajedno sa zateznim kamatama i penalima. Rukovodstvo banke smatra da su poreske obaveze evidentirane u priloženim finansijskim izveštajima pravilno iskazane.

Primetno je i da su obelodanjivanja o poreskom riziku banaka izuzetno saglasna. Ovaj nalaz posebno važi za banke u Srbiji i Bosni i Hercegovini. To može ukazivati na to da banke obelodanjivanje o poreskom riziku posmatraju kao rutinsku aktivnost. S druge strane, korisnici finansijskih izveštaja na ovaj način ostaju bez nekih važnih informacija o poreskim aktivnostima banke. Primera radi, banke ne obelodanjuju podatke o poreskim kontrolama tokom godine (jesu li ih imali i kakvi su nalazi poreskih inspektora), neizvesnim poreskim pozicijama (kod kojih je postoji značajna verovatnoća da će biti osporene tokom poreske kontrole), povezanim pravnim licima koja su rezidenti država sa preferencijalnim poreskim sistemom i slično.

Zaključak

Poreski rizik je u Srbiji dobio na važnosti u poslednje dve decenije, a posebno nakon transformacije na tržišno-orijentisanu privredu i značajnog priliva stranih direktnih investicija. S tim u vezi, u radu su ispitane mogućnosti za upravljanje poreskim rizikom u multinacionalnim bankama koje posluju u Srbiji. Drugim rečima, identifikovani su neki od osnovnih izvora poreskog rizika za multinacionalne banke i analizirane su prakse obelodanjivanja o poreskom riziku u napomenama uz finansijske izveštaje banaka.

Verovatno najviše specifičnosti po pitanju primene poreske regulative banke u Srbiji imaju po pitanju PDV-a. Iako ovaj poreski oblik ima relativno mali značaj za banke, jer je većina bankarskih poslova oslobođena PDV-a, specifičnosti po pitanju prava na korišćenje prethodnog PDV-a i (ne)postojanje obaveze obračuna PDV-a na određene bankarske aktivnosti predstavljaju izazove sa kojima poreska odeljenja u bankama moraju da se bore.

S druge strane, značajno veći značaj za banke ima porez na dobitak, premda je primena regulative poreza na dobitak gotovo identična u bankarskom sektoru i preduzećima iz realnog sektora. Određene specifičnosti se odnose na drugačija pravila za sprečavanje utanjene kapitalizacije u bankarskom sektoru, kao i na postojanje poreskih kredita za banke po osnovu odobrenih zajmova indeksiranih u švajcarskim francima.

Takođe, empirijsko istraživanje je pokazalo da filijale multinacionalnih banaka u Srbiji samo u skromnoj meri obelodanjuju informacije o poreskom riziku. Obelodanjene informacije su relativno šture i isuviše uopštene, te nisu od velike koristi korisnicima finansijskih izveštaja. Takođe, pokazano je da filijale iste multinacionalne bankarske grupe u različitim državama obelodanjuju informacije o poreskom riziku na različit način. Ovo ukazuje na to da banke prilagođavaju obelodanjivanja u skladu sa procenjenim stepenom poreskog rizika u državi u kojoj posluju.

Autor veruje da rezultati istraživanja mogu biti od koristi brojnim interesnim grupama, a posebno menadžmentu multinacionalnih bankarskih grupa, kao i poreskim odeljenjima, komplajans odeljenjima i računovodstvenim odeljenjima multinacionalnih banaka. Razumevanje izvora i načina za upravljanje poreskim rizikom, predstavljenih u ovom radu, je osnova obezbeđenja usklađenosti sa poreskom regulativom, u cilju izbegavanja poreskih kazni tokom poreskih kontrola.

Prezentovane rezultate treba koristiti u svetlu određenih ograničenja. Moguće je da bi zaključci istraživanja bili drugačiji da su uzorkovane druge bankarske grupe, odnosno da je uzorkovan drugi vremenski period. Takođe, poreska regulativa banaka je analizirana sa aspekta Srbije, te se zaključci istraživanja ne mogu analogno preneti na ostale države.

Istraživanje u ovom radu ostavlja značajan prostor za buduća istraživanja. Primera radi, buduća istraživanja bi mogla ispitati najznačajnije izvore poreskog rizika u bankama i prakse upravljanja poreskim rizikom, na bazi metode intervjua ili upitnika sa zaposlenima u banci. Takođe, interesantno bi bilo poređenje poreskog rizika u bankama u razvijenim evropskim državama i u državama Jugoistočne Evrope.

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TAX RISK MANAGEMENT IN MULTINATIONAL BANKS: A VIEW FROM SERBIA

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Abstract : Considering the significant cross-national differences between tax systems, multinational banks are facing a challenge to secure compliance with the tax regulation of each country. In this regard, multinational banks tend to minimize tax risk exposure and the probability that national tax authorities will consider certain tax treatment as illegal. The paper studies the main sources of tax risk for subsidiaries of multinational banks in Serbia. It is pointed out that banks are facing important challenges to secure compliance with the tax regulation, particularly value-added tax and corporate income tax regulation. The paper also shows that subsidiaries of multinational banks in Serbia and neighboring countries disclose the information on the tax risk in notes to the financial statements only to a moderate extent. In addition, multinational banks disclose information on tax risk using different models in different countries, implying that they adapt the disclosure to the assessed level of the tax risk in each country.

Keywords: tax risk, risk management, banks, multinational companies, tax regulation.

JEL classification: G21, H25, H26, F23, K34, G32

Introduction

Although the importance of improving risk management and internal controls systems was highlighted after big corporate scandals at the beginning of the XXI century, tax risk is one of the risk management areas that is often neglected (Wunder, 2009). Tax risk is often considered in the context of uncertain tax outcomes (Neuman et al., 2020) and outcomes of the tax audits, as it is sometimes hard to decide on the tax treatment of the transaction with absolute certainty. Complexity of the tax regulation contributes to this (Hoppe et al., 2023), as well as the inability of the tax regulation to, clearly and in advance, prescribe tax treatment of each possible transaction due to a significant variety of business transactions.

Tax risk in banks is often a result of a bank owner's and management's intentions to reduce the tax burden. On the one side, tax departments of the banks have a task to secure compliance with the tax regulation, which quite often results in a higher tax burden, but, on the other side, also have a task to optimize the tax burden so as to minimize it (Hogsden, 2018). In this regard, banks implement tax planning strategies, using tax incentives prescribed by the law and these strategies do not considerably increase the bank's tax risk. However, banks may also employ tax avoidance strategies, using loopholes of the tax law and these strategies may considerably increase the bank's exposure to the tax risk (Merks, 2006).

In order to properly manage risks, a majority of banks has formed tax departments within subsidiaries in countries in which they operate. In this regard, managers of the internal tax departments often bear a significant part of the company's tax risk (Wunder, 2009). Tax departments reduce, inter alia, the pressure on bank management not only from the national tax authorities, but also from the public (Bruhne & Schanz, 2022).

The subject of the paper is tax risk management of multinational banks, considered as a string of activities towards minimization of tax risk exposure and minimization of the probability that national tax authorities would consider certain tax treatment as illegal. Regarding tax risk management, it is possible to identify two main objectives of the paper. The first is to analyze the main sources of tax risk in banks, while the second is to examine the extent to which banks make disclosures about the tax risk in the notes to the financial statements.

Research about tax risk in multinational banks may be of interest to several interest groups. Identification of main sources of the tax risk, analysis of the possibilities to manage tax risk and to disclose about the tax risk may be of interest to employees in banks in Serbia – management of the banks, but also the employees in the tax and compliance departments and in banks accounting.

The paper contributes to the string of prior research on multinational banks. Research on the subsidiaries of the multinational banks are of particular importance for countries in transition, including Serbia, as the banking sectors of these countries are dominated by multinational banks. To the best of the author's knowledge, this is the first research on tax risk management in subsidiaries of multinational banks in Serbia.

Aside from the introduction and conclusion, the paper consists of three parts. The first part of the paper gives a literature overview about the tax risk in multinational banks. The second part of the paper analyzes the main sources of tax risk in the Serbian banking system, while the third part presents empirical research about the disclosure of tax risk in subsidiaries of multinational banks in Serbia and neighboring countries.

Literature Review

Banks cope with some level of tax risk in every country, primarily due to the complex tax regulation, i.e. potentially different interpretation of the tax law between national tax authorities and bank management. Artemenko et al. (2017) identify various sources of tax risk. As they should secure compliance with the tax regulation of numerous countries, multinational banks are in a more difficult position than domestic banks (which operate in one country). This holds for each well-known tax type, but primarily to value-added tax (VAT) and corporate income tax.

Due to significant cross-national differences in tax systems, multinational companies face specific challenges regarding VAT in each country (Xu et al., 2018). In most countries, special rules are prescribed for the VAT in banks. Indeed, most of the financial services that banks offer are VAT-exempt in most countries (Poddar & English, 1997), so banks face many dilemmas to separate services that are and that are not taxable with VAT, to deduct VAT from the received invoices or not etc.

Multinational banks also face significant disharmony regarding other tax types, such as corporate income tax or personal income tax. For instance, in the context of corporate income tax, different countries implement different rules to calculate a taxable base, different tax rates and tax incentives. Although there were some proposals in the European Union to harmonize the rules for the calculation of the tax base (Munin, 2011), through the CCTB (Common Corporate Tax Base) project, a significant improvement is yet to be made. Cnossen (2018) notes that such harmonization would result in decrease of costs of compliance with the tax regulation.

As a result of significant exposure to tax risk, multinational companies manage it within specialized tax departments in the company or by acquiring external tax consultants. Regarding specialized tax departments within the company, Mulligan & Oats (2016) note that almost every multinational company has included specialized tax departments in its organizational structure in the last few decades.

Multinational banks usually have compliance departments, responsible for securing the compliance of the bank's business with the regulation, but also separate tax departments. Besides minimization of the exposure to the tax risk and securing the compliance with the tax regulation, Crocker & Slemrod (2005) note that the focus of such departments is also put on the active tax liabilities management in order to minimize them. As a society may consider the strategies of tax management in the context of socially (un)responsible activities (Dowling, 2014), Hogsden (2018) argues that specialized tax departments within the company develop tax management strategies that secure compliance with the tax regulation, minimize tax burden, and eliminate negative reactions from the public.

Managers of the specialized tax departments within the multinational companies are often in challenging position, as they should balance between minimization of tax risk (which often assumes safe and less cost-efficient strategies) and minimization of tax burden (which often assumes risky, but cost-efficient strategies). In this regard, Robinson et al. (2010) show that specialized tax departments are usually designed as profit centers rather than cost centers, implying that owners and management of the companies expect from such departments to participate in cost minimization and increase of the company's profitability. There are also findings showing that the performance of specialized tax departments is usually measured with the level of tax burden (Douglas et al., 1996), and that there is negative correlation between fees of the tax department managers and the company tax burden (Armstrong et al., 2012).

On the other hand, external tax consultants may be in a similar position. They are expected to secure the compliance of activities of multinational companies with the tax regulation. However, Hogan & Noga (2015) note that acquiring external tax consultants usually results in a significant decrease of the company's tax burden. For instance, external tax consultants may be more familiar with the tax incentives in the countries in which a multinational company operates. In addition, they may more objectively analyze the tax implications of the transfer pricing between related-party entities. External tax consultants may also better interpret double taxation avoidance agreements to help multinational companies avoid paying withholding taxes on transactions between related-party entities.

Sikka (2015) argues that accounting companies that are part of the Big 4 group – Deloitte, EY, KPMG and PwC are usually acquired as external tax consultants. On the other hand, multinational companies sometimes acquire local consulting companies, as such companies have a narrow focus and expertise for the tax system of only one country.

A significant portion of the tax risk of multinational banks originates from the activities with entities in tax havens – the existence of a tax haven entity in the bank's ownership structure and transactions with the tax haven residents. Merz & Overesch (2016) note that banks with multinational presence are in a position to shift a large fraction of their income in tax havens in order to minimize their world-wide tax burden. On the other hand, the presence of the company in a tax haven and related-party transactions with tax havens significantly increase the probability of subsequent tax payments to the national tax authorities (Taylor et al., 2018).

Regarding the presence of the multinational banks in tax havens, it is important to note that banks may use not only traditional tax havens (for instance remote and exotic islands), but also numerous tax havens within the European continent (Rusina, 2020). Thus, a large number of European banks is registered in the Netherlands or Luxembourg – countries that are European Union members, but also well-known tax havens – although they were initially founded in other countries.

Rosing (2013) points out that transfer prices are a challenge for many multinational companies. The valuation of the transactions between related-party entities, particularly if at least one of them is located in a country with a preferential tax system, may be a subject of audits of national tax authorities. Although transfer prices are usually calculated in line with OECD guidelines (Behrens et al., 2014), national tax authorities of different countries may in different ways consider a justification of choosing a certain method for their calculation.

In addition, multinational banks may choose the model of entry in the destination country in order to optimize the tax burden, choosing between subsidiary and branch. In this regard, Cerutti et al. (2007) show that banks are more likely to operate as branches in countries with higher tax burden than in the countries with lower tax burden.

Complexity of Tax Regulation for Banks in Serbia

Unlike some other countries, banks in Serbia are subject to the same regulation as real-sector companies – they pay the same tax types and the same tax rates are imposed on them. However, due to the specific nature of their industry, banks may have certain difficulties in the implementation of tax regulation. Like in real-sector companies, VAT, corporate income tax, and personal income tax are the tax types that prove most difficulties to banks in securing compliance with the tax regulation.

Since basic (credit and deposit) bank activities and the payments processing are VAT-exempt, this tax type is, at first, of a second-order importance for banks. However, it should be noted that each bank is a VAT taxpayer, as they are required to monthly or quarterly submit a VAT return to the national tax authorities. As of 30 September 2023, twenty banks actively operate in Serbia and twelve of them are monthly VAT taxpayers, while eight of them are quarterly VAT taxpayers.

However, VAT is a tax type that probably produces most specificities in the banking sector. As the largest part of the bank's turnover from basic banking activities is VAT-exempt, banks usually do not have a right to deduct VAT from the received invoices. On the other hand, banks are required to calculate VAT on certain services. The typical example is a rental of safe deposit boxes. Therefore, when a bank purchases goods or services that will be used both for VAT-exempt (for instance loans to individuals and companies) and taxable activities (for instance a rental of safe deposit boxes), VAT from the received invoices is partially deducted, i.e. the VAT is divided according to the economic association (for instance, the area of rented office space may be a base to divide VAT, if it is possible to determine how many square meters are used for taxable activities and how many for VAT-exempt activities). If the division according to the economic association is not possible, proportionate tax deduction is conducted.

Proportionate VAT deduction is prescribed by article 30 of Law on VAT (The Official Gazette of the RS, 84/2004, 86/2004, ..., 138/2022). The percentage in which a bank may deduct VAT is calculated after dividing turnover of goods and services (without VAT) that allows VAT deduction and total turnover of goods and services (without VAT), measured from the beginning of the current year until the end of the fiscal period for which a tax return is filed.

Such law provisions result in some specific situations regarding the VAT calculation in banks. For instance, numerous banks pay for advertising services on social networks, offering loans or saving programs for individuals and companies. Since credit and deposit bank activities are VAT-exempt, banks (unlike real-sector companies) are not allowed to deduct VAT for such purchases. Since social networks are foreign-owned, the provider of advertising services is a nonresident company, and banks have to calculate reverse-charge VAT without the right to deduct it.

A slightly more complex example is a bank's royalty payment to nonresident companies for the rights to use software. In such circumstances, a bank is also required to calculate withholding tax (as a type of corporate income tax) that is part of a base for the reverse-charge VAT calculation. Reverse-charged VAT may not be deducted or may be proportionally deducted, depending on whether software is used only for VAT-exempt activities or also for activities that are taxable with VAT.

Fewer specificities are evident in the taxation of a bank's income. In general, rules for the calculation of the base for the corporate income tax are highly similar to those for real-sector companies. These rules are prescribed by Corporate Income Tax Law (The Official Gazette of the RS, 25/2001, 80/2002, ..., 118/2021). An important exception for the banks is prescribed by Article 62 of this law. In this regard, real-sector companies are allowed to recognize interest expenses from the related-party loans in their tax balance, up to the quadruple value of their shareholders' equity. For banks, such a limit is equal to ten-times the value of their shareholders' equity.

Regarding corporate income tax, some specificities are evident in the area of tax incentives. In this regard, the main tax incentives for large real-sector companies are usually not available to the banks. They are tax incentives for investments in fixed assets, which enable companies to use ten-year tax exemption (in proportion to the investment value) should they invest at least a billion Serbian dinars in fixed assets and additionally employ at least a hundred employees. Since fixed assets usually have a relatively low share of the total assets of banks, it is not surprising that many banks do not benefit from this incentive.

On the other hand, banks widely use interest yield on government securities to reduce the corporate income tax burden. Such yield, as well as dividends received from the resident taxpayers, are exempt from the corporate income tax. This type of revenue is the main strategy to reduce effective corporate income tax rates in the banking sector. In addition, banks may use tax credit in line with Law on the Conversion of Housing Loans Indexed to Swiss Francs (The Official Gazette of the RS, 31/2019).

Banks should pay significant attention to the exposure to the tax risk related to tax havens. Some banks in Serbia are owned by entities that are tax haven residents. For instance, the Serbian subsidiary of a large Italian multinational banking group is fully owned by an entity registered in Luxembourg. Although in the European Union, Luxembourg is one of the most famous tax havens. The presence of the tax haven entity of course does not mean anything illegal per se, but national tax authorities may consider it as an important sign.

In addition, banks should pay attention to transactions with related or nonrelated entities from tax havens. In this regard, Article 40 of the Corporate Income Tax Law prescribes paying withholding tax on certain payments to nonresidents, such as dividends, interests, royalties etc. Standard withholding tax rate is 20%, but if the payment (excluding dividends) is made to a tax haven resident (according to the Rulebook on the List of Jurisdictions with Preferential Tax System, The Official Gazette of the RS, 122/12), the withholding tax rate is 25%. Furtherly, specificities of banks also lie in the fact that they have double responsibility regarding transactions with tax havens – they should secure the compliance of their transactions with the tax regulation, but also, they should not be facilitators of tax evasion conducted by their clients through transactions with tax havens.

Banks in Serbia also face relatively complex regulation of personal income tax. However, it should be noted that there are no significant differences between taxation of real-sector companies and banks in this area. On the other hand, frequent changes of Personal Income Tax Law (The Official Gazette of the RS, 24/2001, 80/2002, ..., 6/2023) and its large number of articles result in the fact that this is probably the most complex tax type in Serbia. A calculation of the basic salary for employees in banks is relatively simple, though some changes in the labor tax rate, social security contributions rates and the tax reliefs should be continuously monitored.

Besides employment contracts, banks in Serbia sign many contracts to engage persons without formal employment. For instance, there are temporary service agreements and copyright contracts, and their treatment is significantly different to the tax treatment of the basic salary. In addition, many banks organize recreation and team building activities for employees. From 2019, such activities have specific tax treatment, prescribed by the Rulebook on Exercising Rights to Tax Exemption for Organizing Recreation, Sports Events and Activities for Employees (The Official Gazette of the RS, 50/2019).

A significant portion of the personal income tax paid by banks in Serbia refers to transactions with bank depositors. Interest yield from savings in Serbian dinars paid to resident individuals is exempt from taxation, but interest yield from savings in other currencies is taxable with a capital income tax of 15%. This tax is a type of withholdings taxes, implying that a bank pays it on behalf of depositors.

Research on Serbian banks between 2018 and 2020 (Vržina, 2021) showed that slightly more than a half of banks disclose information on the tax risk in notes to the financial statements, though most of them make only formal and generalized disclosures. The research also showed that the probability of disclosing information on the tax risk is statistically significantly lower for foreign-owned banks than for domestic banks. This finding is partially explained by the fact that most foreign-owned banks are subsidiaries of multinational banking groups, which do not anticipate, due to their size and strong bargaining power, the possibility of paying tax penalties. In addition, the research showed that the probability of disclosing information on tax risk is statistically significantly higher for less profitable banks and banks with lower corporate income tax burden.

Empirical Research on Tax Risk Disclosure
Research Methodology

Most banks in Serbia and neighboring countries are foreign owned. They are usually subsidiaries of multinational banking groups, which operate in several Balkan countries. For the purposes of this paper, we studied the practices of tax risk disclosure in the notes to the financial statements in Serbia and four countries of former Socialist Federal Republic of Yugoslavia: Bosnia and Herzegovina, Montenegro, Croatia and North Macedonia. The paper studies the practices of tax risk disclosure of subsidiaries of multinational banks in different countries in order to examine whether disclosure practices of the same multinational bank are different in different countries.

Only banks that are subsidiaries of the multinational banking groups were sampled. In other words, only multinational banking groups whose parent company is not located in any of the sampled countries were studied. In this regard, a sample of eight banking groups was developed, while parent companies of each group are located in the European Union (Austria, Italy, Hungary, Germany and Slovenia). In total, 28 banks that are subsidiaries of eight banking groups were sampled. The sample was developed on 30 September 2023 and the list of sampled banks, according to the banking group and country, is shown in Table 1.

Table 1: A list of Sampled Banks

	Serbia	Croatia	Bosnia and Herzegovina	Montenegro	North Macedoniaja	Total
Banking group 1	√	√	√	√		4
Banking group 2	√	√	√			3
Banking group 3	√	√	√	√	√	5
Banking group 4	√		√	√	√	4
Banking group 5	√	√		√		3
Banking group 6	√		√		√	3
Banking group 7	√	√	√			3
Banking group 8	√	√	√			3
Total	8	6	7	4	3	28

Data from the notes to the financial statements was retrieved from the official Internet presentations of banks. The paper used data from individual financial statements, in order to minimize the impact of nonresident legal entities and nonbanking related-party entities. Financial reports for 2022 were used, as a last available year in the moment of sampling.

The tax risk disclosure practice of banks is not uniform. In this regard, banks usually disclosure information on the tax risk using some of the following models:

- disclosing information on tax risk in a separate paragraph in notes to the financial statements;
- disclosing information on tax risk in a risk management section (along with the other risk types, such as credit, interest rate or foreign exchange risk) and
- disclosing information on tax risk in a commitments and contingencies section.

On the other hand, many banks do not directly disclose information on tax risk, but disclose information about certain elements of tax risk, such as tax audits. Such disclosures are usually made using some of the following models:

- within the reconciliation of pre-tax income (from income statement) to the taxable income (from taxable balance);
- within the analysis of the key sources of the uncertainty assessment and
- within the disclosure of accounting policies.

Research Results

Table 2 features the practices of tax risk disclosure in notes to the financial statements for each sampled banking group. The table shows practices of tax risk disclosure ranked from the least sophisticated (0 – without tax risk disclosure) to the most sophisticated (6 – the most complete tax risk disclosure).

Table 2: Models of the Tax Risk Disclosure in the Notes to the Financial Statements

	Srbija	Hrvatska	Bosna i Hercegovina	Crna Gora	Severna Makedonija
Bankarska grupa 1	0	1	2	0	
Bankarska grupa 2	4	2	2		
Bankarska grupa 3	4	0	0	6	6
Bankarska grupa 4	4		2	3	1
Bankarska grupa 5	4	2		6	
Bankarska grupa 6	0		2		3
Bankarska grupa 7	0	2	2		
Bankarska grupa 8	0	0	2		

Note: 0 – does not disclose; 1 – within the accounting policies; 2 – within key sources of the uncertainty assessment; 3 – within the reconciliation of pre-tax income to the taxable income; 4 – in a commitments and contingencies section; 5 – in a risk management section; 6 – separate paragraph in notes to the financial statements.

In general, it may be noted that practices of tax risk disclosure considerably differ within banking groups. Not one of the sampled banks has a unified practice of tax risk disclosure in each country in which operates. It may imply that banking groups adapt tax risk disclosures in line with the assessed level of the tax risk in a country in which it operates.

In addition, it is interesting to note that only three sampled banking groups disclosed some information on the tax risk in each sampled country. An example of banking group 3 is very interesting, as this group did not disclose information on the tax risk in Croatia, but disclosed information about managing taxes as a part of socially responsible activities, as follows:

The bank has always taken care of tax compliance, as well as the respectful and consistent implementation of the tax regulation. As a socially responsible entrepreneur, the bank cares about properly meeting the public needs of the country in which it operates and it pays a fair share of taxes, i.e. the amount of taxes that is required to pay in line with the tax regulation. For this purpose, as of March 2017,the bank in Croatia has a tax department.

Serbia and Bosnia and Herzegovina are specific countries from the aspect of tax risk disclosure, as the information on tax risk are disclosed (excluding banks without any disclosure) using only one model – in Serbia as a part of commitments and contingencies section, while in Bosnia and Herzegovina as a part of key sources of uncertainty assessment.

Table 3 features the structure of sampled banks according to the model of tax risk disclosure. It may be noted that most banks disclose information on tax risk within key sources of uncertainty assessment. On the other hand, only 10% of sampled banks disclose the information on tax risk using the most sophisticated model – as a separate paragraph in notes to the financial statements. It is quite surprising to note that no bank disclosed information on tax risk within the risk management section.

Table 3: Distribution of Banks According to the Model of tax Risk Disclosure

	Model of disclosure	Number of banks	% of banks
0	Does not disclose	8	28,57%
1	Within the accounting policies	2	7,14%
2	Within key sources of the uncertainty assessment	9	32,14%
3	Within the reconciliation of pre-tax income to the taxable income	2	7,14%
4	In a commitments and contingencies section	4	14,29%
5	In a risk management section	0	0,00%
6	Separate paragraph in notes to the financial statements	3	10,71%
Total		28	100,00%

It is worth noting that as much as 75% of sampled banks do not disclose the information on tax risk or use only less sophisticated disclosing models (within accounting policies, key sources of uncertainty assessment or reconciliation of pre-tax income to taxable income). Such practice is particularly evident in banks in Bosnia and Herzegovina and Croatia.

In general, disclosures about the tax risk of sampled banks (regardless of the used disclosing model) are relatively moderate. Regarding the disclosures within accounting policies or key sources of uncertainty assessment, banks usually disclose one paragraph in which they state the possibilities of subsequent audits from the national tax authorities. In other words, tax risk is not even mentioned as a special phrase, as only the possibility of subsequent additional tax payments is mentioned. The typical example of such disclosure is showed below:

Tax returns may be subject to audits from the Tax Administration. Due to the fact that the implementation of the tax law and tax regulation of various transactions may be interpreted differently, amounts presented in financial statements may be subsequently changed, depending on the final findings of the Tax Administration.

On the other hand, banks that use more sophisticated models of tax risk disclosure (in a commitments and contingencies section, risk management section or as a separate paragraph in notes to the financial statements) present slightly more data, but their disclosures are also decidedly poor. The typical example of such disclosure is showed below:

The tax system of the country in which a bank operates is in the process of continuous audits and changes. In a country in which the bank operates, the tax period is opened during a five-year period. In different circumstances, tax authorities may have different approaches to certain issues and impose additional tax liabilities with subsequent default interest and penalties. Bank management argues that tax liabilities presented in the attached financial statements are adequately reported.

It may also be noted that disclosures of the bank's tax risk are highly similar. This finding particularly holds for banks in Serbia and Bosnia and Herzegovina. It may imply that banks consider disclosure of the tax risk a routine activity. On the other hand, in this way the users of financial statements are left without some important information about the bank's tax activities. For instance, banks do not disclose data on tax audits during the year (whether there were some audits and findings of them), uncertain tax positions (that are highly probable to be disputed during a tax audit), related-party entities that are residents of the countries with preferential tax system etc.

Conclusion

Tax risk gained significant attention in Serbia in the last two decades, particularly after the transformation to the market-oriented economy and a larger inflow of foreign direct investments. In this regard, the paper studied the possibilities to manage tax risk in multinational banks that operate in Serbia. In other words, some of the main sources of tax risk in multinational banks are identified and practices of tax risk disclosure in the notes to the financial statements are analyzed.

Regarding the implementation of the tax regulation, banks in Serbia have probably the most specific features in relation to VAT. Although this tax type has relatively little significance for banks, as most of the banking activities are VAT-exempt, specific features regarding the right to deduct VAT from the received invoices and the (non)existence of the obligation to calculate VAT on certain banking activities are important challenges that banks have to cope with.

On the other hand, corporate income tax has a considerably higher importance for banks, though the implementation of the corporate income tax regulation is nearly identical in the banking sector and real-sector companies. Certain specific features relate to the different rules for the prevention of thin capitalization, as well as the availability of tax credit to banks on behalf of loans indexed in Swiss francs.

In addition, the empirical research showed that subsidiaries of multinational banks in Serbia disclose information on tax risk only to a moderate extent. Disclosed information is relatively poor and highly generalized, so it is not highly useful to the users of financial statements. It is further shown that subsidiaries of the same multinational banking group disclose information on tax risk using different models in different countries. This implies that banks adapt the disclosures in line with the assessed level of tax risk in the country in which they operate.

Author believes that research results may be of interest to many interest groups, particularly to the management of multinational banking groups, as well as to the tax departments, compliance departments and accounting departments of the multinational banks. Understanding the sources of tax risk and the way to manage it, presented in this paper, are the basis to secure compliance with the tax regulation, in order to avoid tax penalties during tax audits.

Presented results should be used in the light of certain limitations. It is possible that the research conclusions would be different if other banking groups were sampled or if a different time period had been sampled. In addition, tax regulation of banks is analyzed from the Serbian aspect, so research conclusions should not be analogously transferred to other countries.

Research in this paper leaves significant room for future research. For instance, future research may study the most important sources of tax risk and practices of its management, using methods of interview or questionnaire with employees in banks. In addition, it would also be interesting to compare tax risk in banks in developed European countries and Eastern European countries.

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ANALIZA DINAMIKE ADEKVATNOSTI KAPITALA BANKARSKOG SEKTORA U SRBIJI NA BAZI LMAW-DNMA METODE

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Rezime: Problematika analize adekvatnosti kapitala bankarskog sektora je vrlo izazovna, značajna, kontinuirano aktuelna i složena. Polazeći od toga, u ovom radu se analizira adekvatnost kapitala bankarskog sektora u Srbiji na bazi LMAW-DNMA metode. Rezultati LMAW-DNMA metode pokazuju da u top pet godina po adekvatnosti kapitala bankarskog sektora u Srbiji u posmatranom vremenskom periodu 2008 – 2022. god. spadaju po redosledu: 2016, 2012, 2015, 2017. i 2013. god. Najlošija adekvatnost kapitala bankarskog sektora u Srbiji je bila u 2008. god. To znači, drugim rečima, da je u toj godini bankarski sektor u Srbiji bio najviše izložen rizicima poslovanja. Može se slobodno kazati da se u poslednje vreme blago povećavala adekvatnost kapitala bankarskog sektora u Srbiji.

Ključne reči: adekvatnost kapitala, faktori, bankarski sektor, Srbija, LMAW-DNMA metoda

JEL klasifikacija: D40, G21

Uvod

Adekvatnost kapitala je odnos između kapitala i rizične aktive banke, odnosno sposobnost banke da apsorbuje gubitke nastale lošim plasmanima. On osigurava finansijsku stabilnost, likvidnost, solventnost i profitabilnost bankarskog sektora, kao i zaštitu klijenata od potencijalne izloženosti svih vrsta rizika. Istraživanje adekvatnosti kapitala bankarskog sektora je vrlo izazovno, kontinuirano aktuelno, značajno i složeno (Rose, 1996). Imajući to u vidu, predmet analize u ovom radu je adekvatnost kapitala bankarskog sektora u Srbiji na bazi LMAW-DNMA metode. Cilj i svrha toga je da se što realnije sagleda adekvatnost kapitala bankarskog sektora u Srbiji u funkciji unapređenja u budućnosti primenom relevantnih mera. Implikacije su dakle poboljšanje adekvatnosti kapitala bankarskog sektora u Srbiji kao odbrambeni mehanizam zaštite od potencijalnih rizika. U tome se ogleda naučno-stručni doprinos ovog rada.

U uvodu je ukazano na dve vrste literature. Literatura koja se odnosi isključivo na bankarstvo. I literatura koja se odnosi na metode višekriterijumskog odlučivanja. Poznavanje jedne i druge literature je pretpostavka za razumevanje tretiranog problema u ovoj studiji.

Literatura posvećena razvoju i značaju primene DEA modela u svim sektorima, što znači i u finansijskim institucijama vrlo je bogata (Hwang & Yoon,1981, 1995; Chen et al., 2021; Chang & Wang, 2020; Guo & Cai, 2020; Lee et al., 2011; Lin, 2020; Tone, 2002; Podinovski Podinovski & Bouzdine-Chameeva, 2021; Bouzdine-Chameeva et al., 2021; Rostamzadehet al., 2021; Fenyves & Tarnóczi, 2020; Stević & Brković, 2020; Stević et al., 2020). Ona se vrlo uspešno primenjuju i u analizi efikasnosti banaka i osiguravajućih kompanija (Radojicic et al., 2018; Cvetkoska & Savic, 2017; Cvetkoska & Cikovic, 2020; Cvetkovska et al., 2021; Lukic et al., 2017; Lukic & Hadrovic Zekic, 2019; Lukić, 2018a,b, 2021). Isto tako, prilikom analize finansijskih performansi (profitabilnost, likvidnost) i efikasnosti banaka sve se više primenjuju, integralno ili pojedinačno, i različiti metodi višekriterijumskog odlučivanja, uključujući LMAW-DNMA metodu (Ünlü et al., 2022; Ali et al.,2022, Lukic, 2022a,b; 2023a,b,c,d,e; Demir, 2022, Ecer & Pamucar, 2022). Sva relevantna literatura u ovom radu se koristi kao teorijsko-metodološka i empirijska osnova za analizu dinamike adekvatnosti kapitala bankarskog sektora u Srbiji pomoću LMAW-DNMA metode.

Istraživačka hipoteza u ovom radu je zasnovana na činjenici da je kontinuirano praćenje dinamike adekvatnosti kapitala bankarskog sektora, u konkretnom slučaju u Srbiji, osnova za unapređenje u budućnosti primenom relevantnih mera. U tome značajnu ulogu ima i primena LMAW-DNMA metode.

U odnosu na klasičnu racio analizu, LMAW-DNMA metoda pruža realnije informacije o ostvarenoj adekvatnosti kapitala bankarskog sektora u Srbiji jer se bazira na integrisanju nekoliko pokazatelja. Zato se, pored racio analize, preporučuje u analizi dinamike adekvatnosti kapitala bankarskog sektora u Srbiji.

Potrebni empirijski podaci za analizu adekvatnosti kapitala bankarskog sektora u Srbiji na bazi LMAW-DNMA metode su prikupljeni od Narodne banke Srbije. Oni su „proizvedeni" u skladu sa relevantnim međunarodnim standardima. U pogledu međunarodne komparacije dobijenih rezultata adekvatnosti kapitala bankarskog sektora u Srbiji pomoću LMAW-DNMA metode ne postoje s obzirom na to nikakva ograničenje.

Metodologija

Vrlo je izazovno istraživati dinamičke pozicioniranosti adekvatnosti kapitala bankarskog sektora u Srbiji primenom metoda višekriterijumskog odlučivanja. Oni vrlo precizno ukazuju na to u kojim godinama je a u kojim nije bila zadovoljavajuća adekvatnost kapitala. Na osnovu toga se može pouzdano sagledati izloženost bankarskog sektora u Srbiji rizicima poslovanja i neophodnosti preduzimanja relevantnih mera za njihovo optimiziranje. Drugim rečima, u cilju unapređenja adekvatnosti kapitala bankarskog sektora u Srbiji neophodno je, pored ostalog, poznavati i selekciju i rangiranosti po pojedinim godinama. S obzirom na to istraživanje dinamičke pozicioniranosti adekvatnosti kapitala bankarskog sektora u Srbiji izvršićemo primenom LMAW-DNMA metode. U daljim izlaganjima tretirane problematike ukazaćemo na karakteristike LMAW i DNMA metode.

LMAW metoda je najnovija metoda koja se koristi za izračunavanje težina kriterijuma i rangiranje alternativa (Liao, & Wu, 2020; Demir, 2022). Ona se odvija kroz sledeće korake: m alternativa $A = \{A_1, A_2, \dots, A_m\}$ se vrednuju u poređenju sa n kriterijuma $C = \{C_1, C_2, \dots, C_n\}$ učešćem k eksperta $E = \{E_1, E_2, \dots, E_k\}$ prema unapred definisanoj lingvističkoj skali (Pamučar et al, 2021).

Korak 1: Određivanje težinskih koeficijenata kriterijuma

Eksperti $E = \{E_1, E_2, \dots, E_k\}$ određuju prioritete kriterijumima $C = \{C_1, C_2, \dots, C_n\}$ u odnosu na prethodno definisane vrednosti lingvističke skale. Pri tom dodeljuju veću vrednost kriterijumu veće značajnosti i manju vrednost kriterijumu manje važnosti na lingvističkoj skali. Uzgred, dobija se vektor prioriteta. Oznaka γ_{cn}^e predstavlja vrednost lingvističke skale koju ekspert e(1≤e≤k) dodeljuje kriteriju- $C_t (1 \le t \le n)$. ≤R^e i Re reprezentuje relacioni vektor e(1≤e≤k) .

Korak 1.1: Definisanje apsolutne anti-idealne tačke γ_{AIP}

Apsolutna idealna tačka treba da bude manja od najmanje vrednosti u vektoru prioriteta. To se izračunava prema jednačini:

$$\gamma_{AIP} = \frac{\gamma_{min}^e}{S}$$

gde je γ_{min}^e minimalna vrednost vektora prioriteta i S treba da bude veće od bazne logaritamske funkcije. U slučaju korišćenja funkcije Ln, vrednost S se može izabrati kao 3.

Korak 1.2: Određivanje odnosa između vektora prioriteta i apsolutne anti-idealne tačke

Odnos između vektora prioriteta i apsolutne anti-idealne tačke izračunava se korišćenjem sledeće jednačine:

$$n_{Cn}^e = \frac{\gamma_{Cn}^e}{\gamma_{AIP}} \tag{1}$$

Tako da se relacioni vektor $R^e = (n_{C1}^e, n_{C2}^e, \dots, n_{Cn}^e)$ dobija. Pri čemu n_{Cn}^e predstavlja vrednost relacionog vektora izvedene iz prethodne jednačine, i R^e reprezentuje relacioni vektor e(1≤e≤k) .

Korak 1.3: Određivanje vektora težinskih koeficijenata

Vektor težinskih koeficijenata $w = (w_1, w_2, \dots, w_n)^T$ se izračunava od strane eksperta e(1≤e≤k) primenom sledeće jednačine:

$$w_j^e = \frac{\log_A(n_{Cn}^e)}{\log_A\left(\prod_{J=1}^n n_{Cn}^e\right)}, A > 1 \tag{2}$$

gde w_j^e predstavlja težinske koeficijente dobijene prema ocenama eksperta e^{th} i n_{Cn}^e elemente relacionog vektora R. Dobijene vrednosti za težinske koeficijente moraju ispunjavati uslov da je ∑_ $\sum_{j=1}^n w_j^e = 1$.

Primenom Bonferroni agregatora prikazanog u sledećoj jednačini, određuje se agregirani vektor težinskih koeficijenata $w = (w_1, w_2, \dots, w_n)^T$:

$$W_j = \left(\frac{1}{k.(k-1)} . \sum_{x=1}^{k} \left(w_j^{(x)}\right)^p . \sum_{\substack{y=1 \\ y\neq x}}^{k} \left(w_{ij}^{(y)}\right)^q\right)^{\frac{1}{p+q}} \tag{3}$$

Vrednost p i q su parametri stabilizacije i p,q ≥0 . Rezultirajući težinski koeficijenti treba da ispune uslov da je $\sum_{j=1}^n w_j = 1$.

DNMA metoda je novija metoda za prikazivanje alternativa (Demir, 2022). Koriste se dve različite normalizovane (linerana i vektorska) tehnike, kao i tri različite funkcije spajanja (puna kompenzacija – CCM, nekompenzacija – UCM i nepotpuna kompenzacija – ICM). Koraci primene ove metode su sledeći (Liao & Wu, 2020; Ecer, 2020):

Korak 1: Normalizovana matrica odlučivanja

Elementi matrice odlučivanja normalizuju se sa lineranom $\left(\hat{x}_{ij}^{1N}\right)$ normalizacijom primenom sledeće jednačine:

$$\hat{x}_{ij}^{1N} = 1 - \frac{\left|x^{ij} - r_j\right|}{max\left\{\max_i x^{ij}, r_j\right\} - min\left\{\min_i x^{ij}, r_j\right\}} \tag{4}$$

Vektor $\left(\hat{x}_{ij}^{2N}\right)$ je normalizovan sa korišćenjem sledeće jednačine:

$$\hat{x}_{ij}^{2N} = 1 - \frac{\left|x^{ij} - r_j\right|}{\sqrt{\sum_{i=1}^m (x^{ij})^2 + \left(r_j\right)^2}} \tag{5}$$

Vrednost r_j je ciljna vrednost za c_j kriterijum i smatra se kao $\max_i x^{ij}$ za korisne i $\min_i x^{ij}$ za troškovne kriterijume.

Korak 2: Određivanje težine kriterijuma

Ovaj korak se sastoji od tri faze:

Korak 2.1: U ovoj fazi, standardna devijacija (σ_j) za kriterijum c_j se određuje sa sledećom jednačinom gde je m broj alternativa:

$$\sigma_j = \sqrt{\frac{\sum_{i=1}^{m}\left(\frac{x^{ij}}{\max_i x^{ij}} - \frac{1}{m}\sum_{i=1}^{m}\left(\frac{x^{ij}}{\max_i x^{ij}}\right)\right)^2}{m}} \tag{6}$$

Korak 2.2: Vrednosti standardne devijacije izračunate za kriterijume se normalizuju sa sledećom jednačinom:

$$w_j^{\sigma} = \frac{\sigma_j}{\sum_{i=1}^{n}\sigma_j} \tag{7}$$

Korak 2.3: Konačno, težine se prilagođavaju sa sledećom jednačinom:

$$\widehat{w}_j = \frac{\sqrt{w_j^{\sigma}.w_j}}{\sum_{i=1}^{n}\sqrt{w_j^{\sigma}.w_j}} \tag{8}$$

Korak 3: Izračunavanje modela agregacije

Tri funkcije agregacije (CCM, UCM i ICM) se izračunavaju posebno za svaku alternativu.

CCM (kompletni kompenzacioni model model) se izračunava primenom sledeće jednačine:

$$u_1(a_i) = \sum_{j=1}^{n}\frac{\widehat{w}_j.\hat{x}_{ij}^{1N}}{\max_i \hat{x}_{ij}^{1N}} \tag{9}$$

UCM (nekompenzacioni model) se izračunava pomoću sledeće jednačine:

$$u_2(a_i) = \max_j \widehat{w}_j\left(\frac{1-\hat{x}_{ij}^{1N}}{\max_i \hat{x}_{ij}^{1N}}\right) \tag{10}$$

ICM (nepotpuni kompenzacioni model) se izračunava korišćenjem sledeće jednačine:

$$u_3(a_i) = \prod_{j=1}^{n} \left(\frac{\hat{x}_{ij}^{2N}}{\max_i \hat{x}_{ij}^{2N}} \right)^{\widehat{w}_j} \tag{11}$$

Korak 4: Integracija vrednosti korisnosti

Izračunate funkcije korisnosti se integrišu sa sledećom jednačinom korišćenjem Euklidskog (Euclidean) principa udaljenosti:

$$DN_i = w_1 \sqrt{\varphi \left(\frac{u_1(a_i)}{\max_i u_1(a_i)} \right)^2 + (1-\varphi) \left(\frac{m - r_{1(a_i)+1}}{m} \right)^2} - w_2 \sqrt{\varphi \left(\frac{u_2(a_i)}{\max_i u_2(a_i)} \right)^2 + (1-\varphi) \left(\frac{r_2(a_i)}{m} \right)^2} + w_3 \sqrt{\varphi \left(\frac{u_3(a_i)}{\max_i u_3(a_i)} \right)^2 + (1-\varphi) \left(\frac{m - r_3(a_i) + 1}{m} \right)^2} \quad (12) \tag{12}$$

U ovoj jednačini $r_1(a_i)$ i $r_3(a_i)$ predstavljaju redni broj alternative a_i sortirane prema funkcijama CCM i ICM po opadajućoj vrednosti (prvo veća vrednost). S druge strane, $r_2(a_i)$ pokazuje redni broj u dobijenom redosledu prema rastujućoj vrednosti (prvo manja vrednost) za korišćenu funkciju UCM. Oznaka φ je relativni značaj korišćene podređene vrednosti i u rasponu je [0,1]. Smatra se da se može uzeti kao φ=0,5 . Koeficijenti w_1, w_2, w_3 su dobijene težine korišćenih funkcija CCM, UCM i ICM, respektivno. Suma treba da je jednaka $w_1 + w_2 + w_3 = 1$. Prilikom određivanja težina, ako donosilac odluka pridaje značaj širem rasponu performansi alternativa, on može odrediti veću vrednost za w_1 .U slučaju da donosilac odluka nije spreman da rizikuje, tj. da izabere siromašnu alternativu prema nekom kriterijumu, on može dodeliti veću težinu za w_2 . Međutim, donosilac odluka može dodeliti veću težinu za w_3 ako istovremeno uzima u obzir ukupne performanse i rizik. Najzad, vrednosti DN su sortirane po opadajućoj vrednosti, pri čemu su alternative sa većom vrednošću najbolje.

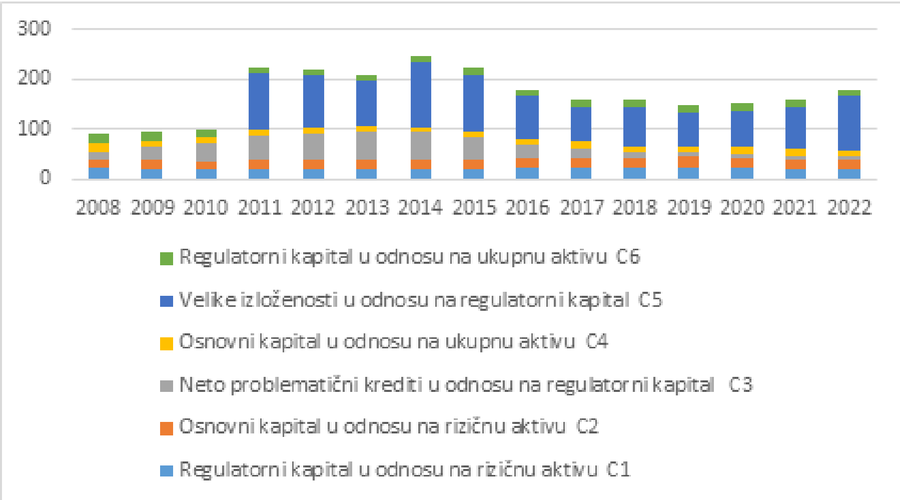
Rezultati i diskusija

U kontekstu analize dinamike adekvatnosti kapitala bankarskog sektora u Srbiji kao kriterijumi su uzeti najvažniji pokazatelji (C1-C6). Alternative (A1-A15) su posmatrane godine. Oni su, kao i inicijalni podaci prikazani u Tabeli 1. Na Slici 1. su prikazani pokazatelji adekvatnosti kapitala bankarskog sektora u Srbiji. (U ovom radu sva izračunavanja i rezultati su autorovi.)

Tabela 1 - Inicijalni podaci

		Regulatorni kapital u odnosu na rizičnu aktivu	Osnovni kapital u odnosu na rizičnu aktivu	Neto problematični krediti u odnosu na regulatorni kapital	Osnovni kapital u odnosu na ukupnu aktivu	Velike izloženosti u odnosu na regulatorni kapital	Regulatorni kapital u odnosu na ukupnu aktivu
		C1	C2	C3	C4	C5	C6
A1	2008	21,9	17,9	15,5	16,8	0,0	20,5
A2	2009	21,4	16,5	26,9	13,1	0,0	17,1
A3	2010	19,9	15,9	35,5	12,8	0,0	16,1
A4	2011	19,1	18,1	52,1	11,5	110,1	12,2
A5	2012	19,9	19,0	52,3	11,6	104,5	12,2
A6	2013	20,9	19,3	55,9	11,2	90,4	12,2
A7	2014	20,0	17,6	56,0	10,1	130,5	11,4
A8	2015	20,9	18,8	44,0	10,7	115,7	11,9
A9	2016	21,8	20,0	27,1	11,6	86,0	12,7
A10	2017	22,6	21,6	17,7	13,7	69,3	14,4
A11	2018	22,3	21,1	9,7	13,5	77,4	14,2
A12	2019	23,4	22,4	6,3	14,4	66,5	15,1
A13	2020	22,4	21,6	6,7	13,1	73,8	13,6
A14	2021	20,8	19,7	7,6	11,8	86,0	12,4
A15	2022	19,5	18,2	7,4	11,0	109,3	11,8
	Statistics						
	Mean	21,1200	19,1800	28,0467	12,4600	74,6333	13,8533
	Std. Error of Mean	,32881	,49331	5,07575	,44388	11,01505	,64549
	Median	20,9000	19,0000	26,9000	11,8000	86,0000	12,7000
	Std. Deviation	1,27347	1,91057	19,65829	1,71914	42,66110	2,49996
	Skewness	,082	,079	,320	1,079	-,939	1,542
	Std. Error of Skewness	,580	,580	,580	,580	,580	,580
	Kurtosis	-,987	-,728	-1,637	1,548	-,134	2,386
	Std. Error of Kurtosis	1,121	1,121	1,121	1,121	1,121	1,121
	Minimum	19,10	15,90	6,30	10,10	,00	11,40
	Maximum	23,40	22,40	56,00	16,80	130,50	20,50

Napomena: Podaci za 2022. su prikazani za III kvartal. Podaci su iskazani u %. Statistika je autorova
Izvor: Narodna banka Srbije



Slika 1 - Pokazatelji adekvatnost kapitala bankarskog sektora u Srbiji

Izvor: Autorova slika

Tako, na primer, prema prikazanoj statistici najveća izloženost rizicima poslovanja u odnosu na regulatorni kapital bankarskog sektora u Srbiji je bila u 2014. god.

Tabela 2. pokazuje prioritizacionu skalu.

Tabela 2 - Prioritizaciona skala

Prioritizaciona skala		
Lingvističke varijable	**Skraćenica**	**Određivanje prioriteta**
Apsolutno nizak	**AL**	1
Veoma nizak	**VL**	1,5
Nizak	**L**	2
Srednje	**M**	2,5
Jednako	**E**	3
Srednje visoko	**MH**	3,5
Visoko	**H**	4
Veoma visoko	**VH**	4,5
Apsolutno visoko	**AH**	5

Tabela 3 - pokazuje evaluaciju kriterijuma od strane donosilaca odluke i njihove težinske koeficijente.
Tabela 3 - Evaluacija, vektor težinskih koeficijenata, agregirani fuzzy vektori i agregirani težinski koeficijenti vektora

Tip	**1**	**1**	**1**	**1**	**1**	**1**
	C1	**C2**	**C3**	**C4**	**C5**	**C6**
E1	**H**	**AH**	**H**	**E**	**MH**	**MH**
E2	**VH**	**VH**	**MH**	**H**	**H**	**MH**
E3	**E**	**MH**	**VH**	**AH**	**AH**	**H**
E4	**MH**	**E**	**E**	**VH**	**AH**	**E**

γ_{AIP}	0.5

	C1	C2	C3	C4	C5	C6	LN(Πη)
R1	8	10	8	6	7	7	12,145
R2	9	9	7	8	8	7	12,445
R3	6	7	9	10	10	8	12,620
R4	7	6	6	9	10	6	11,821

Vektor koeficijenata težine	C1	C2	C3	C4	C5	C6
W1j	0,171	0,190	0,171	0,148	0,160	0,160
W2j	0,177	0,177	0,156	0,167	0,167	0,156
W3j	0,142	0,154	0,174	0,182	0,182	0,165
W4j	0,165	0,152	0,152	0,186	0,195	0,152

Agregirani vektori	C1	C2	C3	C4	C5	C6
W1j	0,007	0,008	0,007	0,007	0,007	0,006
W2j	0,007	0,007	0,006	0,007	0,007	0,006
W3j	0,006	0,007	0,007	0,008	0,008	0,006
W4j	0,007	0,007	0,006	0,008	0,008	0,006
SUM	0,027	0,028	0,027	0,029	0,031	0,025
Vektori agregiranih težinskih koeficijenata	0,1634	0,1677	0,1632	0,1705	0,1760	0,1582

Napomena: Autorovo izračunavanje

Prema tome, u konkretnom slučaju najznačajniji kriterijum je C5 - Velika izloženost u odnosu na regulatorni kapital. To znači, drugim rečima, da se adekvatnim upravljanjem velikim izloženostima (rizicima poslovanja) u odnosu na regulatorni kapital može znatno uticati na ostvarenje ciljne adekvatnosti kapitala bankarskog sektora u Srbiji.

Proračun po fazama i rezultati istraživanja dinamičke pozicioniranosti adekvatnosti kapitala bankarskog sektora u Srbiji primenom date metodologije je prikazano u nižim navedenim tabelama.

U Tabeli 4 - je prikazana inicijalna matrica.

Tabela 4 - Inicijalna matrica

Inicijalna matrica	Tip	1	1	1	1	1	1
	Weight	0,1634	0,1677	0,1632	0,1705	0,1760	0,1582
		C1	**C2**	**C3**	**C4**	**C5**	**C6**
	A1	21,9	17,9	15,5	16,8	0	20,5
	A2	21,4	16,5	26,9	13,1	0	17,1
	A3	19,9	15,9	35,5	12,8	0	16,1
	A4	19,1	18,1	52,1	11,5	110,1	12,2
	A5	19,9	19	52,3	11,6	104,5	12,2
	A6	20,9	19,3	55,9	11,2	90,4	12,2
	A7	20	17,6	56	10,1	130,5	11,4
	A8	20,9	18,8	44	10,7	115,7	11,9
	A9	21,8	20	27,1	11,6	86	12,7
	A10	22,6	21,6	17,7	13,7	69,3	14,4
	A11	22,3	21,1	9,7	13,5	77,4	14,2
	A12	23,4	22,4	6,3	14,4	66,5	15,1
	A13	22,4	21,6	6,7	13,1	73,8	13,6
	A14	20,8	19,7	7,6	11,8	86	12,4
	A15	19,5	18,2	7,4	11	109,3	11,8
	MAX	23,4000	22,4000	56,0000	16,8000	130,5000	20,5000
	MIN	19,1000	15,9000	6,3000	10,1000	0,0000	11,4000

Napomena: Autorovo izračunavanje

Tabela 5 - pokazuje lineranu normalizovanu matricu.

Tabela 5 - Linerna normalizovana matrica

Linearna normalizovana matrica		C1	C2	C3	C4	C5	C6	MAX
	A1	0,6512	0,3077	0,1851	1,0000	0,0000	1,0000	1,0000
	A2	0,5349	0,0923	0,4145	0,4478	0,0000	0,6264	0,6264
	A3	0,1860	0,0000	0,5875	0,4030	0,0000	0,5165	0,5875
	A4	0,0000	0,3385	0,9215	0,2090	0,8437	0,0879	0,9215
	A5	0,1860	0,4769	0,9256	0,2239	0,8008	0,0879	0,9256
	A6	0,4186	0,5231	0,9980	0,1642	0,6927	0,0879	0,9980
	A7	0,2093	0,2615	1,0000	0,0000	1,0000	0,0000	1,0000
	A8	0,4186	0,4462	0,7586	0,0896	0,8866	0,0549	0,8866
	A9	0,6279	0,6308	0,4185	0,2239	0,6590	0,1429	0,6590
	A10	0,8140	0,8769	0,2294	0,5373	0,5310	0,3297	0,8769

	A11	0,7442	0,8000	0,0684	0,5075	0,5931	0,3077	0,8000
	A12	1,0000	1,0000	0,0000	0,6418	0,5096	0,4066	1,0000
	A13	0,7674	0,8769	0,0080	0,4478	0,5655	0,2418	0,8769
	A14	0,3953	0,5846	0,0262	0,2537	0,6590	0,1099	0,6590
	A15	0,0930	0,3538	0,0221	0,1343	0,8375	0,0440	0,8375

Napomena: Autorovo izračunavanje

Tabela 6 - pokazuje vektor normalizovane matrice.

Tabela 6 - Vektor normalizovane matrice

Vektor normalizovane matrice		C1	C2	C3	C4	C5	C6	MAX
	A1	0,9824	0,9422	0,7161	1,0000	0,0000	1,0000	1,0000
	A2	0,9765	0,9243	0,7960	0,9282	0,0000	0,9416	0,9765
	A3	0,9589	0,9166	0,8563	0,9223	0,0000	0,9244	0,9589
	A4	0,9495	0,9448	0,9727	0,8971	0,9425	0,8574	0,9727
	A5	0,9589	0,9564	0,9741	0,8990	0,9268	0,8574	0,9741
	A6	0,9707	0,9602	0,9993	0,8913	0,8871	0,8574	0,9993
	A7	0,9601	0,9384	1,0000	0,8699	1,0000	0,8436	1,0000
	A8	0,9707	0,9538	0,9159	0,8816	0,9583	0,8522	0,9707
	A9	0,9812	0,9692	0,7974	0,8990	0,8747	0,8660	0,9812
	A10	0,9906	0,9897	0,7315	0,9398	0,8276	0,8952	0,9906
	A11	0,9871	0,9833	0,6754	0,9359	0,8504	0,8917	0,9871
	A12	1,0000	1,0000	0,6516	0,9534	0,8197	0,9072	1,0000
	A13	0,9883	0,9897	0,6544	0,9282	0,8403	0,8814	0,9897
	A14	0,9695	0,9653	0,6607	0,9029	0,8747	0,8608	0,9695
	A15	0,9542	0,9461	0,6593	0,8874	0,9403	0,8505	0,9542
	Adj Wj	0,1039	0,1317	0,2636	0,1455	0,2023	0,1530	

Napomena: Autorovo izračunavanje

Tabela 7 - pokazuje CCM (Kompletni Kompenzacioni Model).

Tabela 7 - CCM (Kompletni Kompenzacioni Model)

CCM (Kompletni Kompenzacioni Model)	u1(ai)	C1	C2	C3	C4	C5	C6	SUM
	A1	0,0676	0,0405	0,0488	0,1455	0,0000	0,1530	0,4554
	A2	0,0887	0,0194	0,1744	0,1040	0,0000	0,1530	0,5395
	A3	0,0329	0,0000	0,2636	0,0998	0,0000	0,1345	0,5308
	A4	0,0000	0,0484	0,2636	0,0330	0,1852	0,0146	0,5448
	A5	0,0209	0,0679	0,2636	0,0352	0,1750	0,0145	0,5771
	A6	0,0436	0,0690	0,2636	0,0239	0,1404	0,0135	0,5541
	A7	0,0217	0,0345	0,2636	0,0000	0,2023	0,0000	0,5221
	A8	0,0490	0,0663	0,2256	0,0147	0,2023	0,0095	0,5674
	A9	0,0990	0,1261	0,1674	0,0494	0,2023	0,0332	0,6774
	A10	0,0964	0,1317	0,0690	0,0891	0,1225	0,0575	0,5663
	A11	0,0966	0,1317	0,0225	0,0923	0,1500	0,0588	0,5520

	A12	0,1039	0,1317	0,0000	0,0934	0,1031	0,0622	0,4943
	A13	0,0909	0,1317	0,0024	0,0743	0,1305	0,0422	0,4720
	A14	0,0623	0,1169	0,0105	0,0560	0,2023	0,0255	0,4735
	A15	0,0115	0,0557	0,0070	0,0233	0,2023	0,0080	0,3078

Napomena: Autorovo izračunavanje

Tabela 8 - pokazuje UCM (Nekompenzacioni Model).

Tabela 8 - UCM (Nekompenzacioni Model)

UCM (Nekompenzacioni Model)	**u2(ai)**	**C1**	**C2**	**C3**	**C4**	**C5**	**C6**	**MAX**
	A1	0,0362	0,0912	0,2148	0,0000	0,0000	0,0000	0,2148
	A2	0,0152	0,1123	0,0892	0,0415	0,0000	0,0000	0,1123
	A3	0,0710	0,1317	0,0000	0,0457	0,0000	0,0185	0,1317
	A4	0,1039	0,0833	0,0000	0,1125	0,0171	0,1384	0,1384
	A5	0,0830	0,0639	0,0000	0,1103	0,0273	0,1384	0,1384
	A6	0,0603	0,0627	0,0000	0,1215	0,0619	0,1395	0,1395
	A7	0,0821	0,0973	0,0000	0,1455	0,0000	0,1530	0,1530
	A8	0,0548	0,0654	0,0381	0,1308	0,0000	0,1435	0,1435
	A9	0,0049	0,0056	0,0962	0,0961	0,0000	0,1198	0,1198
	A10	0,0075	0,0000	0,1947	0,0563	0,0798	0,0955	0,1947
	A11	0,0072	0,0000	0,2411	0,0532	0,0523	0,0941	0,2411
	A12	0,0000	0,0000	0,2636	0,0521	0,0992	0,0908	0,2636
	A13	0,0130	0,0000	0,2612	0,0712	0,0718	0,1108	0,2612
	A14	0,0416	0,0149	0,2532	0,0895	0,0000	0,1275	0,2532
	A15	0,0923	0,0761	0,2567	0,1221	0,0000	0,1449	0,2567

Napomena: Autorovo izračunavanje

Tabela 9 - pokazuje ICM (Nekompletni Kompenzacioni Model).

Tabela 9 - ICM (Nepotpuni Kompenzacioni Model)

ICM (Nepotpuni Kompenzacioni Model)	**u3(ai)**	**C1**	**C2**	**C3**	**C4**	**C5**	**C6**	**MAX**
	A1	0,9982	0,9922	0,9157	1,0000	0,0000	1,0000	0,0000
	A2	1,0000	0,9928	0,9475	0,9926	0,0000	0,9944	0,0000
	A3	1,0000	0,9941	0,9706	0,9944	0,0000	0,9944	0,0000
	A4	0,9975	0,9962	1,0000	0,9883	0,9937	0,9809	0,9572
	A5	0,9984	0,9976	1,0000	0,9884	0,9900	0,9807	0,9557
	A6	0,9970	0,9948	1,0000	0,9835	0,9762	0,9768	0,9301
	A7	0,9958	0,9917	1,0000	0,9799	1,0000	0,9743	0,9428
	A8	1,0000	0,9977	0,9848	0,9861	0,9974	0,9803	0,9473
	A9	1,0000	0,9984	0,9468	0,9874	0,9770	0,9811	0,8946
	A10	1,0000	0,9999	0,9232	0,9924	0,9643	0,9846	0,8697
	A11	1,0000	0,9995	0,9048	0,9923	0,9703	0,9846	0,8573
	A12	1,0000	1,0000	0,8932	0,9931	0,9606	0,9852	0,8395

	A13	0,9998	1,0000	0,8967	0,9907	0,9674	0,9824	0,8442
	A14	1,0000	0,9994	0,9038	0,9897	0,9794	0,9820	0,8598
	A15	1,0000	0,9989	0,9071	0,9895	0,9970	0,9825	0,8783

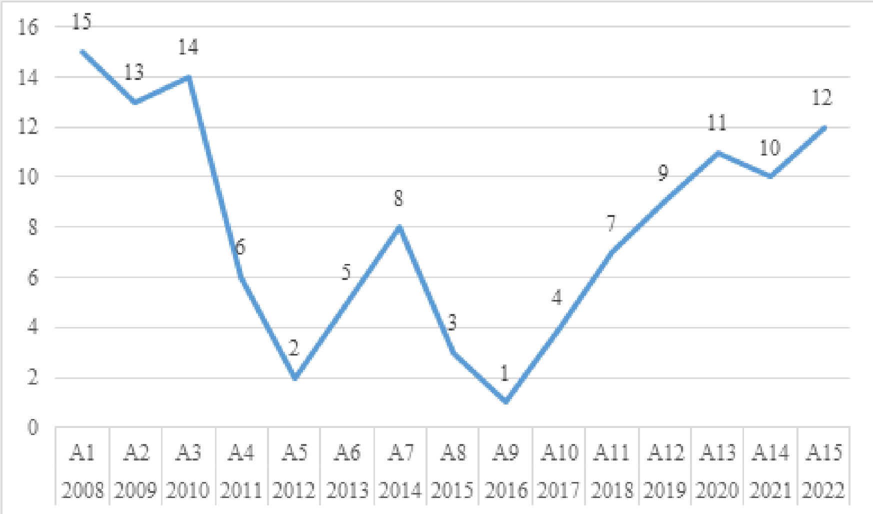
Napomena: Autorovo izračunavanje

Tabela 10 i Slika 2 pokazuju rezultate LMAW-DNMA metode.

Tabela 10 - Rezultati LMAW-DNMA metode

										w1	**w2**	**w3**	
										0.6	**0.1**	**0.3**	
		CCM		**φ**	**UCM**		**φ**	**ICM**		**φ**	**Korisne vrednosti**		**Hijerarhija**
		u1(ai)	**Rang**	**0.5**	**u2(ai)**	**Rang**	**0.5**	**u3(ai)**	**Rang**	**0.5**			
2008	A1	0,4554	14	0,4847	0,2148	10	0,7445	0,0000	13	0,1414	0,4077	0,4077	**15**
2009	A2	0,5395	8	0,6778	0,1123	1	0,3049	0,0000	13	0,1414	0,4796	0,4796	**13**
2010	A3	0,5308	9	0,6449	0,1317	3	0,3806	0,0000	13	0,1414	0,4674	0,4674	**14**
2011	A4	0,5448	7	0,7095	0,1384	4	0,4163	0,9572	1	1,0000	0,7674	0,7674	**6**
2012	A5	0,5771	2	0,8936	0,1384	5	0,4398	0,9557	2	0,9664	0,8701	0,8701	**2**
2013	A6	0,5541	5	0,7768	0,1395	6	0,4690	0,9301	5	0,8608	0,7712	0,7712	**5**
2014	A7	0,5221	10	0,6141	0,1530	8	0,5573	0,9428	4	0,8973	0,6934	0,6934	**8**
2015	A8	0,5674	3	0,8523	0,1435	7	0,5070	0,9473	3	0,9302	0,8411	0,8411	**3**
2016	A9	0,6774	1	1,0000	0,1198	2	0,3349	0,8946	6	0,8117	0,8770	0,8770	**1**
2017	A10	0,5663	4	0,8182	0,1947	9	0,6728	0,8697	8	0,7450	0,7817	0,7817	**4**
2018	A11	0,5520	6	0,7445	0,2411	11	0,8289	0,8573	10	0,6936	0,7377	0,7377	**7**
2019	A12	0,4943	11	0,5672	0,2636	15	1,0000	0,8395	12	0,6482	0,6348	0,6348	**9**
2020	A13	0,4720	13	0,5126	0,2612	14	0,9625	0,8442	11	0,6667	0,6038	0,6038	**11**
2021	A14	0,4735	12	0,5290	0,2532	12	0,8838	0,8598	9	0,7158	0,6205	0,6205	**10**
2022	A15	0,3078	15	0,3248	0,2567	13	0,9217	0,8783	7	0,7752	0,5196	0,5196	**12**
	MAX	0,6774			0,2636			0,9572					

Napomena: Autorovo izračunavanje



Slika 2 - Rangiranje
Izvor: Autorova slika

Vrlo je izazovno istraživati, kao što pokazuju napred navedeni proračuni po fazama i rezultati, dinamičke pozicioniranosti adekvatnosti kapitala bankarskog sektora u Srbiji primenom metoda višekriterijumskog odlučivanja. Oni vrlo precizno ukazuju na to u kojim godinama je, a u kojim nije bila zadovoljavajuća adekvatnost kapitala. Na osnovu toga se može pouzdano sagledati izloženost bankarskog sektora u konkretnom slučaju u Srbiji rizicima poslovanja i neophodnosti preduzimanja relevantnih mera za njihovo optimiziranje.

Prema tome, prema rezultatima LMAW-DNMA metode u top pet godina po adekvatnosti kapitala bankarskog sektora u Srbiji u posmatranom vremenskom periodu 2008 – 2022. spadaju po redosledu: 2016, 2012, 2015, 2017. i 2013. Najlošija adekvatnost kapitala bankarskog sektora u Srbiji je bila u 2008. On je u toj godini bio dakle najviše izložen rizicima poslovanja.

U poslednje vreme na adekvatnost kapitala bankarskog sektora u svetu, i u Srbiji, uticala je, pored ostalog, pandemija korona virusa COVID-19. Ona je prouzrokovala pada privrednih, a time i bankarskih aktivnosti. Delimično je negativan uticaj ublažen elektronskim bankarstvom.

U funkciji poboljšanja adekvatnosti kapitala bankarskog sektora u Srbiji neophodno je, pored ostalog, što adekvatnije upravljati rizicima poslovanja svih vrsta. To znači, drugim rečima, da se adekvatnim upravljanjem velikim izloženostima (rizicima poslovanja) u odnosu na regulatorni kapital može znatno uticati na ostvarenje ciljne adekvatnosti kapitala bankarskog sektora u Srbiji. U tome značajnu ulogu ima supervizija i revizija.

Zaključak

Na osnovu dobijenih rezultata empirijskog istraživanja adekvatnosti kapitala bankarskog sektora u Srbiji primenom LMAW-DNMA metode može se zaključiti sledeće: prema rezultatima LMAW-DNMA metode u top pet godina po adekvatnosti kapitala bankarskog sektora u Srbiji u posmatranom vremenskom periodu 2008 – 2022. spadaju po redosledu: 2016, 2012, 2015, 2017. i 2013. Najlošija adekvatnost kapitala bankarskog sektora u Srbiji je bila u 2008. U toj godini, drugim rečima, bankarski sektor u Srbiji je bio najviše izložen rizicima poslovanja.

U periodu 2019 – 2022. god. na adekvatnost kapitala bankarskog sektora u Srbiji, a što je slučaj i u svetu, uticala je u izvesnoj meri pandemija korona virus COVID-19 tako što je smanjila privredne aktivnosti a time i bankarske. To se negativno odrazilo i na ukupne performanse bankarskog sektora. Negativan uticaj delimično je ublažen elektronskim a.

U bankarskom sektoru Srbije sa adekvatnim upravljanjem rizicima poslovanja u odnosu na regulatorni kapital može se znatno uticati na ostvarenje ciljne adekvatnosti kapitala. Nesumnjivo je da u tome značajnu ulogu ima supervizija i revizija. Istraživanjem je utvrđeno da efikasna supervizija i revizija znatno ublažavaju negativan uticaj rizika na performanse bankarskog sektora.

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ANALYSIS OF THE DYNAMICS OF THE CAPITAL ADEQUACY OF THE BANK SECTOR IN SERBIA BASED ON THE LMAW-DNMA METHOD

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Summary: The issue of capital adequacy analysis in the banking sector is very challenging, significant, continuously updated, and complex. Based on that, this paper analyzes the capital adequacy of the banking sector in Serbia based on the LMAW-DNMA method. According to the results of the LMAW-DNMA method, the top five years in terms of capital adequacy of the banking sector in Serbia in the observed period 2008 - 2022 are in order: 2016, 2012, 2015, 2017, and 2013. This means, in other words, that in that year the banking sector in Serbia was more exposed to business risks. It is safe to say that recently the capital adequacy of the banking sector in Serbia has increased slightly.

Keywords: capital adequacy, factors, banking sector, Serbia, LMAW-DNMA method

JEL classification: D40, G21

Introduction

Capital adequacy is the ratio between the capital and risky assets of the bank, that is, the ability of the bank to absorb losses caused by bad placements. It ensures financial stability, liquidity, solvency, and profitability of the banking sector, as well as the protection of clients from potential exposure to all types of risks. Investigating the capital adequacy of the banking sector is very challenging, continuously updated, significant, and complex (Rose, 1996). Bearing that in mind, the subject of analysis in this paper is the capital adequacy of the banking sector in Serbia based on the LMAW-DNMA method. The aim and purpose of this is to assess the adequacy capital of the banking sector in Serbia as realistically as possible to improve it in the future by applying relevant measures. The implication is, therefore, the improvement of capital adequacy of the banking sector in Serbia as a defense mechanism of protection against potential risks. This is the scientific and professional contribution of this work.

In the introduction, two types of literature were pointed out. Literature related exclusively to banking, and literature related to multi-criteria decision-making methods. The knowledge of both is a prerequisite for understanding the problem treated in this study.

The literature devoted to the development and importance of the application of the DEA model in all economic sectors, which means also in financial institutions is plentiful (Hwang & Yoon,1981, 1995; Chen et al., 2021; Chang & Wang, 2020; Guo & Cai, 2020; Lee et al., 2011; Lin, 2020; Tone, 2002; Podinovski Podinovski & Bouzdine-Chameeva, 2021; Bouzdine-Chameeva et al., 2021; Rostamzadehet al., 2021; Fenyves & Tarnóczi, 2020; Stević & Brković, 2020; Stević et al., 2020). They are also very successfully applied in the analysis of the efficiency of banks and insurance companies (Radojicic et al., 2018; Cvetkoska & Savic, 2017; Cvetkoska & Cikovic, 2020; Cvetkovska et al., 2021; Lukic et al., 2017; Lukic & Hadrovic Zekic, 2019; Lukic, 2018a,b, 2021). Likewise, when analyzing financial performance (profitability, liquidity) and efficiency, banks increasingly apply, integrally or individually, different methods of multi-criteria decision-making, including the LMAW-DNMA method (Ünlü et al., 2022; Ali et al., 2022, Lukic, 2022a,b; 2023a,b,c,d,e; Demir, 2022; Ecer & Pamucar, 2022). All relevant literature in this paper is used as a theoretical-methodological and empirical basis for the analysis of capital adequacy dynamics of the banking sector in Serbia using the LMAW-DNMA method.

The research hypothesis in this paper is based on the fact that continuous monitoring of the capital adequacy dynamics of the banking sector, in the specific case of Serbia, is the basis for improvement in the future by applying relevant measures. The application of the LMAW-DNMA method plays a significant role in this.

Compared to the classic ratio analysis, the LMAW-DNMA method provides more realistic information about the capital adequacy of the banking sector in Serbia because it is based on the integration of several indicators. That is why, in addition to the ratio analysis, it is recommended in the analysis of capital adequacy dynamics of the banking sector in Serbia.

Necessary empirical data for capital adequacy analysis of the banking sector in Serbia based on the LMAW-DNMA method were collected from the National Bank of Serbia. They are “manufactured” by the relevant international standards. Regarding the international comparison of the obtained results of the capital adequacy of the banking sector in Serbia using the LMAW-DNMA method, there are no limitations.

Methodology

It is very challenging to investigate the dynamic positioning of the capital adequacy of the banking sector in Serbia using multi-criteria decision-making methods. They very precisely indicate in which years capital adequacy was and was not satisfactory. Based on this, one can reliably assess the exposure of the banking sector in Serbia to business risks and the necessity of taking relevant measures to optimize them. In other words, to improve the capital adequacy of the banking sector in Serbia, it is necessary, among other things, to know the selection and ranking by individual years. With that in mind, we will conduct research into the dynamic positioning of capital adequacy of the banking sector in Serbia using the LMAW-DNMA method. In further presentations of the treated issues, we will point out the characteristics of the LMAW and DNMA methods.

The **LMAW** method is the latest method used to calculate criteria weights and rank alternatives (Liao, & Wu, 2020; Demir, 2022). It takes place through the following steps: m alternatives $A = \{A_1, A_2, \dots, A_m\}$ are evaluated in comparison with n criteria $C = \{C_1, C_2, \dots, C_n\}$ with the participation of k experts $E = \{E_1, E_2, \dots, E_k\}$ and according to a predefined linguistic scale (Pamučar et al, 2021).

Step 1: Determination of weight coefficients of criteria

Experts $E = \{E_1, E_2, \dots, E_k\}$ set priorities with criteria $C = \{C_1, C_2, \dots, C_n\}$ about previously defined values of the linguistic scale. At the same time, they assign a higher value to the criterion of greater importance and a lower value to the criterion of less importance on the linguistic scale. By the way, the priority vector is obtained. The label γ_{cn}^{e} represents the value of the linguistic scale that the expert e(1≤e≤k) assigns to the criterion $C_t (1 \le t \le n)$.

Step 1.1: Defining the absolute anti-ideal point γ_{AIP}

The absolute ideal point should be less than the smallest value in the priority vector. It is calculated according to the equation:

$$\gamma_{AIP} = \frac{\gamma_{min}^{e}}{S}$$

where is γ_{min}^{e} the minimum value of the priority vector and S should be greater than the base logarithmic function. In the case of using the function Ln, the value of S can be chosen as 3.

Step 1.2: Determining the relationship between the priority vector and the absolute anti-ideal point

The relationship between the priority vector and the absolute anti-ideal point is calculated using the following equation:

$$n_{Cn}^{e} = \frac{\gamma_{Cn}^{e}}{\gamma_{AIP}} \tag{1}$$

So the relational vector $R^e = (n_{C1}^e, n_{C2}^e, \dots, n_{Cn}^e)$, is obtained. Where n_{Cn}^e represents the value of the real vector derived from the previous equation, and R^e represents the relational vector e(1≤e≤k).

Step 1.3: Determination of the vector of weight coefficients

The vector of weight coefficients $w = (w_1, w_2, \dots, w_n)^T$ is calculated by the expert $e(1 \leq e \leq k)$ using the following equation

$$w_j^e = \frac{\log_A(n_{Cn}^e)}{\log_A\left(\prod_{J=1}^{n} n_{Cn}^e\right)}, A > 1 \tag{2}$$

where w_j^e represents the weighting coefficients obtained according to expert evaluations e^{th} and the n_{Cn}^e elements of the realization vector R. The obtained values for the weighting coefficients must meet the condition that $\sum_{j=1}^{n} w_j^e = 1$.

By applying the Bonferroni aggregator shown in the following equation, the aggregated vector of weight coefficients is determined $w = (w_1, w_2, \dots, w_n)^T$:

$$W_j = \left(\frac{1}{k.(k-1)} \cdot \sum_{x=1}^{k} \left(w_j^{(x)}\right)^p \cdot \sum_{\substack{y=1 \\ y \neq x}}^{k} \left(w_{ij}^{(y)}\right)^q \right)^{\frac{1}{p+q}} \tag{3}$$

The values of p and q are stabilization parameters and p,q ≥0. The resulting weight coefficients should fulfil the condition that $\sum_{j=1}^{n} w_j = 1$.

The **DNMA** method is a newer method for showing alternatives (Demir, 2022). Two different normalized (linear and vector) techniques are used, as well as three different coupling functions (full compensation - CCM, non-compensation - UCM, and incomplete compensation - ICM). The steps for applying this method are as follows (Liao & Wu, 2020; Ecer, 2020):

Step 1: Normalized decision matrix

The elements of the decision matrix are normalized with linear $\left(\hat{x}_{ij}^{1N}\right)$ normalization using the following equation:

$$\hat{x}_{ij}^{1N} = 1 - \frac{\left|x^{ij} - r_j\right|}{max\left\{\max_i x^{ij}, r_j\right\} - min\left\{\min_i x^{ij}, r_j\right\}} \tag{4}$$

The vector $\left(\hat{x}_{ij}^{2N}\right)$ is normalized using the following equation:

$$\hat{x}_{ij}^{2N} = 1 - \frac{\left|x^{ij} - r_j\right|}{\sqrt{\sum_{i=1}^{m} (x^{ij})^2 + \left(r_j\right)^2}} \tag{5}$$

The value ı r_j he target value for c_ C_j ǝ criterion and is considered $\max_i x^{ij}$ for both utility and ı$\min_i x^{ij}$ cost criteria.

Step 2: Determining the weight of the criteria

This step consists of three phases:

Step 2.1: In this phase, the standard deviation (σ_j) for the criterion c_j determined with the following equation where m is the number of alternatives:

$$\sigma_j = \sqrt{\frac{\sum_{i=1}^{m}\left(\frac{x^{ij}}{\max\limits_i x^{ij}} - \frac{1}{m}\sum_{i=1}^{m}\left(\frac{x^{ij}}{\max\limits_i x^{ij}}\right)\right)^2}{m}} \tag{6}$$

Step 2.2: Values of the standard deviation calculated for the criteria normalize with the following equation:

$$w_j^{\sigma} = \frac{\sigma_j}{\sum_{i=1}^{n}\sigma_j} \tag{7}$$

Step 2.3: Finally, the weights are adjusted with the following equation:

$$\widehat{w}_j = \frac{\sqrt{w_j^{\sigma}.w_j}}{\sum_{i=1}^{n}\sqrt{w_j^{\sigma}.w_j}} \tag{8}$$

Step 3: Calculating the aggregation model

Three aggregation functions (CCM, UCM, and ICM) are calculated separately for each alternative.

The CCM (Complete Compensatory Model Model) is calculated using the following equation:

$$u_1(a_i) = \sum_{j=1}^{n}\frac{\widehat{w}_j.\hat{x}_{ij}^{1N}}{\max\limits_i \hat{x}_{ij}^{1N}} \tag{9}$$

The UCM (Non Compensatory model) is calculated using the following equation:

$$u_2(a_i) = \max_j \widehat{w}_j\left(\frac{1-\hat{x}_{ij}^{1N}}{\max\limits_i \hat{x}_{ij}^{1N}}\right) \tag{10}$$

The ICM (Incomplete Compensation Model) is calculated using the following equation:

$$u_3(a_i) = \prod_{j=1}^{n} \left(\frac{\hat{x}_{ij}^{2N}}{\max_i \hat{x}_{ij}^{2N}} \right)^{\hat{w}_j} \tag{11}$$

Step 4: Integration of utility values

The calculated utility functions are integrated with the following equation using the Euclidean principle of distance:

$$DN_i = w_1 \sqrt{\varphi \left(\frac{u_1(a_i)}{\max_i u_1(a_i)} \right)^2 + (1-\varphi) \left(\frac{m - r_{1(a_i)+1}}{m} \right)^2} - w_2 \sqrt{\varphi \left(\frac{u_2(a_i)}{\max_i u_2(a_i)} \right)^2 + (1-\varphi) \left(\frac{r_2(a_i)}{m} \right)^2} + w_3 \sqrt{\varphi \left(\frac{u_3(a_i)}{\max_i u_3(a_i)} \right)^2 + (1-\varphi) \left(\frac{m - r_3(a_i) + 1}{m} \right)^2} \tag{12}$$

In this case, the means $r_1(a_i)$ i $r_3(a_i)$ represent the ordinal number of the alternative a_i sorted by CCM and ICM functions in descending value (higher value first). On the other hand, $r_2(a_i)$ it shows the sequence number in the obtained order according to the increasing value (smaller value first) for the UCM function used. The label φ is the relative importance of the child value used and is in the range [0.1]. It is considered that it can be taken as φ=0.5. The coefficients w_1, w_2, w_3 are obtained weights of the used functions CCM, UCM, and ICM, respectively. The sum should be equal to $w_1 + w_2 + w_3 = 1$. When determining the weights, if the decision maker attaches importance to a wider range of performance alternatives, they can set a higher value for w_1. In case the decision maker is not willing to take risks, ie. to choose a poor alternative according to some criterion, they can assign a higher weight to w_2. However, the decision maker may assign a greater weight to w_3 if they simultaneously consider overall performance and risk. Finally, the DN values are sorted in descending order, with the higher-value alternatives being the best.

Results and Discussion

In the context of the analysis of the capital adequacy dynamics of the banking sector in Serbia, the most important indicators were taken as criteria (C1-C6). Alternatives (A1-A15) have been observed for years. They, as well as the initial data, are shown in Table 1. Figure 1 shows the capital adequacy indicators of the banking sector in Serbia. (In this paper, all calculations and results are the author's.)

Table 1 - Initial data

		Regulatory capital to risk-weighted assets	Regulatory Tier 1 capital to risk-weighted assets	Nonperforming loans net of provisions to regulatory capital	Regulatory Tier 1 capital to assets	Large exposures to capital	Regulatory capital to assets
		C1	C2	C3	C4	C5	C6
A1	2008	21.9	17.9	15.5	16.8	0.0	20.5
A2	2009	21.4	16.5	26.9	13.1	0.0	17.1
A3	2010	19.9	15.9	35.5	12.8	0.0	16.1
A4	2011	19.1	18.1	52.1	11.5	110.1	12.2
A5	2012	19.9	19.0	52.3	11.6	104.5	12.2
A6	2013	20.9	19.3	55.9	11.2	90.4	12.2
A7	2014	20.0	17.6	56.0	10.1	130.5	11.4
A8	2015	20.9	18.8	44.0	10.7	115.7	11.9
A9	2016	21.8	20.0	27.1	11.6	86.0	12.7
A10	2017	22.6	21.6	17.7	13.7	69.3	14.4
A11	2018	22.3	21.1	9.7	13.5	77.4	14.2
A12	2019	23.4	22.4	6.3	14.4	66.5	15.1
A13	2020	22.4	21.6	6.7	13.1	73.8	13.6
A14	2021	20.8	19.7	7.6	11.8	86.0	12.4
A15	2022	19.5	18.2	7.4	11.0	109.3	11.8
	Statistics						
	Mean	21.1200	19.1800	28.0467	12.4600	74.6333	13.8533
	Std. Error of Mean	.32881	.49331	5.07575	.44388	11.01505	.64549
	Median	20.9000	19.0000	26.9000	11.8000	86.0000	12.7000
	Std. Deviation	1.27347	1.91057	19.65829	1.71914	42.66110	2.49996
	Skewness	.082	.079	.320	1.079	-.939	1.542
	Std. Error of Skewness	.580	.580	.580	.580	.580	.580
	Kurtosis	-.987	-.728	-1.637	1.548	-.134	2.386
	Std. Error of Kurtosis	1.121	1.121	1.121	1.121	1.121	1.121
	Minimum	19.10	15.90	6.30	10.10	.00	11.40
	Maximum	23.40	22.40	56.00	16.80	130.50	20.50

Note: Data for 2022 are shown for the 3rd quarter. Data is expressed in %. Statistics are the author's
Source: National Bank of Serbia

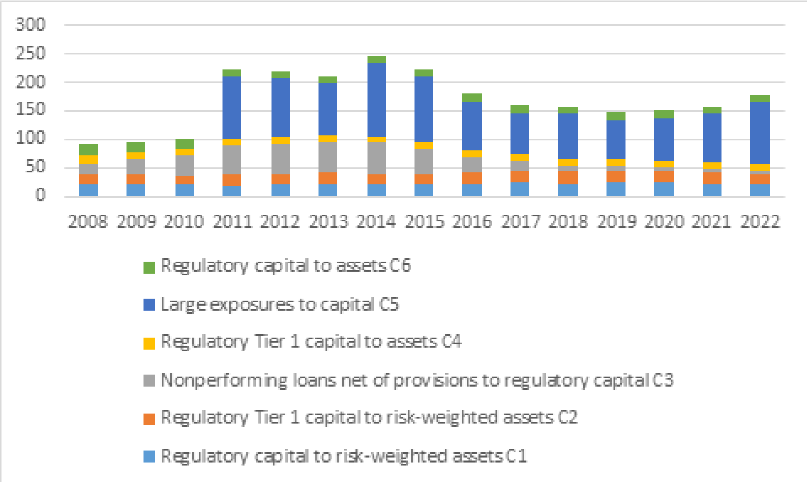

Figure 1 - Capital adequacy indicators of the banking sector in Serbia Source: Author's picture

Thus, for example, according to the presented statistics, the highest exposure to business risks about the regulatory capital of the banking sector in Serbia was in 2014.

Table 2 shows the prioritization scale.

Prioritization Scale		
Linguistic Variables	**Abbreviation**	**Prioritization**
Low	**AL**	1
Very Low	**VL**	1.5
Low	**L**	2
Medium	**M**	2.5
Equal	**E**	3
Medium High	**MH**	3.5
High	**H**	4
Very High	**VH**	4.5
High	**AH**	5

Table 3 shows the evaluation of the criteria by the decision makers and their weight coefficients.

Table 3 - Evaluation, Vector of Weighting Coefficients, Aggregated Fuzzy Vectors, and Aggregated Weighting Coefficients of the Vector

KIND	**1**	**1**	**1**	**1**	**1**	**1**
	C1	**C2**	**C3**	**C4**	**C5**	**C6**
E1	**H**	**AH**	**H**	**E**	**MH**	**MH**
E2	**VH**	**VH**	**MH**	**H**	**H**	**MH**
E3	**E**	**MH**	**VH**	**AH**	**AH**	**H**
E4	**MH**	**E**	**E**	**VH**	**AH**	**E**

γ_{AIP}	0.5

	C1	C2	C3	C4	C5	C6	LN(Πη)
R1	8	10	8	6	7	7	12.145
R2	9	9	7	8	8	7	12.445
R3	6	7	9	10	10	8	12.620
R4	7	6	6	9	10	6	11.821

Weight Coefficients Vector	C1	C2	C3	C4	C5	C6
W1j	0.171	0.190	0.171	0.148	0.160	0.160
W2j	0.177	0.177	0.156	0.167	0.167	0.156
W3j	0.142	0.154	0.174	0.182	0.182	0.165
W4j	0.165	0.152	0.152	0.186	0.195	0.152

Aggregated Fuzzy Vectors	C1	C2	C3	C4	C5	C6
W1j	0.007	0.008	0.007	0.007	0.007	0.006
W2j	0.007	0.007	0.006	0.007	0.007	0.006
W3j	0.006	0.007	0.007	0.008	0.008	0.006
W4j	0.007	0.007	0.006	0.008	0.008	0.006
SUM	0.027	0.028	0.027	0.029	0.031	0.025
Aggregated Weight Coefficient Vectors	0.1634	0.1677	0.1632	0.1705	0.1760	0.1582

Note: Author's calculation

Therefore, in this particular case, the most important criterion is C5 - Large exposures to capital. This means, in other words, that adequate management of large exposures (business risks) about regulatory capital can significantly influence the achievement of the target capital adequacy of the banking sector in Serbia.

The calculation by stages and the results of the research on the dynamic positioning of capital adequacy of the banking sector in Serbia using the given methodology are shown in the tables below.

Table 4 shows the initial matrix.

Table 4 - Initial Matrix

INITIAL MATRIX	KIND	1	1	1	1	1	1
	Weight	0.1634	0.1677	0.1632	0.1705	0.1760	0.1582
		C1	**C2**	**C3**	**C4**	**C5**	**C6**
	A1	21.9	17.9	15.5	16.8	0	20.5
	A2	21.4	16.5	26.9	13.1	0	17.1
	A3	19.9	15.9	35.5	12.8	0	16.1
	A4	19.1	18.1	52.1	11.5	110.1	12.2
	A5	19.9	19	52.3	11.6	104.5	12.2
	A6	20.9	19.3	55.9	11.2	90.4	12.2
	A7	20	17.6	56	10.1	130.5	11.4
	A8	20.9	18.8	44	10.7	115.7	11.9
	A9	21.8	20	27.1	11.6	86	12.7
	A10	22.6	21.6	17.7	13.7	69.3	14.4
	A11	22.3	21.1	9.7	13.5	77.4	14.2
	A12	23.4	22.4	6.3	14.4	66.5	15.1
	A13	22.4	21.6	6.7	13.1	73.8	13.6
	A14	20.8	19.7	7.6	11.8	86	12.4
	A15	19.5	18.2	7.4	11	109.3	11.8
	MAX	23.4000	22.4000	56.0000	16.8000	130.5000	20.5000
	MIN	19.1000	15.9000	6.3000	10.1000	0.0000	11.4000

Note: Author's calculation

Table 5 shows the linear normalized matrix.

Table 5 - Linear Normalization Matrix

Linear Normalization MATRIX		C1	C2	C3	C4	C5	C6	MAX
	A1	0.6512	0.3077	0.1851	1.0000	0.0000	1.0000	1.0000
	A2	0.5349	0.0923	0.4145	0.4478	0.0000	0.6264	0.6264
	A3	0.1860	0.0000	0.5875	0.4030	0.0000	0.5165	0.5875
	A4	0.0000	0.3385	0.9215	0.2090	0.8437	0.0879	0.9215
	A5	0.1860	0.4769	0.9256	0.2239	0.8008	0.0879	0.9256
	A6	0.4186	0.5231	0.9980	0.1642	0.6927	0.0879	0.9980
	A7	0.2093	0.2615	1.0000	0.0000	1.0000	0.0000	1.0000
	A8	0.4186	0.4462	0.7586	0.0896	0.8866	0.0549	0.8866
	A9	0.6279	0.6308	0.4185	0.2239	0.6590	0.1429	0.6590
	A10	0.8140	0.8769	0.2294	0.5373	0.5310	0.3297	0.8769

	A11	0.7442	0.8000	0.0684	0.5075	0.5931	0.3077	0.8000
	A12	1.0000	1.0000	0.0000	0.6418	0.5096	0.4066	1.0000
	A13	0.7674	0.8769	0.0080	0.4478	0.5655	0.2418	0.8769
	A14	0.3953	0.5846	0.0262	0.2537	0.6590	0.1099	0.6590
	A15	0.0930	0.3538	0.0221	0.1343	0.8375	0.0440	0.8375

Note: Author's calculation

Table 6 shows the normalized matrix vector.

Table 6 - Vector Normalization Matrix

Vector Normalization MATRIX		**C1**	**C2**	**C3**	**C4**	**C5**	**C6**	**MAX**
	A1	0.9824	0.9422	0.7161	1.0000	0.0000	1.0000	1.0000
	A2	0.9765	0.9243	0.7960	0.9282	0.0000	0.9416	0.9765
	A3	0.9589	0.9166	0.8563	0.9223	0.0000	0.9244	0.9589
	A4	0.9495	0.9448	0.9727	0.8971	0.9425	0.8574	0.9727
	A5	0.9589	0.9564	0.9741	0.8990	0.9268	0.8574	0.9741
	A6	0.9707	0.9602	0.9993	0.8913	0.8871	0.8574	0.9993
	A7	0.9601	0.9384	1.0000	0.8699	1.0000	0.8436	1.0000
	A8	0.9707	0.9538	0.9159	0.8816	0.9583	0.8522	0.9707
	A9	0.9812	0.9692	0.7974	0.8990	0.8747	0.8660	0.9812
	A10	0.9906	0.9897	0.7315	0.9398	0.8276	0.8952	0.9906
	A11	0.9871	0.9833	0.6754	0.9359	0.8504	0.8917	0.9871
	A12	1.0000	1.0000	0.6516	0.9534	0.8197	0.9072	1.0000
	A13	0.9883	0.9897	0.6544	0.9282	0.8403	0.8814	0.9897
	A14	0.9695	0.9653	0.6607	0.9029	0.8747	0.8608	0.9695
	A15	0.9542	0.9461	0.6593	0.8874	0.9403	0.8505	0.9542
	Adj Wj	0.1039	0.1317	0.2636	0.1455	0.2023	0.1530	

Note: Author's calculation

Table 7 shows the CCM (Complete Compensatory Model).

Table 7 - CCM (Complete Compensatory Model)

CCM (Complete Compensatory Model)	**u1(ai)**	**C1**	**C2**	**C3**	**C4**	**C5**	**C6**	**SUM**
	A1	0.0676	0.0405	0.0488	0.1455	0.0000	0.1530	0.4554
	A2	0.0887	0.0194	0.1744	0.1040	0.0000	0.1530	0.5395
	A3	0.0329	0.0000	0.2636	0.0998	0.0000	0.1345	0.5308
	A4	0.0000	0.0484	0.2636	0.0330	0.1852	0.0146	0.5448
	A5	0.0209	0.0679	0.2636	0.0352	0.1750	0.0145	0.5771
	A6	0.0436	0.0690	0.2636	0.0239	0.1404	0.0135	0.5541
	A7	0.0217	0.0345	0.2636	0.0000	0.2023	0.0000	0.5221
	A8	0.0490	0.0663	0.2256	0.0147	0.2023	0.0095	0.5674
	A9	0.0990	0.1261	0.1674	0.0494	0.2023	0.0332	0.6774
	A10	0.0964	0.1317	0.0690	0.0891	0.1225	0.0575	0.5663
	A11	0.0966	0.1317	0.0225	0.0923	0.1500	0.0588	0.5520

	A12	0.1039	0.1317	0.0000	0.0934	0.1031	0.0622	0.4943
	A13	0.0909	0.1317	0.0024	0.0743	0.1305	0.0422	0.4720
	A14	0.0623	0.1169	0.0105	0.0560	0.2023	0.0255	0.4735
	A15	0.0115	0.0557	0.0070	0.0233	0.2023	0.0080	0.3078

Note: Author's calculation

Table 8 shows the UCM (Un-Compensatory Model).

Table 8 - UCM (Un-Compensatory Model)

UCM (Un-Compensatory Model)	u2(ai)	C1	C2	C3	C4	C5	C6	MAX
	A1	0.0362	0.0912	0.2148	0.0000	0.0000	0.0000	0.2148
	A2	0.0152	0.1123	0.0892	0.0415	0.0000	0.0000	0.1123
	A3	0.0710	0.1317	0.0000	0.0457	0.0000	0.0185	0.1317
	A4	0.1039	0.0833	0.0000	0.1125	0.0171	0.1384	0.1384
	A5	0.0830	0.0639	0.0000	0.1103	0.0273	0.1384	0.1384
	A6	0.0603	0.0627	0.0000	0.1215	0.0619	0.1395	0.1395
	A7	0.0821	0.0973	0.0000	0.1455	0.0000	0.1530	0.1530
	A8	0.0548	0.0654	0.0381	0.1308	0.0000	0.1435	0.1435
	A9	0.0049	0.0056	0.0962	0.0961	0.0000	0.1198	0.1198
	A10	0.0075	0.0000	0.1947	0.0563	0.0798	0.0955	0.1947
	A11	0.0072	0.0000	0.2411	0.0532	0.0523	0.0941	0.2411
	A12	0.0000	0.0000	0.2636	0.0521	0.0992	0.0908	0.2636
	A13	0.0130	0.0000	0.2612	0.0712	0.0718	0.1108	0.2612
	A14	0.0416	0.0149	0.2532	0.0895	0.0000	0.1275	0.2532
	A15	0.0923	0.0761	0.2567	0.1221	0.0000	0.1449	0.2567

Note: Author's calculation

Table 9 shows the ICM (Incomplete Compensatory Model).

Table 9 - ICM (Incomplete Compensatory Model)

ICM (Incomplete Compensatory Model)	u3(ai)	C1	C2	C3	C4	C5	C6	MAX
	A1	0.9982	0.9922	0.9157	1.0000	0.0000	1.0000	0.0000
	A2	1.0000	0.9928	0.9475	0.9926	0.0000	0.9944	0.0000
	A3	1.0000	0.9941	0.9706	0.9944	0.0000	0.9944	0.0000
	A4	0.9975	0.9962	1.0000	0.9883	0.9937	0.9809	0.9572
	A5	0.9984	0.9976	1.0000	0.9884	0.9900	0.9807	0.9557
	A6	0.9970	0.9948	1.0000	0.9835	0.9762	0.9768	0.9301
	A7	0.9958	0.9917	1.0000	0.9799	1.0000	0.9743	0.9428
	A8	1.0000	0.9977	0.9848	0.9861	0.9974	0.9803	0.9473
	A9	1.0000	0.9984	0.9468	0.9874	0.9770	0.9811	0.8946
	A10	1.0000	0.9999	0.9232	0.9924	0.9643	0.9846	0.8697
	A11	1.0000	0.9995	0.9048	0.9923	0.9703	0.9846	0.8573
	A12	1.0000	1.0000	0.8932	0.9931	0.9606	0.9852	0.8395

	A13	0.9998	1.0000	0.8967	0.9907	0.9674	0.9824	0.8442
	A14	1.0000	0.9994	0.9038	0.9897	0.9794	0.9820	0.8598
	A15	1.0000	0.9989	0.9071	0.9895	0.9970	0.9825	0.8783

Note: Author's calculation

Table 10 and Figure 2 show the results of the LMAW-DNMA method.

Table 10 - Results of the LMAW-DNMA Method

										w1	**w2**	**w3**	
										0.6	**0.1**	**0.3**	
		CCM		**φ**	**UCM**		**φ**	**ICM**		**φ**	**Utility Values**		**Rank order**
		u1(ai)	**Rank**	**0.5**	**u2(ai)**	**Rank**	**0.5**	**u3(ai)**	**Rank**	**0.5**			
2008	A1	0.4554	14	0.4847	0.2148	10	0.7445	0.0000	13	0,1414	0.4077	0.4077	**15**
2009	A2	0.5395	8	0.6778	0.1123	1	0.3049	0.0000	13	0.1414	0.4796	0.4796	**13**
2010	A3	0.5308	9	0.6449	0.1317	3	0.3806	0.0000	13	0.1414	0.4674	0.4674	**14**
2011	A4	0.5448	7	0.7095	0.1384	4	0.4163	0.9572	1	1.0000	0.7674	0.7674	**6**
2012	A5	0.5771	2	0.8936	0.1384	5	0.4398	0.9557	2	0.9664	0.8701	0.8701	**2**
2013	A6	0.5541	5	0.7768	0.1395	6	0.4690	0.9301	5	0.8608	0.7712	0.7712	**5**
2014	A7	0.5221	10	0.6141	0.1530	8	0.5573	0.9428	4	0.8973	0.6934	0.6934	**8**
2015	A8	0.5674	3	0.8523	0.1435	7	0.5070	0.9473	3	0.9302	0.8411	0.8411	**3**
2016	A9	0.6774	1	1.0000	0.1198	2	0.3349	0.8946	6	0.8117	0.8770	0.8770	**1**
2017	A10	0.5663	4	0.8182	0.1947	9	0.6728	0.8697	8	0.7450	0.7817	0.7817	**4**
2018	A11	0.5520	6	0.7445	0.2411	11	0.8289	0.8573	10	0.6936	0.7377	0.7377	**7**
2019	A12	0.4943	11	0.5672	0.2636	15	1.0000	0.8395	12	0.6482	0.6348	0.6348	**9**
2020	A13	0.4720	13	0.5126	0.2612	14	0.9625	0.8442	11	0.6667	0.6038	0.6038	**11**
2021	A14	0.4735	12	0.5290	0.2532	12	0.8838	0.8598	9	0.7158	0.6205	0.6205	**10**
2022	A15	0.3078	15	0.3248	0.2567	13	0.9217	0.8783	7	0.7752	0.5196	0.5196	**12**
	MAX	0.6774			0.2636			0.9572					

Note: Author's calculation

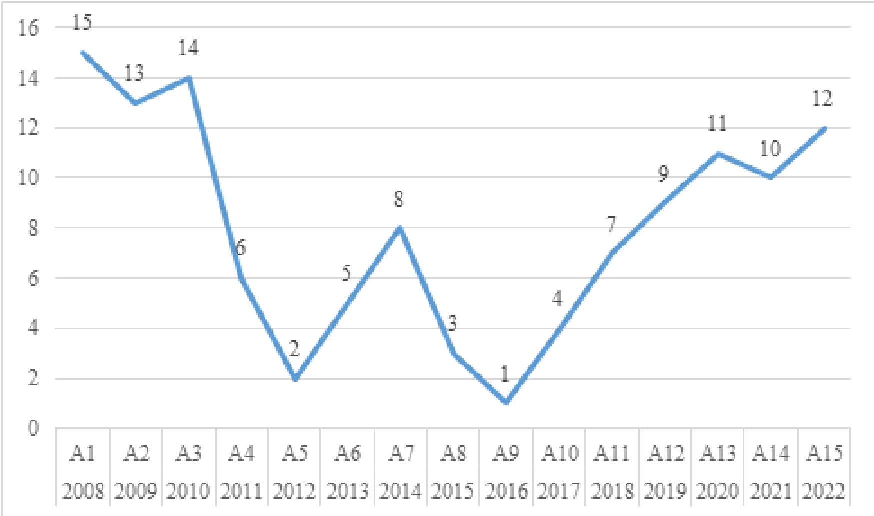

Figure 2- Ranking
Source: Author's picture

It is very challenging to investigate, as shown by the above-mentioned calculations by phases and results, the dynamic positioning of capital adequacy of the banking sector in Serbia by applying multi-criteria decision-making methods. They very precisely indicate in which years capital adequacy was and was not satisfactory. Based on this, one can reliably assess the exposure of the banking sector in the specific case of Serbia to business risks and the necessity of taking relevant measures to optimize them.

Therefore, according to the results of the LMAW-DNMA method, the top five years in terms of capital adequacy of the banking sector in Serbia in the observed period 2008 - 2022 are in order: 2016, 2012, 2015, 2017, and 2013. The worst capital adequacy of the banking sector in Serbia was in 2008. It was therefore most exposed to business risks in that year.

Recently, the capital adequacy of the banking sector in the world, and in Serbia, has been affected, among other things, by the pandemic of coronavirus COVID-19. It caused a decline in economic and therefore banking activities. The negative impact was partially mitigated by electronic banking.
To improve the capital adequacy of the banking sector in Serbia, it is necessary, among other things, to manage business risks of all kinds as adequately as possible. This means, in other words, that adequate management of large exposures (business risks) about regulatory capital can significantly influence the achievement of the target capital adequacy of the banking sector in Serbia. Supervision and auditing play a significant role in this.

Conclusion

Based on the results of the empirical research on the capital adequacy of the banking sector in Serbia using the LMAW-DNMA method, the following can be concluded: according to the results of the LMAW-DNMA method, the top five years in terms of capital adequacy of the banking sector in Serbia in the observed period 2008 - 2022 are in order: 2016, 2012, 2015, 2017 and 2013. The worst capital adequacy of the banking sector in Serbia was in 2008. In that year, in other words, the banking sector in Serbia was most exposed to business risks.

In the period 2019 - 2022, the capital adequacy of the banking sector in Serbia, which is also the case in the world, was affected to a certain extent by the pandemic coronavirus COVID-19 by reducing economic activities and banking. This hurt the overall performance of the banking sector. The negative impact is partially mitigated by electronic a.

In the banking sector of Serbia, adequate management of business risks about regulatory capital can significantly influence the achievement of the target capital adequacy. There is no doubt that supervision and auditing play a significant role in this. The research found that effective supervision and auditing significantly mitigate the negative impact of risk on the performance of the banking sector.

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TRENDOVI U FINANSIRANJU POLJOPRIVREDE REPUBLIKE SRBIJE

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Rezime: Poslednjih godina se beleži porast agrarnog budžeta i subvencija u poljoprivredi, ali i kreditiranja poljoprivrednika od strane komercijalnih banaka. Cilj rada je rasvetljavanje trendova koji ukazuju na značaj finansiranja poljoprivrede u cilju privrednog razvoja Republike Srbije. Kruskal-Wallis test je korišćen da bi se uporedile subvencije u poljoprivredi u odnosu na druge privredne delatnosti, kao i da bi se uporedilo kreditiranje poljoprivrede između komercijalnih banaka, dok je Friedman test korišćen da bi da bi se ispitalo kreditiranje posmatranih banaka. Rezultati su pokazali da su subvencije u poljoprivredi veće u odnosu na druge privredne delatnosti, i da rastu, kao i celokupni agrarni budžet, naročito poslednjih godina, kada dostižu rekordne iznose. Isti slučaj je zabeležen i kod kreditiranja poljoprivrednika od strane komercijalnih banaka. Porast finansiranja i kreditiranja poljoprivrede je bio praćen i porastom poljoprivredne proizvodnje i BDV poljoprivrede. Zaključuje se da se adekvatno finansiranje poljoprivrede pozitivno odražava kako na poljoprivredu, tako i celokupni privredni razvoj Republike Srbije.

Ključne reči: poljoprivreda, agrarni budžet, subvencije, kreditiranje, komercijalne banke, privredni razvoj, Republika Srbija.

JEL klasifikacija: Q14, G21, H81, O13

Uvod

Imajući u vidu značaj poljoprivrede za privredni razvoj Republike Srbije (RS), država sve veći akcenat stavlja na agrarni budžet i finansiranje ovog sektora. Jedan od glavnih razloga neadekvatnog razvoja agrarnog sektora je bio upravo neadekvatan sistem finansiranja i kreditiranja poljoprivredne proizvodnje.

RS ima značajan poljoprivredni sektor, čiji potencijali se zasnivaju uglavnom na visokokvalitetnim obradivim površinama, povoljnoj kontinentalnoj klimi i obilju radne snage. Da bi dostigla svoje pune potencijale, srpska poljoprivreda treba da prevaziđe ukupan nizak nivo produktivnosti. Iako je mali broj većih proizvođača sposoban da se takmiči i učestvuje na globalnim tržištima time što su investirali u tehnologiju, čime su dostigli visok nivo produktivnosti, većinu aktivnosti poljoprivrednih proizvođača karakteriše stara tehnologija i nedovoljno kapitalizovana proizvodnja niske dodate vrednosti. Zato je za dalji poljoprivredni razvoj i unapređenje produktivnosti bitno investiranje, adekvatno finansiranje i ulaganje duž čitavog agrobiznis lanca vrednosti (Atanasijević & Danon, 2014).

Poljoprivredi je zbog specifičnosti proizvodnje, sporijeg obrta kapitala, niske profitabilnosti i nepostojanja sopstvenih izvora finansiranja neophodna finansijska i kreditna podrška, koja treba da bude realizovana uz podršku države. Potreba za dominantnom ulogom države je uzrokovana i nerazvijenošću finansijskih tržišta i institucija. Finansijska podrška države trebalo bi da se manifestuje u većem izdvajanju iz državnog budžeta za agrarni budžet, ali i kroz usmeravanje na korišćenje drugih finansijskih instrumenata, poput predpristupnih fondova EU (IPARD), hartija od vrednosti, finansijskih derivata, itd. (Radović, 2015).

Pristup finansijama za poljoprivrednike i celokupni agrobiznis je bio godinama loš zbog brojnih ograničenja koja su međusobno povezana i pod uticajem raznih pravnih, ekonomskih i institucionalnih faktora. Sva ta ograničenja mogu se u najširem smislu sumirati na sledeći način: nedosledna poljoprivredna politika; neefikasni programi subvencija; destimulacija regulacije ili nedostatak regulative; nekoliko alternativnih izvora finansiranja; znanje zajmodavaca i percepcija rizika u agrobiznisu; znanje i pristup informacijama; ne iskorišćavanje prednosti koje nudi koncept lanca vrednosti; visok rizik sektora itd. Zato se upućuju različite preporuke (Jolović i dr., 2014):

- Vladi: unapređenje formulisanja, blagovremenosti sprovođenja mera poljoprivredne politike RS; unapređenje pravnog okvira za kreditiranje agrobiznisa; i poboljšanje mehanizama podrške Vlade i institucionalnog okvira;

- Agrobiznis sektoru: ojačati kapacitete farmera i agrobiznisa za pristup formalnim finansijama, ojačati kapacitete poslovnih udruženja i klastera za poboljšanje pristupa finansijama za svoje članove, ojačati kapacitet poslovnih udruženja i klastera da se zalažu za reforme za poboljšanje pristupa finansijama za agrobiznis, izgradnja kapaciteta lanaca vrednosti, razviti portal za finansiranje agrobiznisa;

- Finansijskom sektoru: razviti osiguranje poljoprivrede, razviti specijalizovane kreditne veštine i politike, povećati finansiranje lanca vrednosti, itd.

Predmet rada je sagledavanje stanja poljoprivrede i agrarnog budžeta RS, kao dela agrarne politike, dok je cilj rada da se prikažu trendovi koji ukazuju na značaj javnog (državnog) finansiranja i privatnog (komercijalnog) kreditiranja za jačanje ovog sektora i privrednog razvoja zemlje. U skladu sa predmetom i ciljem istraživanja postavljena je sledeća hipoteza:

H1: Veći agrarni budžet i kreditiranje poljoprivrede vode većem privrednom razvoju RS.

Stanje i specifičnosti poljoprivrede Republike Srbije

Poljoprivreda je veoma značajan sektor srpske privrede imajući u vidu visoko učešće u BDP-u i ukupnoj zaposlenosti. Poljoprivrednu proizvodnju karakteriše bogatstvo prirodnim resursima i povoljni klimatski uslovi, dok sa druge strane se kao jedan od većih problema izdvaja velika usitnjenost parcela, gde u ukupnoj strukturi preovlađuju gazdinstva do 5ha (Stojanović, 2022).

Tabela 1: Poljoprivreda RS vs. EU

God.	Poljoprivreda, šumarstvo i ribarstvo, dodata vrednost, % BDP		Zaposlenost u poljoprivredi, % ukupne zaposlenosti		Poljoprivreda, šumarstvo i ribarstvo, dodata vrednost po radniku, US $	
	RS	EU	RS	EU	RS	EU
2010.	6,60	1,65	22,34	5,80	4559,66	18929,83
2011.	7,45	1,72	21,22	5,59	5106,88	20251,12
2012.	6,43	1,70	20,96	5,57	4320,96	19426,30
2013.	7,41	1,74	21,29	5,42	4956,84	20690,29
2014.	7,07	1,71	19,86	5,28	5201,78	22181,60
2015.	6,71	1,64	19,41	5,06	5378,93	22725,84
2016.	6,81	1,59	18,61	4,79	5683,09	23318,84
2017.	6,01	1,70	17,22	4,67	5285,17	24006,40
2018.	6,34	1,62	15,93	4,50	6474,28	24500,88
2019.	5,95	1,59	15,61	4,35	6334,18	25475,68
2020.	6,34	1,64	14,56	4,34	/	/
2021.	6,29	1,63	13,92	4,13	/	/
2022.	6,75	1,73			/	/

Izvor: Svetska banka, 2023

Iz Tabele 1 se uočava visoko učešće poljoprivrede u BDP-u i zaposlenosti, koje je na dosta višem nivou u odnosu na EU. Sa druge strane, produktivnost poljoprivrede RS je na dosta niskom nivou. Ukoliko se posmatra dodata vrednost po radniku u poljoprivredi, kao mera produktivnosti rada, uočava se konstantno i visoko zaostajanje za EU, zbog čega je bitna adekvatna politika finansiranja i investiranja u poljoprivredu, a sve u cilju tehničko-tehnološkog napretka, inoviranja, sticanja novih znanja i povećanja produktivnosti srpske poljoprivrede.

Time bi moglo da se utiče i na opadanje učešća poljoprivrede u BDP-u i zaposlenosti, imajući u vidu da visoko učešće poljoprivrede u ovim indikatorima ima negativan uticaj na privredni razvoj. Sa druge strane, poljoprivredna proizvodnja RS, kao i izvoz, beleže visoku vrednost, naročito u odnosu na zemlje iz okruženja, što se pozitivno odražava i na privredni razvoj zemlje (Dimitrijević et al., 2023).

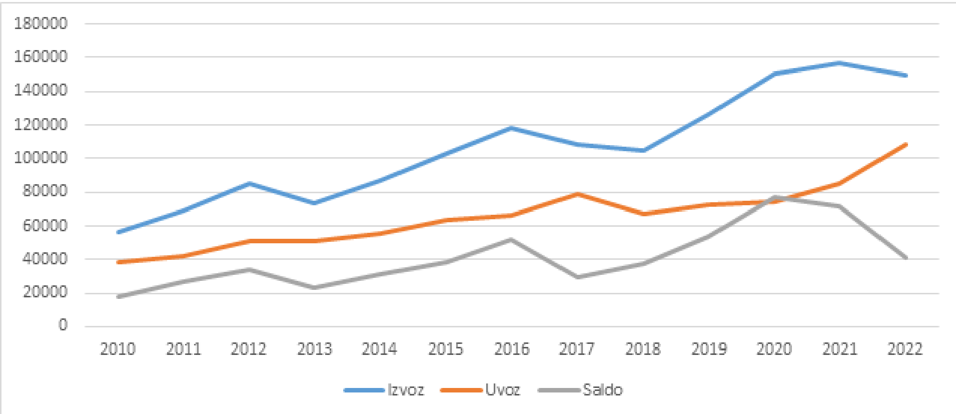
Tabela 2: Vrednost poljoprivredne proizvodnje RS, u tekućim cenama, u mil. RSD

Opis	2012.	2013.	2014.	2015.	2016.	2017.	2018.	2019.	2020.	2021.	2022.
Vrednost proizvodnje	542919	621215	635984	584834	643685	590706	640861	653183	700488	785422	918689
BDV	229404	265665	265818	240778	271831	254597	274792	275642	300569	347739	404654

Izvor: RZS, Ekonomski računi poljoprivrede, 2022. god.

Tabela 2 prikazuje rast vrednosti poljoprivredne proizvodnje i BDV, naročito poslednjih godina, što se pozitivno odražava na ukupnu spoljnu trgovinu i privredni razvoj RS.

Grafikon 1: Spoljna trgovina poljoprivrede, šumarstva i ribarstva RS, u mil. RSD



Izvor: RZS, Statistički godišnjak RS, 2010-2023.

Izvoz poljoprivrednih proizvoda je konstantno veći od uvoza, pa poljoprivredni sektor konstantno beleži spoljnotrgovinski suficit (Grafikon 1). Ohrabruje i to što izvoz beleži rast iz godine u godinu, sa blagim padom u 2022. godini, što se odražava i na ukupnu spoljnu trgovinu poljoprivrede RS, koja ima rastući trend.

Tabela 3: Izvoz i uvoz RS po sektorima i oblastima KD, 2022., u mlrd. RSD

	Izvoz	Uvoz	Saldo
Ukupno	3242,5	4582,4	-1339,9
Poljoprivreda, šumarstvo i ribarstvo	149,5	108,5	41
Rudarstvo	210,2	518,5	-308,3
Prerađivačka industrija	2749,2	3242,7	-493,5
Snabdevanje električnom energijom, gasom i parom	100,5	185	-84,5

Snabdevanje vodom i upravljanje otpadnim vodama	23,9	17,6	6,3
Informisanje i komunikacije	8,9	8,9	0
Stručne, naučne, inovacione i tehničke delatnosti	0	0	0
Umetnost, zabava i rekreacija	0,1	0,1	0
Ostale uslužne delatnosti	0	0	0
Neklasifikovano po KD	0,1	501	-500,9

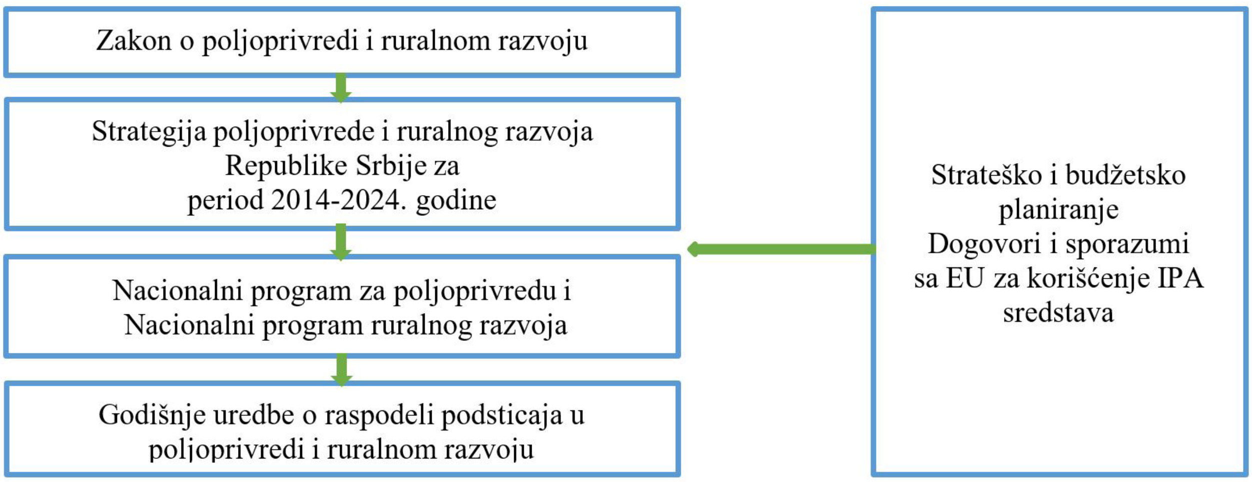
Izvor: RZS, Spoljnotrgovinski robni promet, 2022a.

Tabela 3 prikazuje izvoz, uvoz i ukupan saldo po sektorima. Zaključuje se da iako poljoprivreda ne ostvaruje najveći izvoz u odnosu na druge sektore, ona ipak ostvaruje najveći suficit, posmatrano u odnosu na sve druge sektore RS, što još jednom govori o njenom značaju za privredni razvoj zemlje.

Zakonska regulativa razvoja agrara

Poljoprivreda RS je regulisana zakonskim i pravnim regulativima, koji se odnose na funkcionisanje mera i instrumenata agrarne politike. Najvažniji je Zakon o poljoprivredi i ruralnom razvoju, na osnovu koga je doneta Strategija poljoprivrede i ruralnog razvoja RS za period 2014-2024. godine, Nacionalni program za poljoprivredu (NPP) za period 2018-220 i 2022-2024, Nacionalni program ruralnog razvoja i Godišnje uredbe o raspodeli podsticaja u poljoprivredi i ruralnom razvoju (Slika 1).

Slika 1: Regulativa razvoja poljoprivrede RS



Izvor: Strategija poljoprivrede i ruralnog razvoja Republike Srbije („Sl. glasnik RS", br. 85/2014)

Zakonom o poljoprivredi i ruralnom razvoju uređuju se (Zakon o poljoprivredi i ruralnom razvoju): ciljevi poljoprivredne politike i politike ruralnog razvoja, kao i način njihovog ostvarivanja, Registar poljoprivrednih gazdinstava, evidentiranje i izveštavanje u poljoprivredi, kao i nadzor nad sprovođenjem ovog zakona. Ovim zakonom uređuju se i pravila posebnog postupka sprovođenja i kontrole IPARD programa. Njime se predviđa i poljoprivredna politika i politika ruralnog razvoja RS koja obuhvata mere i aktivnosti koje preduzimaju nadležni organi, u cilju:

1) rasta proizvodnje i stabilnosti dohotka proizvođača;
2) rasta konkurentnosti uz prilagođavanje zahtevima domaćeg i inostranog tržišta i tehničko-tehnološkog unapređenja sektora poljoprivrede;
3) održivog upravljanja resursima i zaštite životne sredine;
4) unapređenja kvaliteta života u ruralnim područjima i smanjenja siromaštva;
5) efikasnog upravljanja javnim politikama i unapređenja institucionalnog okvira razvoja poljoprivrede i ruralnih sredina.

Strategija poljoprivrede i ruralnog razvoja RS za period 2014-2024. godine („Sl. glasnik RS", br. 85/2014), koja proističe iz Zakona o poljoprivredi i ruralnom razvoju, ima za cilj da definiše:

1. Pravce budućeg razvoja poljoprivrede i prehrambene industrije, zasnovane na konceptu održivog razvoja, koji afirmiše očuvanje životne sredine i održivo upravljanje prirodnim resursima;

2. Model podrške koji bi vodio ubrzavanju razvoja poljoprivredno-prehrambenog sektora, koji ima značajne potencijale za povećanje obima proizvodnje i dugoročno održiv rast konkurentnosti u okruženju širem od lokalno-regionalnog;

3. Pravce budućih reformi poljoprivredne politike i institucionalnog okvira, u tri najvažnija segmenta:

1) reforma poljoprivredne politike u smislu uvođenja instrumenata agrarne politike koji omogućavaju dinamično restrukturiranje sektora poljoprivrede, efikasno približavanje EU integracijama putem postepenog usklađivanja politike sa principima Zajedničke poljoprivredne politike i modernu ulogu države u upravljanju razvojem poljoprivrede i ruralnih sredina;

2) usvajanje i potpuna primena zakonodavnog okvira koji omogućuje pravnu osnovu, kako za primenu same Strategije, tako i za usklađivanje nacionalnog zakonodavstva sa EU regulativom;

3) institucionalne reforme koje bi reformom postojećih i izgradnjom nedostajućih delova institucionalnih struktura, omogućile ostvarivanje strateških ciljeva, efikasnu primenu odabrane politike i usklađivanje administrativnih struktura sa zahtevima EU.

Prema ovoj strategiji poljoprivreda u RS treba da bude sektor čiji će se razvoj zasnivati na znanju, savremenim tehnologijama i inovacijama. Nacionalni program za poljoprivredu (NPP) predstavlja dalju razradu Strategije poljoprivrede i ruralnog razvoja RS za period 2014-2024. NPP za period 2018-2020. godine („Sl. glasnik RS", br. 120/17) predstavlja operativni program za sprovođenje poljoprivredne politike, koji sadrži mere klasifikovane kao mere direktnih plaćanja, mere za uređenje tržišta, kao i posebne podsticaje i kreditnu podršku u poljoprivredi. NPP takođe definiše: polazišta i opšte i specifične ciljeve poljoprivredne politike, vrste mera i dinamiku njihovog prilagođavanja konačnom obliku primene sa predviđenim finansijskim iznosima i osnovnim pravilima za implementaciju, kao i indikatore za merenje ostvarenja ciljeva sa baznom i ciljnom vrednošću.

Prema njemu glavni izvor finansiranja poljoprivredne politike jeste budžet RS. NPP 2022-2024 (Ministarstvo poljoprivrede, šumarstva i vodoprivrede, 2022) predstavlja nastavak NPP 2018-2020. Za razliku od starog NPP, čije su mere prvenstveno bile usmerene na podršku u okviru direktnih plaćanja i mera uređenja tržišta, novi NPP pored ovih aktivnosti uključuje i organsku proizvodnju i harmonizaciju sa Zajedničkom poljoprivrednom politikom EU za period 2021-2027.

Metodologija i podaci

Istraživanje je sprovedeno kroz nekoliko celina, tj. ispitana su izdvojena sredstava za agrarni budžet, kao i državno finansiranje poljoprivrede, u vidu subvencija i drugih podsticaja, ali i kreditiranja poljoprivrede od strane komercijalnih banaka. Podaci za istraživanje su prikupljani iz: Zakona o budžetu; Realizacije subvencija u poljoprivredi, odnosno Ministarstva poljoprivrede, šumarstva i vodoprivrede (MPŠV); i finansijskih izveštaja posmatranih komercijalnih banaka. Komercijalne banke koje su odabrane za posmatranje jesu one koje su sa MPŠV potpisale ugovor o subvencionisanim kreditima. Banke koje su poljoprivrednim proizvođačima odobravale beskamatne kredite jesu: NLB Komercijalna banka, ProKredit banka, Sberbank, Banca Intesa, OTP banka, Kredit Agricol, Halk Bank, UniCredit banka, Raiffeisen banka, i AIK banka (MPŠV, 2022). S obzirom da je Sberbank postala deo AIK banke, a Kredit Agricol deo Raiffeisen banke, poslovne banke odabrane za istraživanje, prema spisku banaka (NBS, 2023), jesu: NLB Komercijalna banka, ProCredit banka, Banca Intesa, OTP banka, Halk Bank, UniCredit banka, Raiffaizen banka, i AIK banka.

Primenjena metodologija istraživanja je bazirana na: deskriptivnoj analizi i komparativnoj metodi kako bi se napravila komparacija između izdvojenih subvencija u poljoprivredi i ostvarene poljoprivredne proizvodnje, tj. BDV u poljoprivredi; istorijskoj analizi koja je poslužila da se ispita hronologija kretanja subvencija u poljoprivredni i ukupnih izdvajanja za agrarni budžet. Korišćen je i Kruskal-Wallis test kako bi se uporedile subvencije u poljoprivredi u odnosu na subvencije date drugim privrednim delatnostima, kao i da bi se uporedilo kreditiranje poljoprivrede između komercijalnih banaka. Friedman test je korišćen da bi da bi se ispitalo kreditiranje svih ovih banaka kroz različiti vremenski period. Istraživanje je sprovedeno, u vremenskom periodu od 2010-2023. godine, u SPPS programu.

Rezultati istraživanja

U okviru istraživanja je prvo ispitan agrarni budžet, tj. izdvajanja za Ministarstvo poljoprivrede, šumarstva i vodoprivrede. Zatim su posmatrane subvencije u poljoprivredi i upoređene sa drugim datim subvencijama. Takođe, u okviru državnog finansiranja poljoprivrede, posmatralo se kretanje subvencija iz godine u godinu i kako se to odrazilo na BDV poljoprivrede. Na kraju je istraženo i kreditiranje poljoprivrede od strane poslovnih banaka.

Agrarni budžet

Agrarni budžet je ustanovljen Odlukom o formiranju agrarnog budžeta koja je doneta krajem 1995. godine, dok je sastavni deo budžeta od 1996. godine. Definiše se kao oblik državne podrške poljoprivredi, koja se sprovodi putem subvencionisanja poljoprivredne proizvodnje (Radović, 2015). Agrarni budžet se donosi na predlog MPŠV i sastavni je deo Zakona o budžetu, koga usvaja Vlada RS.

Ciljevi agrarnog budžeta su (Kuzman et al., 2017): rast proizvodnje, produktivnosti, izvoza i praćenje tehnoloških inovacija u poljoprivrednoj proizvodnji; poboljšanje kvaliteta proizvodnje i rast konkurentnosti poljoprivrede; rast životnog standarda i obezbeđivanje adekvatnih prihoda u poljoprivredi; zaštita životne sredine i održivost proizvodnje; razvoj ruralnih područja i zaustavljanje depopulacije.

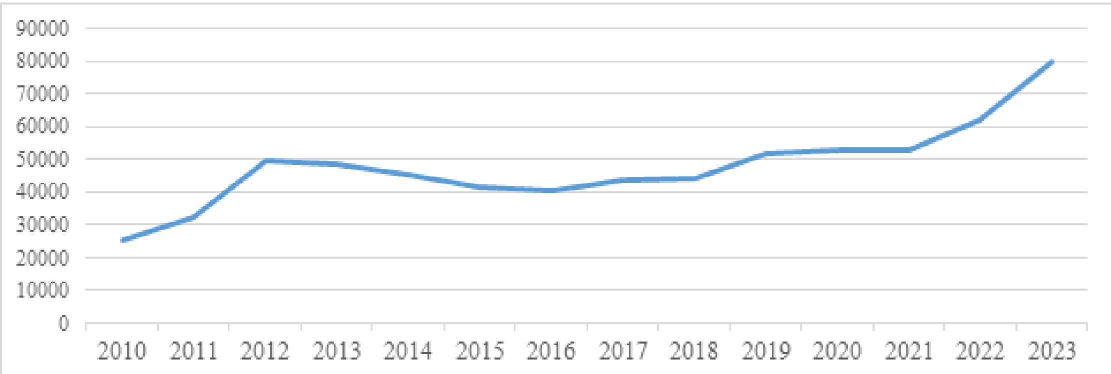
Tabela 4: Agrarni budžet RS

God.	Izdaci za MPŠV	Učešće agrarnog budžeta u ukupnom budžetu[1]
2010.	25621810000	4,20
2011.	32593228000	4,81
2012.	49485490000	7,30
2013.	48434882000	5,79
2014.	45394698000	5,66
2015.	41433438000	5,42
2016.	40465692000	4,88
2017.	43787556000	4,78
2018.	44109239000	4,46
2019.	51776908000	4,89
2020.	52713012000	4,66
2021.	52824876000	4,58
2022.	62074179000	4,71
2023.	79704221000	5,00

Izvor: Zakon o budžetu, 2010-2023. god.

Iz Tabele 4 se vidi da iako učešće agrarnog budžeta u ukupnom budžetu beleži oscilacije (treća kolona), gde su poreski prihodi, u skladu sa Zakonom o budžetskom sistemu, korišćeni kao osnovica, izdvajanja za MPŠV izražena u ukupnim apsolutnim iznosima (druga kolona) beleže rast, naročito izražen od 2016. godine, da bi se u 2023. godini ostvarila najveća izdvajanja.

Grafikon 2: Izdaci za MPŠV, u mil. RSD



Izvor: Zakon o budžetu, 2010-2023. god.

[1] *Prilikom obračuna učešća budžetskih izdvajanja za poljoprivredu u ukupnom budžetu, kao osnovica su primenjeni poreski prihodi, u skladu sa članom 5. stav 4. Zakona o budžetskom sistemu.*

Iako učešće agrarnog budžeta u ukupnom budžetu beleži oscilacije, izdvajanja za sektor poljoprivrede iz godine u godinu beleže rast, tako da su u 2023. godini ostvarena najveća izdvajanja (Grafikon 2). MPŠV je rebalansom budžeta za 2023. godinu dobilo istorijski iznos sredstava za poljoprivredu (MPŠV, 2023).

Jedna od mera agrarne politike su podsticaji, koji obuhvataju podršku programima koji se odnose na ulaganja u poljoprivredu za unapređenje konkurentnosti i postizanje standarda kvaliteta, a to su programi podrške ulaganjima u primarnu biljnu i stočarsku proizvodnju. Podsticaji u poljoprivredi imaju za cilj stabilnost u snabdevanju domaćeg tržišta osnovnim životnim namirnicama, povećanje prodaje i izvoza i otvaranje novih radnih mesta (Kuzman et al., 2017).

Državno finansiranje poljoprivrede

Subvencije u poljoprivredi predstavljaju najznačajniji državni izvor finansiranja poljoprivrede, po čemu se ogleda i veoma značajna uloga države u finansiranju poljoprivrede. Uloga države u subvencionisanom finansiranju je izuzetno značajna, jer komercijalne banke imaju primarni interes u dobiti kada su u pitanju kreditni plasmani. Poljoprivrednici kao pojedinci najčešće stavljaju hipoteku na zemljište kada uzimaju kredite, što ih čini veoma atraktivnim za banke. Uticaj države je suštinski i neophodan, a finansijska sredstva kojima država raspolaže treba da budu u funkciji razvoja poljoprivredne proizvodnje, a politika njihovog trošenja treba da bude u kontekstu nacionalnog interesa (Zelenović et al., 2018).

Tabela 5: Subvencije u poljoprivredi RS

Subvencije	**a. Mean Rank, 2010-2023. god.**	**b. % od ukupnih subvencija, 2023. god.**	**c. Učešće subvencija u poljoprivedi u ukupnim subvencijama, po godinama**
Subvencije u oblasti nauke i obrazovanja	27,50	1,72	2010. 2,04%
Subvencije u oblasti energetike	66,50	17,92	2011. 36,29 %
Subvencije u oblasti zaštite životne sredine	32,00	2,26	2012. 31,99 %
Subvencije za vazdušni saobraćaj	12,00	0,31	2013. 44,77 %
Subvencije u privredi	62,82	13,11	2014. 43,18 %
Subvencije u poljoprivredi	94,71	35,62	2015. 34,84 %
Subvencije za železnički saobraćaj	69,29	13,01	2016. 32,51 %
Subvencije za drumski saobraćaj	53,00	10,22	2017. 37,44 %
Subvencije u oblasti turizma	13,36	0,54	2018. 38,41 %
Subvencije u oblasti kulture	21,27	0,93	2019. 41,46 %
Ostale subvencije	57,50	4,36	2020. 42,79 %

Ostale subvencije	57,50	4,36	2020. 42,79 %
Chi-Square	***79,097	/	2021. 34,89 %
			2022. 35,25 %
			2023. 35,62 %

Izvor: Istraživanje autora, na osnovu Zakona o budžetu, 2010-2023.
Napomena: a. Kruskal Wallis Test; ***$p<0.01$.

Istraživanje u Tabeli 5 (a. kolona) je sprovedeno uz pomoć Kruskal Wallis testa i bazira se na izračunavanju prosečne vrednosti (Mean Rank) za istraživani vremenski period od 2010-2023. godine, za svaku datu subvenciju pojedinačno. Model je statistički značajan na nivou statističke značajnosti od 1% ($p<0.01$). Druga kolona (b. kolona) se odnosi isključivo na 2023. godinu i predstavlja učešće svake od ovih subvencija u ukupnim subvencijama, dok se treća kolona (c. kolona) odnosi samo na poljoprivredu i predstavlja učešće subvencija u poljoprivredi u ukupnim subvencijama, za vremenski period od 2010-2023. godine.

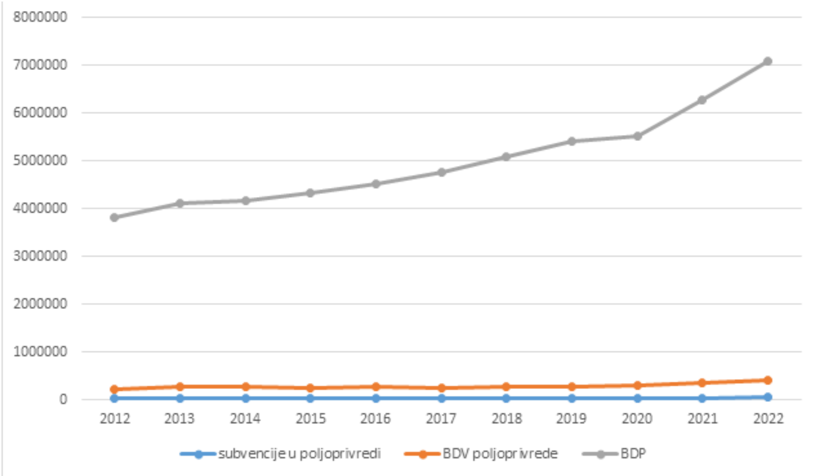
Rezultati Kruskal Wallis testa su prikazani u drugoj koloni (a. kolona) Tabele 5. Mean Rank, odnosno prosečna vrednost subvencija (izraženih u ukupnim apsolutnim iznosima) za vremenski period od 2010-2023. godine, je posebno izračunata za svaku vrstu subvencija. Ova vrednost je najveća za subvencije u poljoprivredi, što znači da je u posmatranom periodu poljoprivreda najviše subvencionisana, u odnosu na sve druge privredne delatnosti. Takođe, ukoliko se ove subvencije, izražene kao učešće u ukupnim subvencijama, međusobno uporede samo za 2023. godinu (treća, b. kolona) rezultati su isti, tj. i u ovoj godini su najveće bile subvencije date poljoprivredi. Četvrta (c. kolona) prikazuje samo učešće subvencija u poljoprivredi u ukupnim subvencijama za vremenski period od 2010-2023. godine. Prema tom indikatoru se beleže odstupanja od 31,99%, kao najniže zabeležene vrednosti 2012. godine, do 44,77%, kao najviše zabeležene vrednosti 2013. godine.

Iz Tabele 5 se uočava da su subvencije u poljoprivredi najveće u odnosu na sve druge subvencije, bilo da se posmatra celokupni period posmatranja, od 2010-2023. godine (a. kolona), ili samo 2023. godina (b. kolona). Ove subvencije su svake godine bile veće u odnosu na druge subvencije. Kada se posmatra učešće subvencija u poljoprivredi u ukupnim subvencijama beleže se oscilacije iz godine u godinu (c. kolona).

Stabilna praksa je da razvijene zemlje pomažu svojoj poljoprivredi subvencijama, premijama, poreskim olakšicama, pristupačnim kreditima, ali i da obezbeđuju jeftine inpute. Uz pomoć subvencija razvijene zemlje obezbeđuju dovoljno hrane za sopstvene potrebe, ali i za izvoz. Svrha podsticaja u poljoprivrednoj proizvodnji je stvaranje uslova za povećanje njenog obima, povećanje zaposlenosti i broja samoodrživih poljoprivrednih domaćinstava, osiguranje stabilnih poljoprivrednih prihoda i boljeg životnog standarda poljoprivrednika. Podsticaji treba da podstaknu održivost i profitabilnost tržišno orijentisanih poljoprivrednika i unaprede tehničko-tehnološke i organizacione aspekte (Kuzman et al., 2017).

Što se tiče RS potrebno je najpre rešavanje strukturnih problema u agraru da bi date subvencije mogle da se koriste na najbolji način, shodno datoj nameni, i da dovedu do prethodno spomenutih ciljeva. RS se suočava sa veoma lošom starosnom i obrazovnom strukturom poljoprivrednog stanovništva, usitnjenim zemljištem, neadekvatnim i niskim prerađivačkim kapacitetima, kao i tehnološkom opremljenošću, što sve dovodi do niskog životnog standarda celokupnog ruralnog stanovništva, ali i neodrživosti takvih poljoprivrednih domaćinstava. Da bi date subvencije bile samoodržive RS usklađuje svoju agrarnu politiku sa Zajedničkom agrarnom politikom EU i u svoje razvojne dokumente ugrađuje ciljeve kompatibilne sa EU, čime teži da obezbedi dugoročnu perspektivu za srpske poljoprivrednike. Kroz korišćenje IPARD fondova treba da se podstakne razvoj prerađivačkih kapaciteta, opremljenost, diverzifikacija i dalji razvoj poljoprivrednih gazdinstava. Međutim, veliki problem može da izazove ukidanje pojedinih podsticaja, kako u EU, tako i u RS, zbog čega projektovanju subvencija i agrarnoj politici treba posvetiti posebnu pažnju.

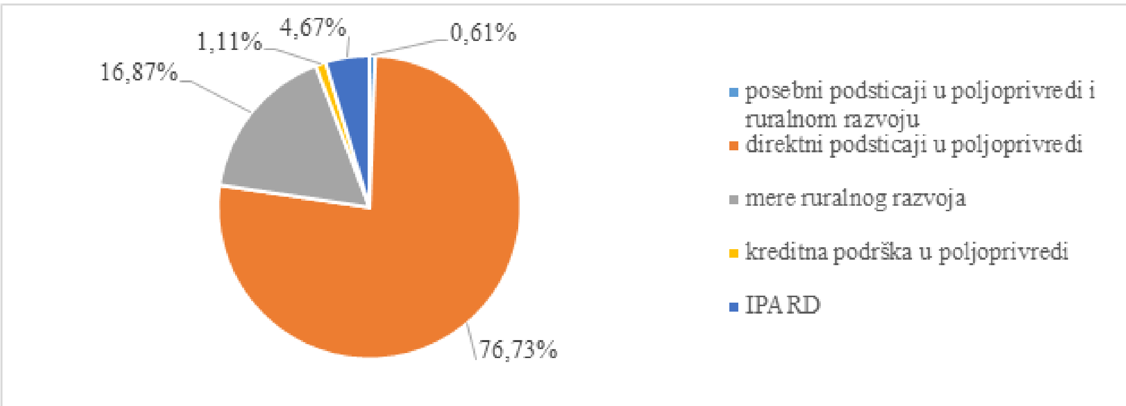
Grafikon 3: Subvencije & BDV u poljoprivredi vs. BDP, po godinama, u mil. RSD



Izvor: Zakon o budžetu, Ekonomski računi poljoprivrede, Godišnji nacionalni računi, za posmatrane godine.

Uočava se porast subvencija, u apsolutnim iznosima, iz godine u godinu. Porast subvencija prati i porast BDV poljoprivrede (Grafikon 3). Ovo znači da se većim izdvajanjima za poljoprivredu utiče i na porast poljoprivredne proizvodnje i ukupne BDV.

Grafikon 4: Vrste podsticaja u poljoprivredi i ruralnom razvoju RS, 2021. god.



Izvor: MPŠV, Realizacija budžeta, 2021.

Najviše podsticaja se izdvaja za direktne podsticaje u poljoprivredi, zatim za mere ruralnog razvoja, IPARD, kreditnu podršku i na kraju za posebne podsticaje (Grafikon 4). U okviru direktnih plaćanja spadaju: premije, podsticaji za proizvodnju, osnovni podsticaji za biljnu proizvodnju, podsticaji u stočarstvu, regresi, regres za đubrivo i sl., regres za troškove skladištenja u javnim skladištima; u okviru podsticaja za mere ruralnog razvoja spadaju: podsticaji za unapređenje konkurentnosti, podsticaji za očuvanje i unapređenje životne sredine i prirodnih resursa, podsticaji za diverzifikaciju dohotka i unapređenje kvaliteta života u ruralnim područjima, podsticaji za pripremu i sprovođenje lokalnih strategija ruralnog razvoja, podsticaji za unapređenje sistema kreiranja i prenosa znanja; u okviru posebnih podsticaja spadaju: podsticaji za sprovođenje odgajivačkih programa, radi ostvarivanja odgajivačkih ciljeva u stočarstvu – mere selekcije, podsticaji za promotivne aktivnosti u poljoprivredi i ruralnom razvoju (mere i akcije u poljoprivredi), podsticaji za proizvodnju sadnog materijala, sertifikaciju i klonsku selekciju; IPARD obuhvata: mera 1, 3 i 7; i u okviru kreditne podrške spadaju: subvencionisanje dela kamatne stope i premija osiguranja (MPŠV, 2020).

Kreditiranje poljoprivrede od strane poslovnih banaka

U ovom delu će biti posmatrane komercijalne banke koje su poljoprivrednim proizvođačima odobravale beskamatne kredite, odnosno, koje sa MPŠV imaju potpisan ugovor o subvencionisanim kreditima. Biće posmatrani odobreni poljoprivredni krediti od strane ovih banaka u vremenskom periodu od 2010-2022. godine. Ukupni poljoprivredni krediti koji se spominju u daljoj analizi se odnose na ukupno odobrene kredite poljoprivredi od strane svih banaka, dok se kreditni portfolio banke odnosi na sve vrste odobrenih kredita od strane date banke.

Pored značajne uloge države u finansiranju poljoprivrede putem subvencija i drugih podsticaja, značajna je uloga i kreditiranja poljoprivrede od strane komercijalnih banaka. Država je prepoznala značajnu ulogu poslovnih banaka u kreditiranju poljoprivrede, sa kojima radi na ugovaranju subvencionisanih i beskamatnih kredita za poljoprivrednike.

Subvencionisani krediti Ministarstva poljoprivrede, šumarstva i vodoprivrede namenjeni su poljoprivrednicima u saradnji sa poslovnim bankama koje odobravaju kredite, dok Ministarstvo poljoprivrede subvencioniše kamatu na ove kredite. Državna kreditna podrška je svojevrsni podsticaj za olakšavanje pristupa kreditima poljoprivrednim gazdinstvima (Zelenović et al., 2018).

Banke su dominantno orijentisane na veće proizvođače i poljoprivredna preduzeća, dok su manji poljoprivredni proizvođači istisnuti sa tržišta. Takođe, bankarski krediti se odlikuju visokim kamatnim stopama, visokim zalogom i nedovoljno dugim rokovima (Popović et al., 2018).

Najznačajniji poljoprivredni kreditor u RS je ProCredit banka koja je u 2016. godini odobrila skoro 45% ukupnih poljoprivrednih kredita. Pošto ti krediti čine nešto više od trećine kreditnog portfolija banke, moglo bi se reći da je ova banka specijalizovana za finansiranje poljoprivrednog sektora. Na drugom mestu je Banca Intesa sa skoro četvrtinom ukupne sume odobrenih poljoprivrednih kredita. Međutim, ti krediti čine samo 5% kreditnog portfolija banke. Komercijalna banka je na trećem mestu po učešću u ukupnim poljoprivrednim kreditima, koji čine 13% kreditnog portfolija banke. Samo tri banke imaju udeo poljoprivrednih kredita veći od 10%, što dokazuje da banke nisu voljne da prodru na ovo tržište. Banke poljoprivredne kredite doživljavaju kao rizičnije od kredita drugim industrijskim sektorima (Popović et al., 2018).

Tabela 6: Krediti odobreni poljoprivredi

Banke	**a. Mean Rank, 2010-2022.**
NLB Komercijalna banka	64,92
ProCredit banka	93,85
Banca Intesa	87,00
OTP banka	51,08
Halk Bank	19,85
UniCredit banka	48,38
Raiffeisen banka	38,85
AIK banka	16,08
Chi-Square	***80,748

God.	**a. Mean Rank**
2010.	4,00
2011.	3,63
2012.	4,50
2013.	4,50
2014.	6,00
2015.	5,88
2016.	6,38
2017.	7,00
2018.	7,50
2019.	11,13
2020.	10,00
2021.	10,50
2022.	10,00
Chi-Square	*****43,813**

Izvor: Istraživanje autora, na osnovu finansijskih izveštaja posmatranih banaka, 2010-2022. [2]

Napomena: a. Kruskal Wallis Test;b.Friedman Test; ***p<0.01.

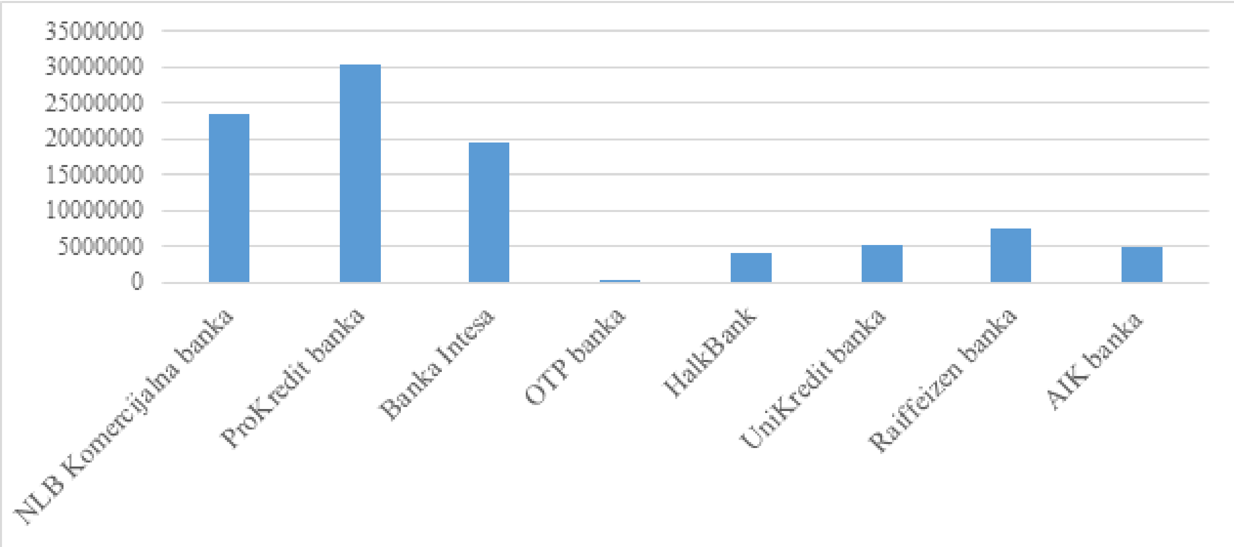
Istraživanje u Tabeli 6 (a. kolona) je sprovedeno uz pomoć Kruskal Wallis testa i bazira se na izračunavanju prosečne vrednosti (Mean Rank) poljoprivrednih kredita, za istrtaživani vremenski period od 2010-2022. godine, za svaku posmatranu banku pojedinačno, u cilju poređenja poljoprivrednih kredita među bankama. Friednman test (b. kolona) je korišćen da bi se izračunale prosečne vrednosti (Mean Rank) svih banaka za svaku godinu pojedinačno, od 2010-2022. godine, u cilju posmatranja trenda odobrenih poljoprivrednih kredita od strane ovih komercijanih banaka. Oba modela su statistički značajna na nivou statističke značajnosti od 1% (p<0.01).

Druga kolona (a. kolona) Tabele 6 prikazuje rezultate Kruskal Wallis testa. Mean Rank, odnosno, prosečne vrednosti odobrenih poljoprivrednih kredita (izraženih u ukupnim apsolutnim iznosima) za ukupni vremenski period od 2010-2022. godine, su prikazane za svaku pojedinačno posmatranu banku. Te vrednosti su bile najveće za ProCredit banku, Banca Intesu i NLB Komercijalnu banku. Rezultati Friedman testa su prikazani u četvrtoj koloni (b. kolona). Oni prikazuju Mean Rank, odnosno prosečne vrednosti poljoprivrednih kredita (izraženih u ukupnim apsolutnim iznosima) za sve posmatrane banke, ali za svaku pojedinačnu godinu od 2010-2022. godine, kako bi se ustanovio trend kretanja odobrenih kredita poljoprivredi od strane posmatranih komercijanih banaka. Od 2010-2015. godine se beleže oscilacije, dok se posle tog perioda beleži konstantan rast komercijalnih kredita odobrenih poljoprivredi, do 2019. godine, sa blagim padom posle toga.

Od posmatranih banaka, u posmatranom periodu od 2010-2022. godine, najviše kredita poljoprivredi odobrava (a. kolona): ProCredit banka, Banca Intesa i NLB Komercijalna banka (Tabela 6). Takođe, iz iste tabele (b. kolona) se uočava značajan rast, naročito izražen od 2019. godine, ukupno odobrenih kredita poljoprivredi, od strane posmatranih banaka.

[2] *U bankama kod kojih nisu iskazani krediti odobreni poljoprivredi je korišćen podatak o kreditnim rizicima u poljoprivredi.*

Grafikon 5: Odobreni krediti u 2022. godini, u hiljadama RSD



Izvor: Finansijski izveštaji posmatranih banaka, 2022. god.

Iz Grafikona 5 se uočava da je i u 2022. godini ista situacija kao i prethodnih godina, tj. najviše kredita poljoprivrednicima je odobrila ProCredit banka, a zatim slede NLB Komercijalna banka i Banca Intesa.

MPŠV je bilo spona između poljoprivrednog i bankarskog sektora, što je doprinelo da poslovne banke razviju portfolio za poljoprivredu. Podsticaj u vidu kreditne podrške poljoprivrednim gazdinstvima omogućava povoljnije kamatne stope za kreditiranje: kupovine životinja, razvoj biljne proizvodnje, kupovine mehanizacije i opreme, kupovine hrane za životinje, kupovine đubriva i sl. (Grujić Vučkovski, 2022).

Izazovi u praksi

Glavni izazovi sa kojima se suočava agrar RS i što finansiranjem ovog sektora treba da bude prevaziđeno jeste stvaranje konkurentnih i održivih poljoprivrednih gazdinstava i preduzeća putem investiranja u prerađivačke kapacitete, kao i proizvodnja finalnog proizvoda sa većom dodatom vrednošću (Dimitrijević et al., 2023a, Dimitrijević et al., 2023b). Finansiranje poljoprivrede treba da se kreće ka razvijanju inovacija, modernizaciji i digitalizaciji (Dimitrijević et al., 2022, Dimitrijević, 2023).

Da bi se stvorili preduslovi za ovako nešto subvencijama treba uticati na zamenu dotrajale poljoprivredne mehanizacije, koja je uglavnom starija od 10 godina i što predstavlja veliko ograničenje agrotehničke opremljenosti RS. Takođe, bitno je i subvencionisanje inputa, s obzirom da se, prema Strategiji poljoprivrede i ruralnog razvoja Republike Srbije za period 2014-2024. godine, RS nalazi na veoma niskom nivou po korišćenju mineralnog đubriva, herbicida, pesticida, navodnjavanju zemljišta i sl. („Sl. glasnik", br. 85/2014). U tom kontekstu značajnu ulogu imaju regresi za đubrivo, gorivo i druge repromaterijale i inpute. Razvijenost stočarske proizvodnje je veoma na niskom nivou, kao i konzervativne poljoprivrede koja je u skladu sa održivim razvojem. Organska poljoprivreda tek počinje da se razvija (Dimitrijević, 2023a). U tom kontektu veliki značaj imaju direktni podsticaji za ugrožene grane poljoprivredne proizvodnje.

Iako mnogi strateški dokumenti ukazuju na veliki značaj poljoprivredne proizvodnje RS još uvek nije stvoreno adekvatno podsticajno okruženje za agrarni razvoj (Aničić & Paraušić, 2020), imajući u vidu neuređeno tržište poljoprivrednih proizvoda i neizvestan plasman, nepovoljnu starosnu i obrazovnu strukturu seoskog stanovništva, nerazvijenu ruralnu infrastrukturu, nedovoljne melioracije, disparitet cena itd (Kuzman et al., 2017). Zato dalji razvoj poljoprivrede treba bazirati na uklanjanju ovih strukturnih problema, itd., na primeni znanja, novih tehnologija i inovacija. Treba obezbediti adekvatnu podršku mladim poljoprivrednicima i diverzifikovati delatnosti u ruralnim sredinama u pravcu razvijanja i nepoljoprivrednih delatnosti (Dimitrijević et al., 2022a).

Sredstva poljoprivrednog budžeta i dalje nisu dovoljna za dinamičniji razvoj poljoprivrede RS (Dimitrijević, 2023a). Intenzivniji razvoj podrazumeva dalje povećanje poljoprivrednog budžeta i veće investicije u programe ruralnog razvoja. Udeo poljoprivrednog budžeta treba uskladiti sa učešćem poljoprivrede u privrednom razvoju (BDP), uz veću podršku biljnoj i stočarskoj proizvodnji i stvaranju izvoznog, kvalitetnog i visoko finalizovanog proizvoda. Subvencije treba da budu usmerene u tom pravcu i povećanju prinosa. Zato je potrebno adekvatno finansiranje i projektovanje poljoprivrednog budžeta, kao i subvencionisanje i podsticaji poljoprivredne proizvodnje, rad savetodavne službe i veće investicije, a sve u cilju održivog razvoja poljoprivrede, a samim tim i privrednog razvoja RS. Najbolji primer za to su privredno razvijene zemlje, naročito EU (Ristić et al., 2022), sa kojom mi uskladjujemo svoju agrarnu politiku (Dimitrijević & Ristić, 2022), što ujedno može da bude i predmet buduhić istraživanja, u smislu komparacije kako agrarne politike, tako i subvencija, sa tim zemljama, odnosno sa zajedničkom agrarnom politikom EU (CAP – Common Agriculture Policy).

Zaključak

Poslednjih godina, tj. od 2019-2023. godine, u odnosu na ranije posmatrane godine, tj. od 2010-2019. godine, uočava se značajno veće izdvajanje i finansiranje poljoprivrede, kako od strane države, tako i od strane komercijalnih banaka. Takođe, agrarni budžet i subvencije su rasle iz godine u godinu, da bi u 2023. godini zabeležile rekordne istorijske iznose.

To se u značajnoj meri odrazilo i na porast poljoprivredne proizvodnje i BDV (Tabela 2), koja takođe od 2019. godine beleži veće vrednosti u odnosu na ranije posmatrane godine od 2010-2019. godine, a što se odrazilo i na značajniji rast BDP-a u tom periodu (Grafikon 3), čime se potvrđuje postavljena hipoteza da se većim izdvajanjem sredstava za poljoprivredu u značajnoj meri može uticati na BDV poljoprivrede, a samim tim i na privredni razvoj RS.

Država treba da razvija nove oblike finansiranja poljoprivrede, poput vertikalnog i horizontalnog udruživanja duž čitavog agrobiznis lanca vrednosti i uvođenja hartija od vrednosti i finansijskih derivata kako bi se dodatno poboljšalo finansiranje poljoprivrede i finansijsko tržište, a sve u cilju izvozno orjentisane proizvodnje, prerade i stvaranja proizvoda sa većom dodatom vrednošću.

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TRENDS IN THE FINANCING OF AGRICULTURE IN THE REPUBLIC OF SERBIA

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Summary:In recent years, there has been an increase in the agrarian budget and subsidies in agriculture, as well as lending to farmers by commercial banks. The goal of the work is to shed light on trends that indicate importance of financing agriculture for the economic development of the Republic of Serbia. The Kruskal-Wallis test was used to compare subsidies in agriculture in relation to other economic activities, as well as to compare agricultural lending between commercial banks, while the Friedman test was used to examine the lending of observed banks. The results showed that subsidies in agriculture are higher compared to other economic activities, and that they are growing, as well as the entire agricultural budget, especially in recent years, when they reach record amounts. The same case was recorded in lending to farmers by commercial banks. The increase in agricultural financing and lending was accompanied by an increase in agricultural production and GVA of agriculture. It is concluded that adequate financing of agriculture has a positive impact on both agriculture and the overall economic development of the Republic of Serbia.

Keywords: agriculture, agricultural budget, subsidies, lending, commercial banks, economic development, Republic of Serbia.

JEL classification: Q14, G21, H81, O13

Introduction

Bearing in mind the importance of agriculture for the economic development of the Republic of Serbia (RS), the Government places increasing emphasis on the agricultural budget and financing of this sector. One of the main reasons for the inadequate development of the agricultural sector was precisely the inadequate system of financing and crediting agricultural production.

RS has a significant agricultural sector, the potential of which is based mainly on high-quality arable land, a favorable continental climate, and an abundance of labor. In order to reach its full potential, Serbian agriculture needs to overcome the overall low level of productivity. Although a small number of larger producers are able to compete and participate in global markets by investing in technology, thus reaching a high level of productivity, most of the activities of agricultural producers are characterized by old technology and undercapitalized production with low added value. That is why investment, adequate financing and investment along the entire agribusiness value chain are important for further agricultural development and improvement of productivity (Atanasijević & Danon, 2014).

Due to the specificity of production, slower turnover of capital, low profitability, and lack of own sources of financing, agriculture needs financial and credit support, which should be implemented with the support of the Government. The need for a dominant role of the state is also caused by the underdevelopment of financial markets and institutions. The financial support of the state should be manifested in a larger allocation from the state budget for the agricultural budget, but also through directing the use of other financial instruments, such as EU pre-accession funds (IPARD), securities, financial derivatives, etc. (Radović, 2015).

Access to finance for farmers and the entire agribusiness has been poor for years due to numerous constraints that are interconnected and influenced by various legal, economic and institutional factors. All these limitations can be summarized in the broadest sense as follows: inconsistent agricultural policy; ineffective subsidy programs; disincentivizing regulation or lack of regulation; several alternative sources of financing; lenders' knowledge and risk perception in agribusiness; knowledge and access to information; not taking advantage of the value chain concept; high risk sector etc. That is why various recommendations are made (Jolović et al., 2014):

- Government: improvement of formulation, timeliness of implementation of agricultural policy measures of RS; improvement of the legal framework for lending to agribusiness; and improvement of Government support mechanisms and institutional framework;

- Agribusiness sector: strengthen the capacity of farmers and agribusiness to access formal finance, strengthen the capacity of business associations and clusters to improve access to finance for their members, strengthen the capacity of business associations and clusters to advocate for reforms to improve access to finance for agribusiness, building the capacity of value chains, develop a portal for agribusiness financing;

- Financial sector: develop agricultural insurance, develop specialized credit skills and policies, increase value chain financing, etc.

The subject of the work is an overview of the state of agriculture and the agrarian budget of the RS, as part of the agrarian policy, while the goal of the work is to show trends that indicate the importance of public (Government) financing and private (commercial) crediting for the strengthening of this sector and the economic development of the country. In accordance with the subject and aim of the research, the following hypothesis was defined:

H1: A larger agricultural budget and crediting of agriculture leads to greater economic development of the RS.

The State and Specifics of Agriculture in the Republic of Serbia

Agriculture is a very important sector of the Serbian economy, considering its high participation in the GDP and total employment. Agricultural production is characterized by a wealth of natural resources and favorable climatic conditions, while on the other hand, one of the biggest problems is the large fragmentation of plots, where the total structure is dominated by farms up to 5ha (Stojanović, 2022).

Table 1: Agriculture of RS vs. EU

Year	Agriculture, forestry and fishing, added value, % GDP		Employment in agriculture, % of total employment		Agriculture, forestry and fishing, value added per worker, US$	
	RS	EU	RS	EU	RS	EU
2010	6.60	1.65	22.34	5.80	4559.66	18929.83
2011	7.45	1.72	21.22	5.59	5106.88	20251.12
2012	6.43	1.70	20.96	5.57	4320.96	19426.30
2013	7.41	1.74	21.29	5.42	4956.84	20690.29
2014	7.07	1.71	19.86	5.28	5201.78	22181.60
2015	6.71	1.64	19.41	5.06	5378.93	22725.84
2016	6.81	1.59	18.61	4.79	5683.09	23318.84
2017	6.01	1.70	17.22	4.67	5285.17	24006.40
2018	6.34	1.62	15.93	4.50	6474.28	24500.88
2019	5.95	1.59	15.61	4.35	6334.18	25475.68
2020	6.34	1.64	14.56	4.34	/	/
2021	6.29	1.63	13.92	4.13	/	/
2022	6.75	1.73			/	/

Source: World Bank, 2023.

Table 1 shows the high participation of agriculture in the GDP and employment, which is at a much higher level compared to the EU. On the other hand, the productivity of RS agriculture is at a very low level. If we look at the added value per worker in agriculture, as a measure of labor productivity, we can see a constant and high lag behind the EU, which is why an adequate policy of financing and investing in agriculture is important, all with the aim of technical and technological progress, innovation, and the acquisition of new knowledge, and increasing the productivity of Serbian agriculture. This could also affect the decline in the share of agriculture in the GDP and employment, bearing in mind that the high share of agriculture in these indicators has a negative impact on economic development. On the other hand, the agricultural production of RS, as well as exports, record a high value, especially in relation to neighboring countries, which has a positive effect on the country's economic development (Dimitrijević et al., 2023).

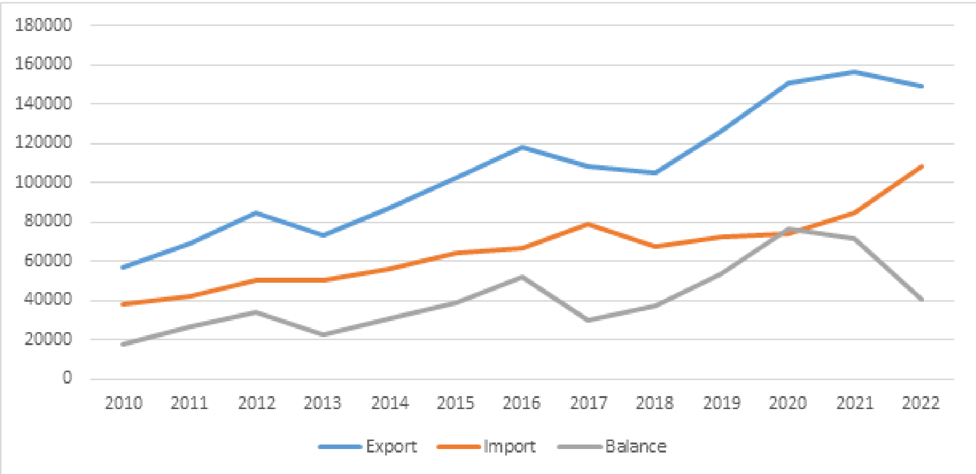
Table 2: The Value of the Agricultural Production of the RS, in Current Prices, in Mill. RSD

Label	2012.	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Production value	542919	621215	635984	584834	643685	590706	640861	653183	700488	785422	918689
GVA	229404	265665	265818	240778	271831	254597	274792	275642	300569	347739	404654

Source: SORS, Economic Accounts of Agriculture, 2022.

Table 2 shows the growth in the value of agricultural production and GVA, especially in recent years, which has a positive effect on the overall foreign trade and economic development of the RS.

Figure 1: Foreign Trade of Agriculture, Forestry, and Fisheries of the RS, in Mill. RSD



Source: SORS, Statistical Yearbook of the RS, 2010-2023.

The export of agricultural products is constantly higher than the import, so the agricultural sector constantly records a foreign trade surplus (Figure 1). It is also encouraging that exports record year-on-year growth, with a slight decline in 2022, which is also reflected in the total foreign trade of RS agriculture, which has an increasing trend.

Table 3: Exports and Imports of the RS by Sectors and Areas of CA, 2022, in Bill. RSD

	Export	Import	Balance
In total	3242.5	4582.4	-1339.9
Agriculture, forestry, and fishing	149.5	108.5	41
Mining	210.2	518.5	-308.3
Manufacturing industry	2749.2	3242.7	-493.5
Electricity, gas, and steam supply	100.5	185	-84.5

Water supply and wastewater management	23.9	17.6	6,3
Information and communications	8.9	8.9	0
Professional, scientific, innovative, and technical activities	0	0	0
Arts, entertainment, and recreation	0.1	0.1	0
Other service activities	0	0	0
Not classified by CA	0.1	501	-500.9

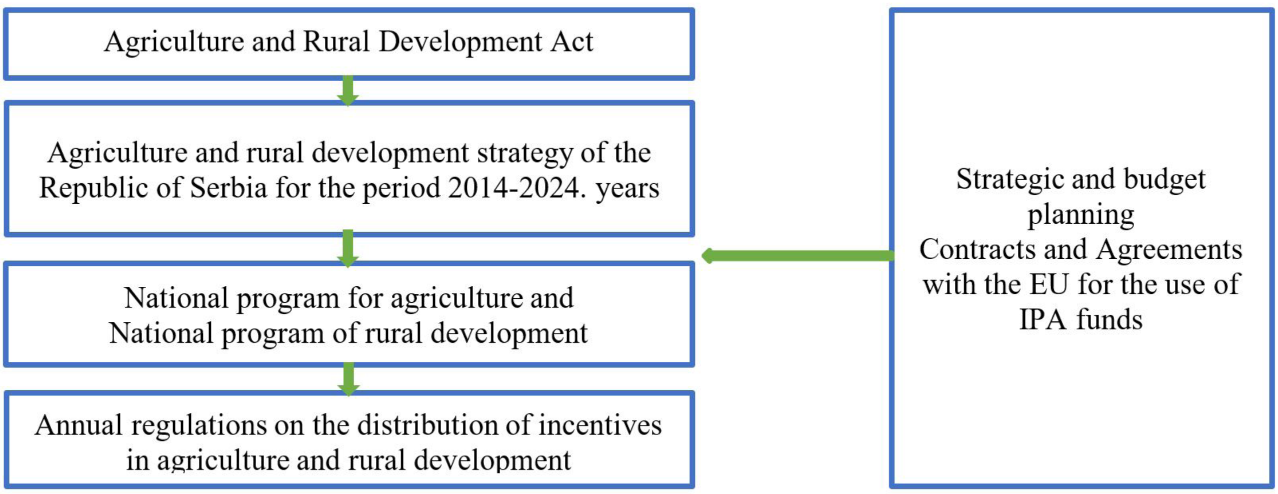
Source: SORS, Foreign Trade in Goods, 2022a.

Table 3 shows exports, imports, and total balance by sector. It is concluded that although agriculture does not achieve the largest export compared to other sectors, it nevertheless achieves the largest surplus, compared to all other sectors of the RS, which once again speaks of its importance for the economic development of the country.

Legal Regulation of Agricultural Development

Agriculture of the RS is regulated by legal regulations, which refer to the functioning of agricultural policy measures and instruments. The most important is the Law on Agriculture and Rural Development, on the basis of which the Strategy for Agriculture and Rural Development of the RS for the period 2014-2024 was adopted, the National Program for Agriculture (NPA) for the period 2018-2020 and 2022-2024, the National Program for Rural Development and the Annual Regulation on the distribution of incentives in agriculture and rural development (Picture 1).

Picture 1: Regulation of agricultural development of RS



Source: Agriculture and Rural Development Strategy of the Republic of Serbia ("Official Gazette of RS", No. 85/2014)

The Law on Agriculture and Rural Development regulates (Law on Agriculture and Rural Development): the goals of agricultural policy and rural development policy, as well as the way to achieve them, the Register of Agricultural Farms, recording and reporting in agriculture, as well as the supervision of the implementation of this law. This law regulates the rules of the special procedure for the implementation and control of the IPARD program. It foresees the agricultural policy and rural development policy of theRS, which includes measures and activities undertaken by competent authorities, with the aim of:

1) Production growth and producer income stability;
2) Increasing competitiveness while adapting to the requirements of the domestic and foreign markets and technical and technological improvement of the agricultural sector;
3) Sustainable resource management and environmental protection;
4) Improving the quality of life in rural areas and reducing poverty;
5) Efficient management of public policies and improvement of the institutional framework for the development of agriculture and rural areas.

Agriculture and rural development strategy of the RS for the period 2014-2024 ("Official Gazette of RS", no. 85/2014), which stems from the Law on Agriculture and Rural Development, aims to define:

1. Directions of future development of agriculture and food industry, based on the concept of sustainable development, which affirms the preservation of the environment and sustainable management of natural resources;

2. A support model that would lead to accelerating the development of the agricultural and food sector, which has significant potential for increasing the volume of production and long-term sustainable growth of competitiveness in an environment wider than local-regional;

3. Directions of future reforms of agricultural policy and institutional framework, in the three most important segments:

1) agricultural policy reform in terms of the introduction of agricultural policy instruments that enable dynamic restructuring of the agricultural sector, effective approach to EU integration through gradual alignment of policy with the principles of the Common Agricultural Policy and the modern role of the state in managing the development of agriculture and rural areas;

2) the adoption and full implementation of the legislative framework that provides a legal basis both for the implementation of the Strategy itself and for the harmonization of national legislation with EU legislation;

3) institutional reforms that, by reforming existing and building missing parts of institutional structures, would enable the achievement of strategic goals, effective implementation of the selected policy and harmonization of administrative structures with EU requirements.

According to this strategy, agriculture in the RS should be a sector whose development will be based on knowledge, modern technologies and innovations. The National Program for Agriculture (NPA) is a further elaboration of the Strategy for Agriculture and Rural Development of the RS for the period 2014-2024. The NPA for the period 2018-2020 ("Official Gazette of the RS", no. 120/17) is an operational program for the implementation of agricultural policy, which contains measures classified as direct payment measures, market regulation measures, as well as special incentives and credit support in agriculture. The NPA also defines: the starting points and general and specific objectives of the agricultural policy, types of measures and the dynamics of their adaptation to the final form of application with anticipated financial amounts and basic rules for implementation, as well as indicators for measuring the achievement of goals with base and target values. According to him, the main source of funding for agricultural policy is the RS budget. The NPA 2022-2024 (Ministry of Agriculture, Forestry and Water Management, 2022) is a continuation of the NPP 2018-2020. Unlike the old NPP, whose measures were primarily aimed at support within the framework of direct payments and market regulation measures, the new NPA, in addition to these activities, also includes organic production and harmonization with the Common Agricultural Policy of the EU for the period 2021-2027.

Methodology and Data

The research was carried out through several units, i.e. allocated funds for the agricultural budget were examined, as well as Government financing of agriculture, in the form of subsidies and other incentives, as well as agricultural lending by commercial banks. Data for the research was collected from: the Budget Law; Realization of subsidies in agriculture, that is, the Ministry of Agriculture, Forestry and Water Management (MAFWM); and financial reports of observed commercial banks. The commercial banks that were selected for observation are those that have signed an agreement on subsidized loans with the MAFWM. Banks that granted interest-free loans to agricultural producers are: NLB Komercijalna bank, ProCredit bank, Sberbank, Banca Intesa, OTP bank, Credit Agricole, Halk Bank, UniCredit bank, Raiffeisen bank, and AIK bank (MAFWM, 2022). Given that Sberbank became part of AIK Bank, and Credit Agricole part of Raiffeisen Bank, the commercial banks selected for research, according to the list of banks (NBS, 2023), are: NLB Komercijalna bank, ProCredit bank, Banca Intesa, OTP bank, Halk Bank, UniCredit Bank, Raiffeisen Bank, and AIK Bank.

The applied research methodology is based on: descriptive analysis and comparative method in order to make a comparison between the allocated subsidies in agriculture and the realized agricultural production, i.e. GVA in agriculture; historical analysis, which was used to examine the chronology of the movement of agricultural subsidies and total allocations for the agricultural budget. The Kruskal-Wallis test was also used in order to compare subsidies in agriculture in relation to subsidies given to other economic activities, as well as to compare agricultural lending between commercial banks. The Friedman test was used to examine the lending of all these banks over a different period of time. The research was conducted, in the period from 2010-2023, in the SPPS program.

Research Results

As part of the research, the agricultural budget was first examined, i.e. allocations for the Ministry of Agriculture, Forestry and Water Management. Then the subsidies in agriculture were observed and compared with other subsidies given. Also, within the framework of Government financing of agriculture, the movement of subsidies from year to year was observed and how this was reflected in the GVA of agriculture. Finally, agricultural lending by commercial banks was also investigated.

Agrarian Budget

The agrarian budget was established by the Decision on the Formation of the Agrarian Budget, which was adopted at the end of 1995, and it has been an integral part of the budget since 1996. It is defined as a form of state support to agriculture, which is implemented through subsidizing agricultural production (Radović, 2015). The agrarian budget is adopted on the proposal of the MAFWM and is an integral part of the Budget Law, which is adopted by the Government of the RS.

The goals of the agricultural budget are (Kuzman et al., 2017): growth of production, productivity, exports, and monitoring of technological innovations in agricultural production; improving the quality of production and increasing the competitiveness of agriculture; growth of living standards and provision of adequate income in agriculture; environmental protection and production sustainability; development of rural areas and stopping depopulation.

Table 4: Agrarian Budget of the RS

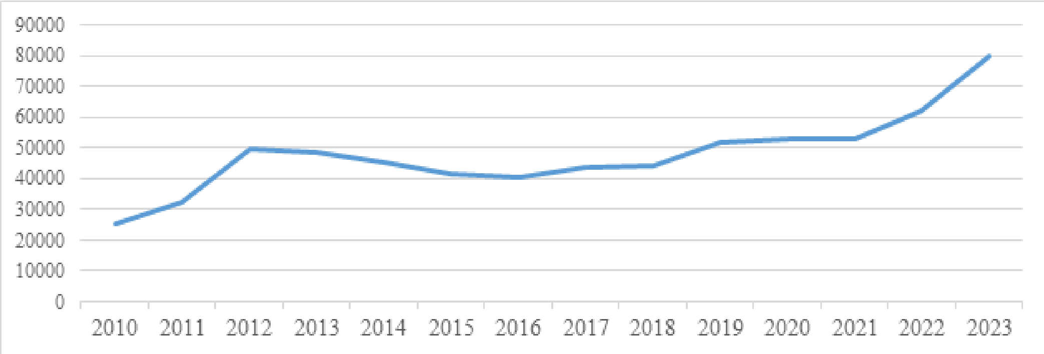
Year	Expenditures for MAFWM	Share of the agricultural budget in the total budget[1]
2010	25621810000	4.20
2011	32593228000	4.81
2012	49485490000	7.30
2013	48434882000	5.79
2014	45394698000	5.66
2015	41433438000	5.42
2016	40465692000	4.88
2017	43787556000	4.78
2018	44109239000	4.46
2019	51776908000	4.89
2020	52713012000	4.66
2021	52824876000	4.58
2022	62074179000	4.71
2023	79704221000	5.00

Source: Budget Law, 2010-2023

It can be seen from Table 4 that although the share of the agricultural budget in the total budget fluctuates (third column), where tax revenues, in accordance with the Budget System Law, were used as the basis, allocations for MAFWM expressed in total absolute amounts (second column) are increasing, especially since 2016, so that in 2023 the largest allocations will be realized.

[1] *When calculating the share of budget allocations for agriculture in the total budget, tax revenues were used as the basis, in accordance with Article 5, paragraph 4 of the Budget System Law.*

Figure 2: Expenditures for MAFWM , in mill. RSD



Source: Budget Law, 2010-2023

Although the share of the agricultural budget in the total budget fluctuates, the allocations for the agriculture sector grow from year to year, so that the largest allocations were realized in 2023 (Figure 2). The MAFWM received a historical amount of funds for agriculture by rebalancing the budget for 2023 (MAFWM, 2023).

One of the measures of agricultural policy are incentives, which include support for programs related to investments in agriculture to improve competitiveness and achieve quality standards, namely programs to support investments in primary crop and livestock production. Incentives in agriculture are aimed at stability in supplying the domestic market with basic foodstuffs, increasing sales and exports, and creating new jobs (Kuzman et al., 2017).

Government Funding of Agriculture

Subsidies in agriculture are the most significant state source of agricultural financing, which reflects the very important role of the Government in financing agriculture. The role of the Government in subsidized financing is extremely important, because commercial banks have a primary interest in profit when it comes to credit placements. Individual farmers usually mortgage their land when taking out loans, which makes them very attractive to banks. The influence of Government is essential and necessary, and the financial resources available to Government should be in the function of the development of agricultural production, and the policy of their spending should be in the context of the national interest (Zelenović et al., 2018).

Table 5: Subsidies in RS Agriculture

Subsides	**a. Mean Rank, 2010-2023**	**b.% of total subsides, 2023**	**c. Share of agricultural subsidies in total subsidies, by years**
Subsidies in the field of science and education	27.50	1.72	2010 2.04%
Subsidies in the field of energy	66.50	17.92	2011 36.29 %
Subsidies in the field of environmental protection	32.00	2.26	2012 31.99 %
Subsidies for air transport	12.00	0.31	2013 44.77 %

Subsidies in the economy	62.82	13.11	2014 43.18 %
Subsidies in agriculture	94.71	35.62	2015 34.84 %
Subsidies for railway traffic	69.29	13.01	2016 32.51 %
Subsidies for road traffic	53.00	10.22	2017 37.44 %
Subsidies in the field of tourism	13.36	0.54	2018 38.41 %
Subsidies in the field of culture	21.27	0.93	2019 41.46 %
Other subsidies	57.50	4.36	2020 42.79 %
Chi-Square	***79.097	/	2021 34.89 %
			2022 35.25 %
			2023 35.62 %

Source: Author's research, based on the Budget Law, 2010-2023.
Note: a. Kruskal Wallis Test; ***p<0.01.

The research in Table 5 (a. column) was conducted with the help of the Kruskal Wallis Test and is based on the calculation of the average value (Mean Rank) for the researched time period from 2010-2023, for each given subsidy individually. The model is statistically significant at the level of statistical significance of 1% (p<0.01). The second column (b. column) refers exclusively to 2023 and represents the participation of each of these subsidies in the total subsidies, while the third column (c. column) refers only to agriculture and represents the participation of agricultural subsidies in the total subsidies, for the period from 2010-2023.

The results of the Kruskal Wallis test are shown in the second column (a. column) of Table 5. Mean Rank, that is, the average value of subsidies (expressed in total absolute amounts) for the period 2010-2023, was calculated separately for each type of subsidy. This value is the highest for subsidies in agriculture, which means that in the observed period, agriculture was the most subsidized, compared to all other economic activities. Also, if these subsidies, expressed as share in total subsidies, are compared to each other only for the year 2023 (third, b. column), the results are the same, i.e. and in this year, the largest subsidies were given to agriculture. The fourth (c. column) shows only the share of agriculture subsidies in total subsidies for the period 2010-2023. According to that indicator, there are deviations from 31.99%, as the lowest recorded value in 2012, to 44.77%, as the highest recorded value in 2013.

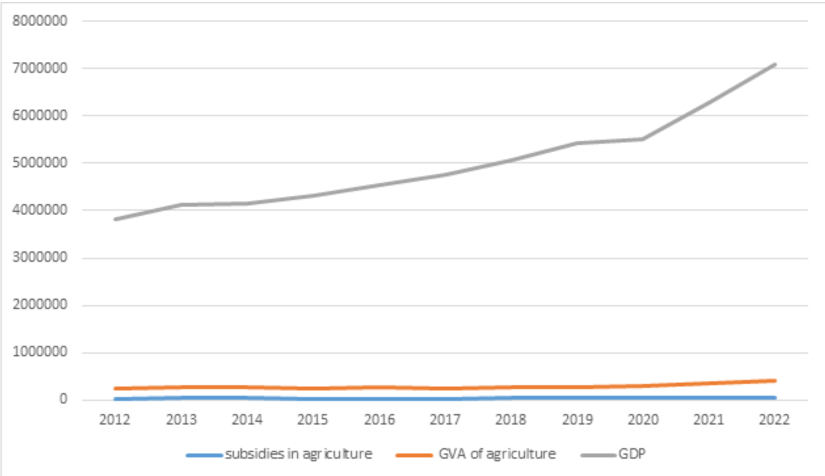
From Table 5, it can be seen that subsidies in agriculture are the largest in relation to all other subsidies, regardless of whether the entire observation period is observed, from 2010-2023 (a. column), or only in 2023 (b. column). These subsidies were higher every year compared to other subsidies. When observing the participation of subsidies in agriculture in total subsidies, oscillations are recorded from year to year (c. column).

It is a stable practice that developed countries help their agriculture with subsidies, premiums, tax breaks, affordable loans, but also provide cheap inputs. With the help of subsidies, developed countries provide enough food for their own needs, but also for export. The purpose of incentives in agricultural production is to create conditions for increasing its volume, increasing employment and the number of self-sustaining agricultural households, ensuring stable agricultural income and a better standard of living for farmers. Incentives should encourage sustainability and profitability of market-oriented farmers and improve technical-technological and organizational aspects (Kuzman et al., 2017).

As far as the RS is concerned, the structural problems in agriculture need to be solved as soon as possible so that the given subsidies can be used in the best way, according to the given purpose, and lead to the previously mentioned goals. The RS faces a very poor age and educational structure of the agricultural population, fragmented land, inadequate and low processing capacities and technological equipment, which all lead to a low standard of living of the entire rural population, but also to the unsustainability of such agricultural households.

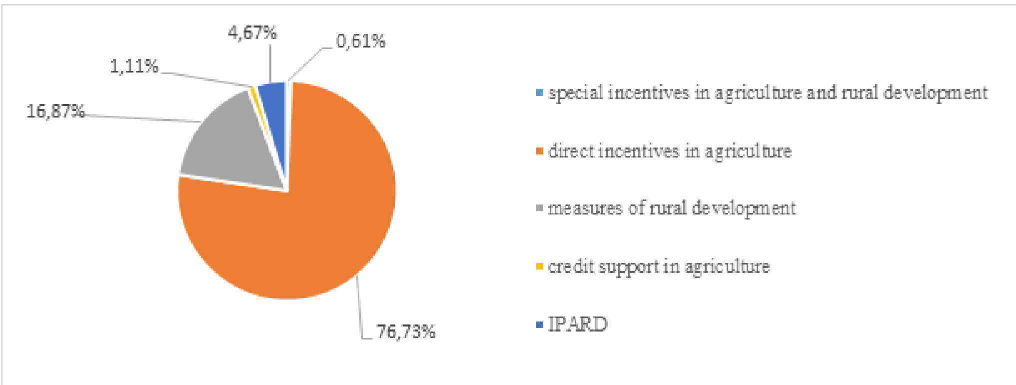
In order for the given subsidies to be self-sustaining, the RS harmonizes its agricultural policy with the Common Agricultural Policy of the EU and incorporates EU-compatible goals into its development documents, thus striving to ensure a long-term perspective for Serbian farmers. Through the use of IPARD funds, the development of processing capacities, equipment, diversification and further development of agricultural holdings should be encouraged. However, a big problem can be caused by the abolition of certain incentives, both in the EU and in the RS, which is why special attention should be paid to the design of subsidies and agricultural policy.

Figure 3: Subsidies & GVA in agriculture vs. GDP, by years, in mill. RSD



An increase in subsidies, in absolute terms, is observed from year to year. The increase in subsidies is accompanied by the increase in GVA of agriculture (Figure 3). This means that higher allocations for agriculture also affect the increase in agricultural production and total GVA.

Figure 4: Types of Incentives in Agriculture and Rural Development of the RS, 2021.



Source: MAFW, Realization of the budget, 2021.

Most incentives are allocated for direct incentives in agriculture, then for rural development measures, IPARD, credit support and finally for special incentives (Figure 4). Direct payments include: premiums, incentives for production, basic incentives for crop production, incentives in animal husbandry, rebates, rebates for fertilizer, etc., rebates for storage costs in public warehouses; incentives for rural development measures include: incentives for improving competitiveness, incentives for preserving and improving the environment and natural resources, incentives for diversifying income and improving the quality of life in rural areas, incentives for the preparation and implementation of local rural development strategies, incentives for improving system of creation and transfer of knowledge; special incentives include: incentives for the implementation of breeding programs, in order to achieve breeding goals in animal husbandry - selection measures, incentives for promotional activities in agriculture and rural development (measures and actions in agriculture), incentives for the production of planting material, certification and clonal selection; IPARD includes: measures 1, 3 and 7; and the credit support includes: subsidizing part of the interest rate and insurance premiums (MAFWM, 2020).

Lending to agriculture by commercial banks

In this part, we will look at commercial banks that granted interest-free loans to agricultural producers, that is, that have a signed contract on subsidized loans with MAFWM. Agricultural loans approved by these banks in the period 2010-2022 years will be observed. The total agricultural loans mentioned in the further analysis refer to the total approved loans to agriculture by all banks, while the bank's loan portfolio refers to all types of approved loans by the given bank.

In addition to the important role of Government in financing agriculture through subsidies and other incentives, the role of lending to agriculture by commercial banks is also important. Government has recognized the significant role of commercial banks in lending to agriculture, with whom it works to contract subsidized and interest-free loans for farmers.

Subsidized loans of the Ministry of Agriculture, Forestry and Water Management are intended for farmers in cooperation with commercial banks that grant loans, while the MAFWM subsidizes the interest on these loans. Government credit support is a kind of incentive for facilitating access to loans for agricultural farms (Zelenović et al., 2018).

Banks are dominantly oriented towards larger producers and agricultural enterprises, while smaller agricultural producers are squeezed out of the market. Also, bank loans are characterized by high interest rates, high collateral and insufficiently long terms (Popović et al., 2018).

The most important agricultural creditor in RS is ProCredit Bank, which approved almost 45% of total agricultural loans in 2016. Since these loans make up a little more than a third of the bank's loan portfolio, it could be said that this bank specializes in financing the agricultural sector. Bank Intesa is in second place with almost a quarter of the total amount of approved agricultural loans. However, these loans make up only 5% of the bank's loan portfolio. Komercijalna bank is in third place in terms of participation in total agricultural loans, which make up 13% of the bank's loan portfolio. Only three banks have a share of agricultural loans greater than 10%, which proves that banks are not willing to penetrate this market. Banks perceive agricultural loans as riskier than loans to other industrial sectors (Popović et al., 2018).

Table 6: Loans approved for agriculture

Bank	**a.Mean Rank, 2010-2022.**
NLB Komercijalna banka	64.92
ProCredit banka	93.85
Banca Intesa	87.00
OTP banka	51.08
Halk Bank	19.85
UniCredit banka	48.38
Raiffeisen banka	38.85
AIK banka	16.08
Chi-Square	***80.748

Year	**a.Mean Rank**
2010	4.00
2011	3.63
2012	4.50
2013	4.50
2014	6.00
2015	5.88
2016	6.38
2017	7.00
2018	7.50
2019	11.13
2020	10.00
2021	10.50
2022	10.00
Chi-Square	*****43.813**

Source: Author's research, based od financial reports of observed banks, 2010-2022.[2]

Note: a. Kruskal Wallis Test; b. Friednman Test; ***p<0.01.

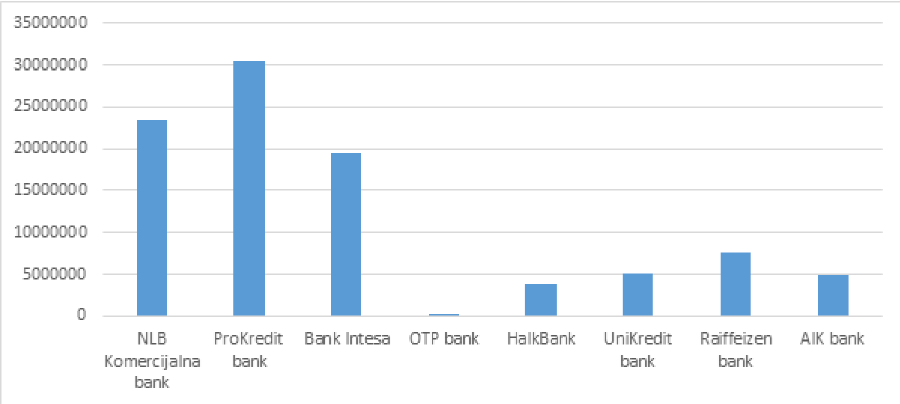
The research in Table 6 (a. column) was conducted with the help of the Kruskal Wallis Test and is based on the calculation of the average value (Mean Rank) of agricultural loans, for the researched period from 2010-2022, for each observed bank individually, in order to compare agricultural loans between banks. The Friednman Test (b. column) was used to calculate the average values (Mean Rank) of all banks for each year individually, from 2010-2022, in order to observe the trend of approved agricultural loans by these commercial banks. Both models are statistically significant at the level of statistical significance of 1% (p<0.01).

The second column (a. column) of Table 6 shows the results of the Kruskal Wallis test. Mean Rank, that is, the average value of approved agricultural loans (expressed in total absolute amounts) for the period 2010-2022, are shown for each individually observed bank. Those values were the highest for ProCredit banka, Banca Intesa and NLB Komercijalna banka. The results of the Friedman test are shown in the fourth column (b. column). They show the Mean Rank, that is, the average value of agricultural loans (expressed in total absolute amounts) for all observed banks, but for each individual year for the period 2010-2022, in order to establish the trend of approved loans to agriculture by the observed commercial banks. From 2010-2015 oscillations are recorded, while after that period there is a constant growth of commercial loans granted to agriculture, until 2019, with a slight decline after that.

Of the observed banks (Table 6), in the observed period from 2010-2022, ProCredit bank, Banca Intesa and NLB Komercijalna bank grant the most loans to agriculture (a. column). Also, from the same table (b. column), a significant growth, particularly expressed since 2019, of total approved loans to agriculture by the observed banks can be observed.

[2] *Data on credit risks in agriculture was used in banks where loans approved for agriculture were not reported.*

Figure 5: Approved loans in 2022, in thousand RSD



Source: Financial reports of the observed banks, 2022.

From Figure 5, it can be seen that in 2022 the situation is the same as in previous years, i.e. ProCredit bank granted the most loans to farmers, followed by NLB Komercijalna bank and Banca Intesa.

The MAFWM was a link between the agricultural and banking sectors, which contributed to commercial banks developing a portfolio for agriculture. Incentives in the form of credit support to agricultural farms enable more favorable interest rates for lending: animal purchases, plant production development, machinery and equipment purchases, animal feed purchases, fertilizer purchases, etc. (Grujić Vučkovski, 2022).

Challenges in Practice

The main challenges faced by the agriculture of RS and which should be overcome by financing this sector is the creation of competitive and sustainable agricultural farms and enterprises through investment in processing capacities, as well as the production of final products with greater value added (Dimitrijević et al., 2023a, Dimitrijević et al., 2023b). Financing of agriculture should move towards the development of innovations, modernization and digitization (Dimitrijević et al., 2022, Dimitrijević, 2023).

In order to create the preconditions for something like this, subsidies should influence the replacement of out-out agricultural machinery, which is mostly older than 10 years and which represents a major limitation of the agro-technical equipment of RS. Subsidizing inputs is also important, given that, according to the Agriculture and rural development strategy of the Republic of Serbia for the period 2014-2024, RS is at a very low level in terms of the use of mineral fertilizers, herbicides, pesticides, soil irrigation, etc. („Official Gazette“, No. 85/2014). In this context, regressions for fertilizer, fuel and other raw materials and inputs play a significant role. The development of livestock production is at a very low level, as well as of conservative agriculture, which is in line with sustainable development. Organic agriculture is just beginning to develop (Dimitrijević, 2023a). In this context, direct incentives for vulnerable branches of agricultural production are of great importance.

Although many strategic documents indicate the great importance of agricultural production in RS, an adequate stimulating environment for agricultural development has not yet been created (Aničić & Paraušić, 2020), bearing in mind the unregulated market of agricultural products and uncertain placement, unfavorable age and educational structure of the rural population, underdeveloped rural infrastructure, insufficient melioration, disparities price etc. (Kuzman et al., 2017).

Therefore, the further development of agriculture should be based on the elimination of these structural problems, on the application of knowledge, new technologies and innovations. Adequate support should be provided to young farmers and activities in rural areas should be diversified in the direction of developing non-agricultural activities as well (Dimitrijević et al., 2022a).

The funds of the agricultural budget are still not sufficient for a more dynamic development of agriculture in RS (Dimitrijević, 2023a). More intensive development implies a further increase in the agricultural budget and greater investments in rural development programs. The share of the agricultural budget should be harmonized with the participation of agriculture in economic development (GDP), with greater support for plant and livestock production and the creation of exportable, high-quality and highly finalized products. Subsidies should be directed in that direction and to increase yields. That is why adequate financing and planning of the agricultural budget is needed, as well as subsidies and incentives for agricultural production, the work of the advisory service and larger investments, all with the aim of sustainable development of agriculture, and thus the economic development of RS. The best example for this are economically developed countries, especially the EU (Ristić et al., 2022), with which we harmonize our agricultural policy (Dimitrijević & Ristić, 2022), which can also be the subject of future research, in terms of comparing both agricultural policy and subsidies with those countries, i.e. with the Common Agricultural Policy EU (CAP – Common Agriculture Policy).

Conclusion

In recent years, i.e. from 2019-2023 years, compared to the previously observed years, i.e. from 2010-2019. years, there has been a significant increase in the allocation and financing of agriculture, both by the state and by commercial banks. Also, the agricultural budget and subsidies grew from year to year, in order to record record historical amounts in 2023.

This was significantly reflected in the increase in agricultural production and GVA (Table 2), which also recorded higher values from 2019 compared to the previously observed years from 2010-2019 years, and which was reflected in the significant growth of GDP in that period (Graph 3), which confirms the hypothesis that greater allocation of funds for agriculture can significantly affect the GVA of agriculture, and therefore the economic development of the RS.

Government should develop new forms of agricultural financing, such as vertical and horizontal integration along the entire agribusiness value chain and the introduction of securities and financial derivatives in order to further improve agricultural financing and the financial market, all with the aim of export-oriented production, processing and creation of products with higher added value.

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ODGOVORNOST BANKE PLATIOCA U SLUČAJU PREVARE SA AUTORIZOVANIM PLATNIM NALOGOM

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Rezime: Prevara sa autorizovanim platnim nalogom predstavlja veliku opasnost za korisnike platnih usluga jer su iznosi tih transakcija često veći u odnosu na iznose kod neautorizovanih transakcija (zloupotreba platnih instrumenata), dok je povraćaj sredstava teže izvodljiv. Banke platioca za sada su uverene da u skladu sa propisima o platnim uslugama, u tim slučajevima ne mogu biti odgovorne za gubitak. Ipak, opšta pravila srpskog ugovornog prava koja bi se mogla supsidijarno primeniti, nalažu banci da upozori platioca koji je izdao platni nalog ako smatra da bi izvršenje takvog naloga bilo od štete za njega. Preduslov za aktiviranje ove dužnosti banke jeste da spram okolnosti konkretnog slučaja postoji razumno očekivanje da je uobičajeno razborit bankar mogao da posumnja u ispravnost (integritet) platnog naloga. Ako u takvoj situaciji banka nije upozorila platioca, u obzir dolazi primena instituta podeljene odgovornosti za nastanak, odnosno doprinos u nastanku štete iz Zakona o obligacionim odnosima.

Ključne reči: Prevara sa autorizovanim platnim nalogom; Presretnuta imejl komunikacija; Propisi o platnim uslugama; Dužnost pažnje; Odgovornost banke platioca.

JEL klasifikacija: G21, K12, K22, K42

Uvod

Internet i elektronska komunikacija pored ogromnih prednosti sa sobom nose i određene rizike kojih korisnici platnih usluga često nisu svesni ili ih prenebregavaju. Dok je rizik zloupotrebe platnih kartica usled gubitka, krađe kartice ili podataka sa kartice relativno dobro poznat korisnicima platnih usluga, prevara sa autorizovanim platnim nalogom (*Authorised Push Payments Fraud, APP*) nepoznata je širem krugu korisnika, iako njene posledice, u smislu iznosa gubitka, daleko nadilaze kartične zloupotrebe. Ovakav naziv (autorizovan nalog) proističe iz činjenice da platilac kao žrtva prevare sam daje instrukciju banci da prebaci novac na račun koji kontrolišu kriminalci, te je sa aspekta banke takva transakcija autorizovana.

Trenutno, najopasniji oblik *APP* prevare u Srbiji, jeste prevara usled presretnute (poslovne) imejl komunikacije (*Business Email Compromise, BEC*). Šema kod ove prevare se najčešće sastoji u tome što kriminalci pristupe komunikaciji između poslovnih partnera (tako što pristupe imejl nalogu jedne od strana u komunikaciji), a zatim imajući pred sobom sve podatke iz dotadašnje komunikacije, na uverljiv način navode jednog od njih da novac prenese na račun pod njihovom kontrolom.

Pored namere da ukaže stručnoj i široj zainteresovanoj javnosti na ovaj aktuelni izazov, cilj ovog rada je da na osnovu postojećih propisa, domaće i uporedne prakse razmotri pitanje odgovornosti klijenta i banke za gubitak (koji često iznosi nekoliko desetina, pa i stotina hiljada evra) nastao usled prevara sa autorizovanim platnim nalogom. Zbog toga što je transakcija nesumnjivo autorizovana od strane korisnika, banke su, čini se uverene, da na osnovu važećih propisa ne mogu biti odgovorne za gubitak korisnika. Međutim, da li je baš tako? U radu smo pokušali da damo odgovor na to pitanje, analizirajući domaće propise i dajući prikaz prakse Narodne banke Srbije, istovremeno ih dovodeći u vezu sa pojedinim institutima precedentnog prava (*common law*) i praksom u Ujedinjenom Kraljevstvu.

Podaci o prevarama usled presretnute imejl komunikacije

Prema podacima iz ankete Narodne banke Srbije ukupan iznos zloupotreba po platnim karticama u 2021. godini iznosi 93 miliona dinara (od toga 78,6 na internetu, 2,5 na fizičkim prodajnim mestima i 11,9 na bankomatima). Korisnicima je vraćeno 74,2 miliona dinara. U 2022. godini ukupan iznos zloupotreba po platnim karticama iznosi 179,7 miliona dinara (od toga 129,8 na internetu, 41,6 na fizičkim prodajnim mestima i 8,2 na bankomatu). Ukupno je vraćeno korisnicima 141 milion dinara.

Kada je reč o prevarama usled presretnute (poslovne) imejl komunikacije u 2021. godini izvršeno je 105 platnih naloga u ukupnom iznosu od 251,5 miliona dinara, dok je u 2022. godini izvršeno 108 naloga u ukupnom iznosu od 418 miliona dinara (99% od tog ukupnog iznosa odnosi se na plaćanja privrednih društava u međunarodnom platnom prometu). U 2021. godini izvršen je povraćaj za 22 transakcije u ukupnom iznosu od 54,2 miliona dinara, a u 2022. godini 22 transakcije u ukupnom iznosu od 68,8 miliona dinara.

Iz navedenih podatka najpre zaključujemo da je u slučaju zloupotreba platnih kartica (posmatrano za 2022. godinu) prosečan iznos transakcije oko 9.000 dinara, dok je prosečan iznos transakcije kod prevara sa presretnutom imejl komunikacijom oko 3.870.000 dinara. Dodatno, korisnicima kartica vraćeno je 78 - 80% zloupotrebljenih sredstava, dok je u slučaju BEC prevara banka platioca uspela da obezbedi povrat od 16 do 20% sredstava.

Pored ovog poređenja, a budući da su sve BEC transakcije izvršene u međunarodnom platnom prometu, korisno je dati poređenje između broja i vrednosti transakcija u domaćem i međunarodnom platnom prometu (ne uključujući kartične transakcije). Iz izveštaja Narodne banke Srbije (*Opšti pokazatelji RTGS sistema i Kliring sistema u 2022. godini:* https://nbs.rs/sr/ciljevi-i-funkcije/platni-sistem/statistika/) može se izvesti podatak da je prosečan dnevni broj plaćanja po učesniku u sistemu veći od 34.000, dok je prosečna vrednost transakcije u ovom platnom sistemu 473.210 dinara, odnosno oko 4.000 evra. S druge strane, primer jedne od banaka (sa znatnim tržišnim učešćem u međunarodnom platnom prometu) pokazuje da je u 2022. godini, u proseku dnevno izvršeno 1.206 međunarodnih transakcija čija je ukupna vrednost 45,9 miliona evra, a prosečan iznos takve transakcije je 38.000 evra.

Pravni režim u slučaju prevare sa autorizovanim platnim nalogom

Pravila koja uređuju alokaciju gubitaka su važna ne samo zbog njihovih posledica u smislu raspodele tog gubitka, već i zbog podsticaja koje stvaraju. Veća odgovornost strane za gubitak nastao prevarom, znači veći podsticaj za tu stranu da bude pažljivija kako bi izbegla prevaru. (Levitin, 2010). U slučaju prevara u platnom prometu, pitanje alokacije gubitka je regulisano nacionalnim pravilima kojima je implementiran režim odgovornosti za neautorizovane platne transakcije u skladu sa direktivom o platnim uslugama. Kod ostalih finansijskih usluga, ova pitanja se rešavaju u skladu sa opštim pravilima o obligacionim odnosima (Kjørven, 2020).

Ovo je samo donekle tačno (i za članice EU i za Srbiju), budući da je i pitanje odgovornosti u slučaju prevare sa autorizovanim platnim nalogom dotaknuto direktivama o platnim uslugama kroz odredbe koje regulišu situaciju u kojoj je transakcija nepravilno izvršena usled unosa pogrešnog broja računa od strane platioca. S druge strane, iako i kod prevare sa autorizovanim platnim nalogom platilac unosi, autorizuje pogrešan broj računa, pitanje je da li je kroz te odredbe evropski zakonodavac hteo da reguliše samo greške uzrokovane tehničkim ili drugim sličnim propustom platioca, ili je na isti način (na teret platioca) hteo da izvrši alokaciju rizika i u slučaju „greške" uzrokovane prevarom.

Zakon o platnim uslugama

Sa aspekata Zakona o platnim uslugama (Službeni glasnik RS, br. 139/2014, 44/2018, dalje: ZPU) pravni položaj izdavaoca platnog naloga (platioca) koji je posledica prevare, znatno je nepovoljniji u odnosu na vlasnika zloupotrebljene platne kartice. Naime, odgovornost za pravilno izvršenje autorizovanog platnog naloga uređuju odredbe člana 55. st. 1. i 2. ZPU, kojima su transponovane odredbe člana 74 st. 1 i 2 prve Direktive o platnim uslugama (*Directive 2007/64/EC, OJ L 319, 5.12.2007,* dalje: Direktiva 2007/64). Odredbe sa istom sadržinom postoje i u trenutno važećoj, drugoj Direktivi po platnim uslugama (*Directive (EU) 2015/2366, OJ L 337/35, 23.12.2015, dalje:* Direktiva 2015/2366). Te odredbe propisuju da, ako je platni nalog izvršen u skladu *s jedinstvenom identifikacionom oznakom* primaoca plaćanja iz tog naloga, smatra se da je taj nalog pravilno izvršen u delu koji se odnosi na određenje primaoca plaćanja, bez obzira na druge podatke dostavljene pružaocu platnih usluga, a da *u slučaju kada je jedinstvena identifikaciona oznaka koju je korisnik platnih usluga dostavio pružaocu platnih usluga netačna, pružalac platnih usluga nije odgovoran za neizvršenu ili nepravilno izvršenu platnu transakciju.*

U članu 2. stav 1. tač. 19) ZPU definisano je da jedinstvena identifikaciona *oznaka označava kombinaciju slova, brojeva i/ili simbola* koju pružalac platnih usluga utvrđuje korisniku platnih usluga i koja se u platnoj transakciji *upotrebljava za nedvosmislenu identifikaciju tog korisnika i/ili njegovog platnog računa.* U praksi je nedvosmisleno zauzet stav da je jedinstvena identifikaciona oznaka u slučaju domaćeg platnog prometa broj tekućeg računa kod banke, odnosno broj drugog platnog računa kod institucije elektronskog novca ili platne institucije, dok je u slučaju međunarodnog platnog prometa to međunarodni broj bankovnog računa (*International Bank Account Number; IBAN*).

Dakle, ZPU je ovde potpuno jasan i nedvosmislen. Ako banka prenese novac na račun naveden u platnom nalogu, koji je autorizovan od strane platioca (na način kako je određeno u ugovoru o platnim uslugama)[1], ne postoji odgovornost banke kao pružaoca platnih usluga platioca, za neizvršenu ili nepravilno izvršenu platnu transakciju. Drugim rečima, u skladu sa navedenim odredbama ZPU za banke je primalac lice koje je vlasnik računa koji je naveden u platnom nalogu, a ne lice čiji je naziv (ime i prezime), adresa i sl. naveden u tom nalogu. Banka platioca jeste dužna da proveri ispravnost računa navedenog u platnom nalogu u smislu njegove logičke kontrole (svih elemenata koji čine taj broj), ali banka u skladu sa pomenutim odredbama ZPU, nije dužna da „uparuje“ broj računa i primaoca sredstava.

Ipak, od trenutka kada platilac prijavi da se radi o prevari, Banka je u skladu sa članom 55. stav 3. ZPU dužna da preduzme razumne mere radi povraćaja novčanih sredstava, odnosno kada povraćaj više nije moguć da utvrdi tok novčanih sredstava i o tome obavesti korisnika. Važno je pritom primetiti, da je radi ostvarivanja prethodno navedenog cilja (povraćaj, odnosno informacija o toku novčanih sredstava), ovom odredbom predviđena i obaveza banke primaoca sredstava da sarađuje (dostavlja određene podatke, npr. o primaocu sredstava) sa bankom platioca. Međutim, u međunarodnom platnom prometu, gde se trenutno ove vrste prevara najčešće dešavaju, tu saradnju nije moguće uvek obezbediti jer se radi o bankama u inostranstvu. Pribavljanje podatka o primaocu plaćanja koji je izvršio prevaru zavisi isključivo od volje njegove (inostrane) banke da sarađuje sa bankom platioca i njenom korespondentskom bankom. Pored kasne reakcije platioca (koji shvataju da su prevareni tek nakon nekoliko nedelja pa i meseci), nizak procenat povrata sredstava u ovim slučajevima uzrokovan je i pasivnošću banke primaoca sredstava. Zanimljivo je reći, da *SWIFT (Society for Worldwide Interbank Financial Telecommunication)*, za razliku od *SEPA (Single Euro Payments Area)* nema standardizovanu poruku za prevaru, što informacionim sistemima banaka primalaca sredstava ograničava mogućnost da automatski blokiraju sredstva ili generišu upozorenje. Banke platioca, trenutno, u slučaju ovakvih prevara, banke šalju dve standardizovane poruke, MT192 i MTn92 od kojih nijedna nužno ne ukazuje na prevaru. Prva označava zahtev za opoziv prethodne poruke kojom su sredstva transferisana, a druga predstavlja zahtev za povraćaj sredstava, ali uz saglasnost primaoca.

Prethodno navedeno pokazuje da ZPU, kao poseban zakon koji uređuje prava korisnika platnih usluga, propisuje da gubitak u slučaju prevare sa autorizovanim nalogom snosi platilac kao nalogodavac. Za razliku od zloupotreba platnih kartica gde se u skladu sa članom 51. ZPU ceni stepen nepažnje platioca, kod prevare sa autorizovanim platnim nalogom, stepen nepažnje korisnika sa aspekata ZPU nije od značaja. Čak i kada je platilac žrtva veoma vešte, sofisticirane, odnosno složene prevare, kojoj bi podlegao i korisnik koji je postupao sa pažnjom dobrog domaćina, odnosno dobrog privrednika, ZPU je neumoljiv - odgovornost za gubitak nastao usled ovakve prevare na strani je platioca, koji je popunio i izdao, autorizovao platni nalog. Za razliku od kartičnih transakcija (oblik direktnog zaduženja), gde nedostatak u monitoringu tih transakcija na strani banke izdavaoca kartice (član 59. ZPU) može biti poslednji argument korisnika koji otvara mogućnost eventualne podeljene odgovornosti banke i korisnika, izdavaocima klasičnog platnog naloga (transfera odobrenja) ZPU ne daje takvu priliku. ZPU njima garantuje samo obavezu banke da odmah nakon prijave prevare kontaktira banku primaoca sredstava, uglavnom preko korespondentske banke i zahteva povraćaj sredstava, nadajući se da će banka primalac reagovati na vreme.

[1] *Autorizacija naloga se može izvršiti svojeručnim potpisom na papirnom obrascu, kvalifikovanim potpisom u okviru elektronskog dokumenta ili dvofaktorskom autentifikacijom. Pored ZPU, pitanje (dvofaktorske) autentifikacije uređuje i Odluka o minimalnim standardima upravljanja informacionim sistemom finansijske institucije („Službeni glasnik RS“, br. 23/2013, 113/2013, 2/2017, 88/2019 i 37/2021), kojom su implementirani određeni standardi autentifikacije utvrđeni Direktivom 2015/2366 i Delegiranom Uredbom Komisije 2018/389.*

Kada banka primalac i reaguje na vreme i spremna je da izvrši povraćaj sredstava (obično uz dokaz da je izvršena prijava prevare nadležnim organima) ona to često uslovljava pismenom garancijom banke platioca, da će izmiriti obaveze prema primaocu, ako na to bude obavezna *(letter of indemnity)*. S tim u vezi, postavlja se pitanje da li bi banka platilac bila dužna da pošalje takvu izjavu u kontekstu njene obaveze da preduzme sve razumne mere radi povraćaja sredstava. Na osnovu modela izjave u koju smo imali uvid,[2] proizilazi da se tom izjavom banka platioca obavezuje da izvrši povraćaj prethodno vraćenih sredstava, ne samo u slučaju odluke suda ili drugog nadležnog organa u zemlji banke primaoca sredstava, već i u slučaju zahteva primaoca sredstava bez takve odluke. Ipak, s obzirom da se radi o šemi prevare koja je dobro poznata bankama, teško je prihvatiti da bi banka primaoca sredstava koja je otvorila račun licu osumnjičenom za prevaru bila spremna da od banke platioca zahteva povraćaj sredstava, samo na osnovu zahteva tog lica bez procene osnovanosti takvog zahteva, odnosno bez pokretanja određenog postupka protiv banke od strane tog lica. Zbog toga bi se donekle ipak mogao izvesti zaključak, koji u određenim slučajevima zbog specifičnih okolnosti ne bi važio – da je banka platioca dužna, da u okviru razumnih aktivnosti s ciljem povraćaja sredstva (član 55. stav 3. ZPU), dostavi banci primaoca i takvu izjavu.

Supsidijarna primena opštih pravila ugovornog prava

Članom 14. stav 2. ZPU predviđeno je da se na sva pitanja koja nisu uređena tim zakonom primenjuju odredbe Zakona o obligacionim odnosima, (Sl. list SFRJ", br. 29/78, 39/85, 45/89 - odluka USJ i 57/89, „Sl. list SRJ", br. 31/93, Sl. list SCG, br. 1/2003 - Ustavna povelja i Sl. glasnik RS, br. 18/2020, dalje: ZOO)

ZPU uređuje pitanje odgovornosti za nepravilno izvršenje platne transakcije usled pogrešnog broja računa, ali kako je prethodno navedeno, ne može se sa sigurnošću uzeti da je prilikom formulisanja takvog pravila zakonodavac uzeo u obzir prevare sa autorizovanim platnim nalogom. Drugim rečima, moglo bi se postaviti pitanje je da li je član 55. ZPU sedes materiae za pitanje odgovornosti kod nepravilno izvršenih transakcije usled prevare sa autorizovanim nalogom ili u tom delu zapravo postoji pravna praznina, koju treba popuniti supsidijarnom primenom ZOO.

Dalje, jasno je da je primarna obaveza banke kao nalogoprimca da izvršava platne naloge kako glase u skladu sa ugovorenim rokovima. Drugim rečima, njena osnovna dužnost je da se novac sa računa njenog klijenta prenese na račun koji taj klijent naznači u platnom nalogu. S tim u vezi, član 36. ZPU izričito navodi da banka ne može odbiti izvršenje platnog naloga kada su ispunjeni svi uslovi utvrđeni ugovorom o platnim uslugama, osim ako je drugačije utvrđeno nekim propisom. Taj drugi propis bi mogao biti ZOO i to odredbe koje ustanovljavaju standarde u pogledu načina izvršavanja naloga, odnosno kada nalogoprimac može odbiti izvršenje tog naloga. S tim u vezi, članom 1057. stav 1. ZOO (koji uz ZPU reguliše ugovor o bankarskom tekućem računu) propisano je da banka odgovara za izvršenje naloga deponenta prema pravilima ugovora o nalogu. Međutim, (opštim) pravilima ugovora o nalogu nalaze se i odredbe člana 751. stav 1. i 2. ZOO. Prvom je propisana obaveza za nalogoprimca da nalog izvrši prema primljenim uputstvima, sa pažnjom dobrog privrednika, ostajući u njegovim granicama i u svemu pazeći na interese nalogodavca i rukovodeći se njima, dok je drugom precizirano da nalogoprimac ima obavezu da kada smatra da bi izvršenje naloga po dobijenim uputstvima bilo od štete za nalogodavca, skrene na to pažnju nalogodavcu i zatraži nova uputstva. Ova pravila bi se mogla shodno primeniti na banku, i to na način da bi za banku kao „profesionalnog nalogoprimca", morao da važi viši stepen pažnje iz stava 2. člana 18. ZOO – pažnja dobrog stručnjaka.

[2] *„Ovim pismom se saglašavamo da vas obeštetimo i da vas smatramo oslobođenim odgovornosti u vezi sa bilo kojim radnjama, postupcima, potraživanjima i zahtevima koji bi mogli biti usmereni prema vama, te da vam nadoknadimo sve gubitke, troškove i štetu koju možete da pretrpite - zbog toga što ste nam vratili iznos transakcije bez saglasnosti vašeg klijenta."*

Drugim rečima, „pošto je nalogoprimac stručnjak za poslove iz naloga čijeg se izvršenja prihvata, on je dužan da upozori na grešku postupajući sa pažnjom dobrog privrednika i dobrog domaćina. Pri tome se pod pažnjom dobrog privrednika podrazumeva pažnja dobrog stručnjaka" (Trajković, Perović (red), 1995, 1282).

S tim u vezi, razumno je očekivati da uz pažnju dobrog stručnjaka, a s obzirom na svoje znanje i iskustvo u vezi sa platnim prometom, banka u određenim slučajevima može da prepozna potencijalnu BEC prevaru i u skladu sa članom 751. stav 2. upozori svog klijenta.

Zapravo, ne bi trebalo dovoditi u pitanje postojanje uvek prisutne obaveze banke da kada sumnja na prevaru, odbije izvršenje naloga i upozori korisnika, već je ključno pitanje kada je banka dužna, odnosno kada kao profesionalni pružalac platnih usluga može, odnosno kada bi morala, da posumnja u ispravnost primljenih uputstava, čime bi se aktivirala njena obaveza iz člana 751. stav 2. ZOO.[3] U vezi sa ovim pitanjem treba primetiti da je članom 110. Zakona o bankama (Službeni glasnik RS, br. 107/2005, br. 91/2010 i 14/2015, dalje: Zakon o bankama) prepoznat standard opreznog bankarskog poslovanja. Iako je ovo pre svega standard koji se koristi kod kontrole boniteta banke, njegova primena se može ceniti i sa aspekta kontrole zakonitosti poslovanja banke u pružanju platnih usluga. S tim u vezi, može se uzeti da bi postojanje opreza na strani banke bilo opravdano i očekivano ako postoji određeno iskustvo ili saznanje na strani banke koje ukazuje da je kod pružanja određenih usluga takav oprez potreban, s tim da takav oprez ne remeti pružanje tih usluga.

U okolnostima kada postoji porast različitih oblika prevara sa autorizovanim platnim nalogom, može se uzeti da banke kao pružaoci platnih usluga imaju i saznanje i određeno iskustvo koje bi trebalo da ih navede da postupaju sa povećanim stepenom opreza kod izvršavanja, pre svega međunarodnih platnih transakcija. Uz to, a kako je prethodno prikazano, broj platnih naloga u međunarodnom platnom prometu nije tako veliki, dok je istovremeno pojedinačna vrednost tih naloga značajna i pritom postoji nizak stepen povraćaja sredstva u slučaju prevare. Sve to navodi na zaključak da pojačani oprez banke (koji vodi dodatnom administriranju), ne bi bio nesrazmeran potencijalnoj šteti koja se može izbeći i ne bi ugrozio pružanje ove vrste platnih usluga.

S tim u vezi i primera radi, „prema Američkom Jedinstvenom trgovačkom zakoniku *(Uniform Commercial Code)* generalno posmatrano, banka nije odgovorna za gubitak ako je primenila 'komercijalno razumne' *(commercially reasonable)* sigurnosne procedure" (Tang, 2015). Da bi odlučili šta je „ekonomski razumno" Američki trgovački zakonik upućuje sudove „da razmotre želje korisnika koje su iskazane prema banci, okolnosti u vezi sa korisnikom koje su poznate banci, uključujući vrednost, vrstu i učestalost platnih naloga koje korisnik redovno izdaje banci...i generalno sigurnosne procedure koje primenjuju korisnik i banke primalaca koje su u sličnoj poziciji" (Tang, 2015).

Ako se pogledaju slučajevi prevara usled presretnute imejl komunikacije u vezi sa kojima je pred Narodnom bankom Srbije vođen postupak po pritužbi, može se zaključiti da je prvi indikator ove prevare – podatak da sedište (fabrika, poslovnica i sl.) primaoca sredstava i sedište ili filijala banke u kojoj se nalazi račun iz naloga za plaćanje, nisu u istoj državi. Od ukupno 24 pritužbe u vezi sa *BEC* prevarama koje je Narodna banka Srbije rešila, u 18 slučajeva se razlikovala država sedišta, pravog primaoca sredstava i banke lažnog primaoca sredstava. Drugi, jednako važan pokazatelj jeste promena računa i banke prema kojoj se vrši plaćanje, u odnosu na račun (banku) na koji je klijent ranije vršio prenos istom primaocu sredstava. Ako su ova dva pokazatelja udružena, postoji veoma visok stepen verovatnoće da se radi o prevari. Pored navedenog, neobičajeno visok iznos i/ili učestalost transakcija, kao i država banke primaoca mogu da predstavljaju dodatne pokazatelje.

[3] *Uporedno posmatrano, kao pandan ovom standardu iz ZOO u Ujedinjenom Kraljevstvu se primenjuje institut duty of care, odnosno u slučaju banaka quincecare duty. Više o tome u nastavku rada.*

Uz to, budući da banka ima saznanje o svakoj izvršenoj prevari prema njenim klijentima, pojavljivanje banke prema kojoj su prethodno vršena *BEC* plaćanja moralo bi uvek da bude dodatno provereno. Pritom, član 75. stav 2. ZPU daje mogućnost bankama da razmenjuju ove podatke, tako da mogu imati određenu sivu listu banaka prema kojima su vršena takva plaćanja.

Dakle, primena standarda opreznog bankarskog poslovanja kod izvršavanja (međunarodnih) platnih naloga u postojećim okolnostima bi između ostalog značila da banka treba da prikupi i objedini istorijske podatke i tako definiše indikatore prevara, te da te indikatore koristi prilikom kontrole platnog naloga. Ako se takvi indikatori pojave, Banka ima dužnost da prepozna da instrukcije mogu biti štetne po platioca, čime se aktivira njena obaveza iz člana 751. stav 2. ZOO da upozori nalogodavca. Ovde je važno primetiti da banke imaju različit stepen automatizacije u izvršavanju platnih naloga, različit broj i strukturu korisnika (stanovništvo/privredna društva) i platnih naloga, različit odnos broja domaćih i međunarodnih platnih transakcija, i uopšte različit obim i strukturu platnog prometa. Sve to treba uzeti u obzir kada se ceni ispunjenost standarda opreznog bankarskog poslovanja, te taj standard treba ceniti u odnosu na konkretnu banku.[4]

U svakom slučaju, u okolnostima kada se broj i vrednost *BEC* transakcija i drugih oblika prevara sa autorizovanim nalogom povećava, i kada je to banci poznato, banka se teško može sakriti iza isključive primene člana 55. stav 2. ZPU. Zapravo, i sama ta odredba navodi da Banka nije dužna da proverava ispravnost broja računa u platnom nalogu, što ne znači da nije dužna da upozori korisnika, ako ima određene sumnje u pogledu tog računa ili nekog drugog elementa iz platnog naloga.

Na osnovu prethodno navedenih razmatranja, moglo bi se zaključiti da u situaciji u kojoj je banci poznato postojanje ovih vrsta prevara, kao i pokazatelja koji mogu da signaliziraju prevaru, nije moguće ceniti odgovornost banke isključivo sa aspekata ZPU, već je neophodno primeniti standard dužne pažnje „profesionalnog nalogoprimca“, a to je u smislu ZOO pažnja dobrog stručnjaka. To ne znači (osim u nekim izuzetnim slučajevima), da propust banke platioca da uoči prevaru i upozori korisnika može voditi zaključku da ona odgovara za celokupan iznos gubitka nastao prevarom, već bi se moralo uzeti da je banka platioca usled tog propusta doprinela nastanku, odnosno uvećanju štete. Drugim rečima, jasno je ko je prouzrokovač štete, ali svi ostali učesnici u platnoj transakciji: platilac, primalac plaćanja i njihove banke, mogu imati određeni (nekada ključni) doprinos u nastanku štete. Zato bi u konkretnom slučaju u kojem se utvrdi da je postojao propust banke platioca u pogledu njene obaveze iz člana 751. stav 2. ZOO, mogao da se primeni (uz neophodno prilagođavanje) institut podeljene odgovornosti iz člana 192. tog zakona.

Praksa NBS

Prema našim saznanjima, za sada nema domaće sudske prakse u vezi sa prevarama sa autorizovanim platnim nalogom, ali postoji praksa Narodne banke Srbije u postupcima po pritužbama korisnika platnih usluga (uglavnom pravnih lica). Narodna banka Srbije je u periodu od 2021., a zaključno sa decembrom 2023. godine rešila 24 pritužbe korisnika (uglavnom privrednih društava) u vezi sa nepravilnim izvršenjem platnih transakcija usled *BEC* prevara. U tim postupcima Narodna banka Srbije je ovlašćena da utvrđuje da li je banka postupala u skladu sa propisima kojima su uređene platne usluge. S tim u vezi, Narodna banka Srbije je u svojim nalazima pre svega cenila postupanje banke sa aspekata prethodno pomenutih odredbi ZPU, našavši da u smislu tih odredaba, ne postoji odgovornost banke za nepravilno izvršenu platnu transakciju. Ipak, Narodna banka Srbije je tim nalazima davala i mišljenje o postupanju banke sa aspekata člana 751. ZOO. S tim u vezi, slučajevi koji su razmatrani mogu se podeliti u nekoliko kategorija.

4 *Detaljnije o tome u slučaju Sjedinjenih Država, vid. Tang, 2015.*

Prvu čine oni slučajevi gde je banka, supsidijarnu obavezu iz člana 751. st. 1. i 2. ZOO u potpunosti ispunila, jer je nakon prijema platnog naloga sa spornim instrukcijama (u smislu sumnje na prevaru), upozorila korisnika i zahtevala da te instrukcije proveri, ali su i pored upozorenja korisnici takve instrukcije potvrđivali. U tim slučajevima, Narodna banka Srbije je jasno stavljala do znanja da se ne može postaviti pitanje odgovornosti banke za doprinos u nastanku štete ni sa aspekata pomenutih odredbi ZOO. Drugu kategoriju, čine slučajevi gde banka nije reagovala na određene indikatore, s tim da se radilo o pojedinačnim, a ne udruženim pokazateljima (npr. korisnik prvi put plaća određenom primaocu, te nema indikatora promene broja računa). U toj situaciji je Narodna banka Srbije iznosila mišljenje da i ako bi se moglo postaviti pitanje podeljene odgovornosti banke za doprinos u nastanku štete, taj doprinos bi bio mali. U treću kategoriju dolaze slučajevi gde su indikatori BEC prevara bili udruženi, a banka nije reagovala i upozorila korisnika. U takvim slučajevima Narodna banka Srbije je iznosila stav da u obzir dolazi primena instituta podeljene odgovornosti za štetu, sa potencijalno značajnijim stepenom odgovornosti banke za doprinos u nastanku štete. U svim slučajevima gde je NBS iznosila stav u vezi sa primenom tog instituta, taj stav je iznošen u formi mišljenja (u okviru obaveštenja o nalazu) jer prema važećim propisima NBS nema ovlašćenja da utvrđuje štetu.

Praksa u Ujedinjenom Kraljevstvu

Ni uporedno posmatrano, ne postoji bogata sudska praksa u vezi sa prevarama sa autorizovanim nalogom. Ipak, u julu 2023. godine, pred Vrhovnim sudom Ujedinjenog Kraljevstva (*United Kingdom Supreme Court,* Vrhovni sud) okončan je jedan veoma zanimljiv slučaj, gde su žrtve (penzionerki par koji je izgubio 700.000 funti ušteđevine), veoma sofisticirane prevare sa autorizovanim platnim nalogom tužile banku. Presuda u ovom slučaju je precedent koji će imati izuzetno velike posledice po sudsku praksu u Ujedinjenom Kraljevstvu, a možda i šire, pa joj je zato u ovom radu dato mnogo prostora (Judgment, *Philipp v Barclays Bank* UK PLC, [2023], 25, 12/07/2023, dalje: SC Judgment). Dodatno, u Ujedinjenom Kraljevstvu postoji i praksa Finansijskog ombudsmana *(Financial Ombudsman Service)* koji je u nekoliko slučajeva prevara sa autorizovanim nalogom doneo odluke u korist oštećenih korisnika.

Još jedna zanimljiva presuda iz 2023. godine je iz Sjedinjenih Država, gde je Federalni sud u Virdžiniji našao da je banka primaoca sredstava odgovorna za štetu koju je pretrpeo platilac kao žrtva BEC prevare *(Studco Building Systems US, LLC v. 1st Advantage Federal Credit Union)*. Budući, da se tu radi o odgovornosti banke primaoca sredstava, a ne banke platioca, ovaj slučaj nećemo dalje razmatrati, već je naveden informativno.

Odgovornost banke platioca u slučaju Mrs Philipp v. Barclays

Nakon što je gospodin Filip *(Philipp)* kontaktiran od strane nepoznatog lica koje se predstavilo kao visoki službenik u Organu nadležnom za superviziju finansijskih institucija *(Financial Conduct Authority)* i nakon što je to lice primenjujući socijalni inženjering uspelo da zadobije njegovo poverenje, te da njega i njegovu suprugu *(Mrs Philipp)* ubedi da njihova sredstva nisu sigurna na računu g. Filipa u njegovoj banci i investicionom fondu, on ušteđevinu od 950.000 funti najpre prebacuje na račun svoje supruge u drugoj banci *(Barclays)*, a ona odatle, u dve transakcije prenosi 700.000 funti na račune u Ujedinjenim Arapskim Emiratima. Treća transakcija od 250.000 funti nije izvršena, jer je banka *Barclays*, blokirala račune na osnovu informacija policije da su njeni klijenti žrtve prevare.[5] Engleski naziv za ovu vrstu prevare je *vishing*, a za ovaj konkretan oblik *'safe account fraud'*.

5 *Detaljnije o tome u slučaju Sjedinjenih Država, vid. Tang, 2015.*

Stav Apelacionog suda (The Court of Appeal)

Nakon što je prvostepeni sud doneo odluku u skraćenom postupku u kojem je odbio da utvrdi bilo kakvu odgovornost banke, apelacioni sud je usvojio žalbu tužilaca, našavši *da bi se mogla* utvrditi odgovornost banke zbog njenih propusta u vezi sa dužnošću pažnje *(quincecare duty)*. Ovaj institut ugovorne odgovornosti banke prema klijentu opisan je, ali nije primenjen, u slučaju *Barclays Bank plc v Quincecare Ltd.* I pre ovog slučaja bila je prepoznata dužnost pažnje *(duty of care)* banke prema klijentu. Tako je u presudi s početka sedamdesetih, sud u UK našao „da je banka povredila dužnost pažnje koju ima prema svom klijentu, tj. da sprovede ispitivanje pre nego što izvrši plaćanje po čeku, u situaciji gde su postojale razumne osnove za stav da su ovlašćeni potpisnici *zloupotrebili ovlašćenja* u cilju prevare njihovog vlastodavca, odnosno u cilju onemogućavanja njegovih istinskih namera" (*Karak Rubber Co Ltd v Burden,* No 2 [1972] 1 WLR 602, prema SC Judgment, para 41). Institut *quincecare duty* je primenjen u slučaju *Singularis* (Judgment, *Singularis Holdings Ltd v Daiwa Capital Markets Europe Ltd, UKSC 50,30/10/2019*), gde je ocenjeno da je broker, odnosno investiciona banka povredila dužnost pažnje prema klijentu (kompaniji), kada je bez dodatnog ispitivanja relevantnih okolnosti izvršila transakciju po nalogu zastupnika, (koji je istovremeno i jedini vlasnik), iako bi svaki razuman bankar shvatio da postoje očigledni znaci da vlasnik kompanije zloupotrebljava kompaniju kada daje instrukcije da se novac prenese na druge delove njegovih poslovnih operacija (Vid. SC Judgment, para 50).

Iz prethodno navedenog jasno proizilazi da je dotadašnja sudska praksa opisivala i primenjivala institut dužne pažnje banke isključivo u slučajevima gde je zastupnik pravnog lica pokušavao da zloupotrebi sredstva kompanije. S tim u vezi, Apelacioni sud je pokušao da institut qincecare duty reinterpretira na način da ga proširi i na slučaj kada fizičko lice usled prevare izdaje nalog svojoj banci. Analizirajući prethodno navedene (i druge) slučajeve gde je razmatrana primena instituta dužne pažnje, Apelacioni sud primećuje da ključno pitanje nije da li takva dužnost postoji nego kada se ona aktivira, odnosno koji (manji) nivo znanja aktivira za banku takvu obavezu. Pozivajući se na slučaj Singularis, ovaj sud zaključuje da su to situacije kada postoje okolnosti gde bi uobičajeno razborit bankar ispitao te okolnosti (Vid. The Court of Appeal, Approved Judgment [2022], EWCA Civ 116, 14/03/2022, para 28; dalje: CA Judgment). Sud prepoznaje da se obaveze, izvršavanje platnog naloga kako glasi (i u kratkom ugovorenom roku – kom. aut.) i primena razumne veštine i pažnje (u smislu sprečavanja nastanka štete za nalogodavca – kom. aut.) vrše u međusobnoj tenziji, a kako se u datom slučaju te tenzije rešavaju zavisi od konkretnih okolnosti (Vid. CA Judgment, para 34.).

Na argument banke da bi ovakav način primene instituta qincecare duty onemogućio normalno izvršavanje platnih naloga, sud odgovara da je pogrešno taj institut u kontekstu APP prevara razumeti kao obavezu banke da svaki nalog ispituje sa aspekata takve prevare, već obavezu banke da ne izvrši nalog bez dodatne provere samo kada postoje okolnosti koje bi uobičajenog razboritog bankara navele na dodatne provere. Zato sud ističe da je ključno koje su to okolnosti koje bi uobičajenog razboritog bankara navele da izvrši dodatne provere u vezi sa platnim nalogom, te s tim u vezi navodi da je neophodno utvrditi sve činjenice u konkretnom slučaju, odnosno da nije moguće doneti presudu u skraćenom postupku, kako je to učinio prvostepeni sud. U vezi sa tim okolnostima u konkretnom slučaju, Apelacioni sud navodi nekoliko: istorija računa gđe Filip; da je gđa Filip došla lično u poslovnicu banke koja nije njena uobičajena poslovnica; da je zahtevala prenos ogromne sume novca, u njenom slučaju bez presedana; da je samo nekoliko dana pre toga primila taj novac na svoj račun; kao i da se prenos vrši na račun firme Lambi Petroleum u UAE (Vid. CA Judgment, para 71.). Treba ukazati i da sud u pogledu objektivne ocene koje bi okolnosti vodile ka ispitivanju naloga klijenta, kao i u vezi sa administrativnim ograničenjima takvih ispitivanja, prepoznaje značaj određenih bankarskih standarda i dobre prakse, pre svega radi ocene šta je s tim u vezi, izvodljivo (Vid. CA Judgment, para 55.).

Kritički osvrt na presudu Vrhovnog suda

Ovom presudom Vrhovni sud ne samo da nije proširio dotadašnje shvatanje pravila qincecare duty, nego je i osporio njegovo postojanje, našavši da je to zapravo opšte pravilo o dužnoj pažnji banke kao nalogoprimca, koje je pritom suzio.

Sud je više paragrafa presude posvetio obrazloženju svog shvatanja dužne pažnje (duty of care), a znatno manje obrazloženju zbog čega takva dužnost nije postojala u konkretnom slučaju.

Vrhovni sud nije prihvatio stav Apelacionog suda da logika obrazloženja presuda u kojima je razmatran institut qincecare duty nije zasnovana na činjenici da je nalog banci izdao zastupnik klijenta banke, a ne klijent, te da je zato taj institut moguće proširiti i na slučaj kada nalog izdaje sam klijent, fizičko lice. Naprotiv, Vrhovni sud navodi da „kao što je primećeno, u slučaju Singularis, baronesa Hejl (Hale) shvata ovaj zajednički faktor kao definišuću karakteristiku instituta qincecare duty" (SC Judgment, para 53.).

Po mišljenju Vrhovnog suda, prva manjkavost u shvatanju Apelacionog suda (koju ovaj sledi iz presude u slučaju Quincecare), jeste ta što uzima da postoji tenzija između bančine dužnosti pažnje i njene obaveze da izvrši platni nalog klijenta, odnosno pokušava se doći do razumnog zaključka (do kog se već došlo u slučaju Selengor i Karak), polazeći od pogrešne pretpostavke (Vid. SC Judgment, para 62.). Vrhovni sud iznosi stav da je primarna obaveza banke kao platioca (kojoj su podređene sve ostale) da izvrši nalog korisnika kako glasi, a dužnost da se primeni razumna veština i pažnja se aktivira samo ako validnost ili sadržina naloga nije jasna ili ostavlja određeni izbor banci u pogledu načina izvršenja, te da nije moguće iz takve dužnosti kreirati dužnost da se nalog ne izvrši (Vid. SC Judgment, para 63. - 64.). Ovu tvrdnju pokušava da podrži pozivanjem na pravilo o dužnoj pažnji (važi za svaki ugovor o isporuci robe ili pružanju usluga), koje je propisano u zakonima (Statutory law), kao obaveza da se usluge pruže sa razumnom veštinom i pažnjom. Pozivajući se na neke presude (koje nisu u vezi sa presudama na liniji Quincecare) Vrhovni sud svodi dužnu pažnju banke na to da takva pažnja mora da se primeni ako instrukcija za plaćanje ostavlja slobodu banci u pogledu izbora metoda transfera ili u situaciji kada iz instrukcije nije jasno šta banka zapravo treba da uradi (navodeći da u takvoj situaciji dužnost pažnje znači da banka od korisnika zahteva pojašnjenje instrukcije; Vid. SC Judgment, para 34. - 37.).

Moglo bi se reći da Vrhovni sud ovde u potpunosti stavlja u stranu presude Selengor i Karak (iako prethodno tvrdi da se u tim presudama došlo do razumnih zaključaka) jer u ovim slučajevima dužna pažnja nije shvaćena samo kao obaveza da se zahteva preciziranje nepotpunih instrukcija, već kao obaveza da se banka uzdrži od izvršenja naloga dok ne izvrši dodatno ispitivanje, ako bi razuman i razborit bankar imao osnova da poveruje da zastupnik pokušava da prevari svog vlastodavca, klijenta banke. Vrhovni sud, ovo pokušava da „pokrije" tako što umesto zloupotrebe ovlašćenja zastupnika kompanije (misuse of authority), uvodi shvatanje po kojem u tim slučajevima ovlašćenje za izdavanje takvih naloga zapravo ne postoji (absence of authority), pa je tu sporna validnost tih naloga (Vid. SC Judgment, para 69. - 89.) Sud tako zaključuje da kada se načela u vezi sa pravom zastupanja primene na seriju Quincecare slučajeva (Selangor, Karak Rubber, Lipkin Gorman, Singularis), obrazloženje za pravne zaključke iznete u tim slučajevima postaje jasno. U situaciji u kojoj zastupnik pokušava da radi ostvarivanja sopstvenog interesa prevari kompaniju čiji je zastupnik, on nema stvarno ovlašćenje da izda platni nalog u ime kompanije (zastupnik i tada generalno ima pretpostavljeno ovlašćenje, kao predstavnik kompanije prema banci, da izdaje platne naloge, ali ne i ako okolnosti sugerišu nepoštenost koja je banci očigledna i koja bi razumnog bankara navela da pre izvršenja instrukcije proveri ovlašćenja zastupnika; Vid. SC Judgment, para 90.).

Drugim rečima, Vrhovni sud smatra da i kod slučajeva na liniji Quincecare nema nikakve posebne dužnosti banke da se uzdrži od izvršenja platnog naloga nego u tim slučajevima nalog nije zaista autorizovan od strane klijenta, tj. nije ni izdat, a banka je dužna da to prepozna u određenim okolnostima.

Vrhovni sud zaključuje, Qincecare duty nije nikakav specijalni institut već njegovo ispravno razumevanje znači primenu opšteg pravila dužne pažnje (duty of care) banke da tumači, utvrđuje i dela u skladu sa klijentovim instrukcijama. Kada banka ima razumne osnove da veruje da je platni nalog dat od strane zastupnika navodno u ime klijenta, zapravo pokušaj prevare klijenta, ova dužnost zahteva da banka odustane od izvršenja tog naloga, dok ne proveri da li je taj nalog zaista autorizovan od strane klijenta (SC Judgment, para 97.).

Ipak, ovako shvaćenu dužnost pažnje teško je primeniti npr. u slučaju Singularis, gde je sud utvrdio povredu dužnosti pažnje na strani banke, a gde je platni nalog kojim su oštećeni pre svega poverioci kompanije (a ne sama kompanija, drugi vlasnici, investitori i sl.) izdao zastupnik koji je istovremeno bio jedini akcionar, direktor, itd. Drugim rečima, Vrhovni sud očigledno stvara jednu fikciju kako bi izbegao konflikt dve dužnosti banke, a to je da kada prepozna u nalogu zastupnika potencijalnu zloupotrebu, banka zapravo prepoznaje da nema ovlašćenja za takav nalog, pa onda se i ne uzdržava od izvršenja naloga nego se uzima da nalog nije ni izdat.

Na osnovu rečenog, Vrhovni sud zaključuje da se ovakvi principi ne mogu primeniti na slučaj gde je klijent žrtva prevare, jer u toj situaciji nema sumnje u pogledu validnosti ovlašćenja, budući da sam klijent daje jasne instrukcije banci i nema potrebe da se nalog ispituje sa aspekta ovlašćenja da se on kao takav izda (Vid. SC Judgment, para 100.).

Iako zastupnik gđe Filip ukazuje da i u slučaju APP prevare, kao i u slučajevima gde zastupnici pokušavaju da prevare svoje vlastodavce, platni nalog ne odražava pravu nameru klijenta, Vrhovni sud odbacuje takav argument uz obrazloženje da to što su namere ili želje proistekle iz pogrešnih verovanja ne čini ih manje realnim ili zaista postojećim (Vid. SC Judgment, para 101.-102.). S tim u vezi, Vrhovni sud stavlja po strani činjenicu da je upravo u paragrafu 40. i 41. citirao presude Selengor i Karak u delu gde se navodi da ovlašćeni potpisnici zloupotrebljavaju njihova ovlašćenja u cilju prevare njihovog nalogodavca ili kako bi na drugi način izigrali njegove prave namere „poražavaju" prave namere klijenta (defeating his true intention).

Sud dalje navodi da u Engleskom pravu prevara ne uzrokuje ništavost ugovora ili drugog pravnog posla, već lice koje je pogođeno prevarom može zahtevati da se takav posao poništi, s tim da to poništenje utiče samo na odnos sa licem koje je učinilo prevaru, ali ne i u odnosu na treća lica, u ovom slučaju banku. Drugim rečima, sud zaključuje da je činjenica da je klijentov nalog uzrokovan prevarom ovlašćuje tog klijenta da zatraži povraćaj od lica koje je prevaru izvršilo, ali ne dovodi u pitanje punovažnost platnog naloga, niti daje osnova za potraživanje prema banci (Vid. SC Judgment, para 103.-105.).

Ipak, valja napomenuti da Vrhovni sud prihvata da dužnost pažnje u smislu dodatnog ispitivanja instrukcija postoji kada se radi o licu sa nedostatkom mentalnih kapaciteta (Vid. SC Judgment, para 99.). S tim u vezi, čudi da u tom delu nije povučena paralela sa licem koje je žrtva prevare, posebno u slučaju para Filip, koji su kao penzioneri bili pod tolikim uticajem prevaranta, odnosno u takvoj zabludi da su odbijali upozorenja svojih prijatelja i policije, a poslednja transakcija je sprečena upravo zahvaljujući njima, iako je gđa Filip insistirala da se platna transakcija izvrši. Drugim rečima, takav nivo zablude je svakako doveo do manjka mentalnih kapaciteta prilikom donošenja odluka, odnosno izdavanja platnog naloga.

Sud je ipak razmatrao ograničenja u pogledu izvršenja validnog naloga koji je izdalo zaista ovlašćeno lice. Kao primere navodi slučajeve gde bi prevoznik koji je preuzeo obavezu da odveze i istovari robu u neku fabriku, pa po dolasku na to mesto nađe fabriku u požaru delovao nerazumno ako bi se držao preuzete obaveze. Vrhovni sud nalazi da je logika ovde takva da je razumno uzdržati se od naloga kada je jasno da bi njegovo izvršenje štetilo nalogodavcu, pod uslovom da su okolnosti koje ukazuju na tu štetnost bile nepoznate nalogodavcu kada je izdao nalog. Primenjujući to na slučaj gđe Filip, Sud nalazi da bi ovakvo pravilo važilo u situaciji u kojoj banka dobije informaciju od policije da je njen klijent potencijalna žrtva zloupotrebe (što se u pogledu poslednje transakcije i dogodilo kada je banka i pored insistiranja gđe Filip odbila izvršenje naloga). Međutim, zaključuje sud, okolnosti koje ukazuju na prevaru bile su dobro poznate klijentu kada je izdala platne naloge, jer je kroz instrukcije za plaćanje potvrdio sve te okolnosti, i pritom je bio nepokolebljiv u nameri da se nalozi izvrše, pa banka nije imala razlog da sumnja da je klijent sa tim okolnostima nije upoznat (Vid. SC Judgment, para 107.-110.).

Sud je zapravo ovde kontradiktoran jer su okolnosti prevare bile dobro poznate klijentu i u pogledu poslednje transakcije koju je banka odbila da izvrši, a ona je to odbila ne zato što okolnosti koje ukazuju na prevaru nisu bile poznate klijentu, nego zato što je banka dobila informaciju od policije da se izvesno radi o prevari. Dakle, ovde se ne može primeniti logika na koju se sud poziva, već razlika postoji u stepenu saznanja na strani banke kao nalogoprimca.

Na kraju, Vrhovnom sudu je konflikt dve suprotstavljene dužnosti banke bio neprihvatljiv iz još jednog razloga koji nije vezan direktno za ovaj slučaj, pa ni samo za prevare sa autorizovanim platnim nalogom. Naime, taj sud smatra da sudija u slučaju Quincecare, uočivši konflikt (između dve dužnosti banke, koji u realnosti ne postoji) taj sukob nije mogao da reši na principijelan način, već je morao da se osloni na politička razmatranja (Vid. SC Judgment, para 65.-66.). Problem sa ovim metodom je što on nije adekvatan za utvrđivanje ugovornih obaveza. Koje pravilo bi predstavljalo „odgovarajući kompromis" ili „fer balans" između širokih političkih ciljeva je pitanje za zakonodavca. Prilikom odlučivanja da li postoji određena obaveza ugovorne strane koja nije izričito ugovorena, sud ima znatno skromniju ulogu da obezbedi primenu pretpostavljene volje ugovornih strana (SC Judgment, para 67.).

Ovaj stav zaslužuje poseban komentar. Naime, u odsustvu određenih pravila koja bi regulisala nove okolnosti, poput prevara sa autorizovanim nalogom, odnosno kada prilikom propisivanja tih pravila nisu uzete te specifične okolnosti, sud bi morao (posebno u common law sistemu) da odredi taj balans, kada za to postoji osnov u opštoj odredbi zakona ili sudskoj praksi, kao što je postojao u Quincecare slučajevima. Ovde treba citirati stav čuvenog Lona Fulera koji kaže: „Common law nije proizvod rada jednog sudije, već saradnje velikog broja sudija tokom dugog perioda vremena. Tokom njegove istorije primena njegovih pravila je unapređivana i oplemenjivana. Istovremeno, ta pravila su često revidirana kako bi se obezbedila njihova delotvornost. Šta je sud rekao u prethodnom slučaju uvek je predmet reinterpretacije u novoj situaciji pred sudom. Tada se polje primene precedenta ne određuje isključivo u svetlu ciljeva koje je imao na umu sud koji je doneo raniju odluku, već u svetlu novih ciljeva, koji proširuju značenje prethodnih, a koji nisu mogli biti artikulisani na osnovu ograničenog činjeničnog stanja koje je predstavljalo podlogu za donošenje precedenta" (prema Dević, 2007).

Dakle, prednost common law sistema u odnosu na kontinentalni, jeste upravo u tome što i sudovi stvaraju pravo i kroz reinterpretaciju precedenata mogu mnogo brže da prilagode pravo novim situacijama i konkretnim slučajevima, bez potrebe da (kao u kontinentalnom sistemu) čekaju zakonodavca koji po pravilu kaska za praksom (i realnošću), a i kada reaguje, neretko je potrebno vreme da se među sudovima uobliči šta je zakonodavac zapravo „rekao" ili „hteo da kaže". Ta prednost ovde nije iskorišćena.

Kodeks o povraćaju sredstava u slučaju prevara sa autorizovanim nalogom

Na stav Vrhovnog suda da treba sačekati zakonodavca, svakako je uticalo i to što su i same banke preduzele određenu inicijativu da ovu oblast samostalno i dobrovoljno regulišu (samoregulacija)[6] pod pokroviteljstvom Odbora za kreditne standarde (Lending Standards Board - organizacija u UK koje preduzima aktivnosti u vezi sa samoregulacijom banaka i drugih kreditora). Tako je jedan deo banaka (među kojima je i Barclays), dobrovoljno prihvatio primenu Kodeksa o postupanju u slučaju prevara sa autorizovanim platnim nalogom (Contingent Reimbursement Model Code for Authorised Push Payment Scams - Kodeks) koji je stupio na snagu maja 2019. godine, a kojim je određeno u kojim slučajevima su banka platioca, odnosno primaoca plaćanja dužne da nadoknade gubitak platiocu (https://www.lendingstandardsboard.org.uk/wp-content/). Kodeks se primenjuje samo u slučaju domaćih transakcija. Dodatno, treba ukazati na dva ključna standarda, instituta u tom kodeksu, od čijeg načina primene zavisi alokacija gubitka (korisnik ili banka/banke).

Prvi standard je krajnja nepažnja, gde pružalac platnih usluga nije obavezan da nadoknadi gubitak korisniku ako dokaže postojanje takve nepažnje. U Kodeksu je navedeno nekoliko izričitih primera takve nepažnje kao što su: 1) ignorisanje efektivnih upozorenja koja su data od pružaoca platnih usluga; 2) nepreduzimanje odgovarajuće aktivnosti od strane korisnika nakon jasnog negativnog rezultata potvrde primaoca plaćanja; 3) izdavanje naloga za prenos bez razumne osnove da korisnik veruje da je primalac lice kojem je on hteo da plati ili da se plaćanje vrši za pravu robu i usluge, itd. - uzimajući pritom u obzir karakteristike korisnika, kompleksnost i soficistiranost prevarne šeme. Pored ovih exempli causa slučajeva krajnje nepažnje u Kodeksu je dat i opšti pojam krajnje nepažnje. Izgleda da se bez ovog standarda ne može ni na Ostrvu, pa se može očekivati da će taj ili sličan standard i zakonodavac koristiti prilikom propisivanja pravila za alokaciju gubitaka, što će loptu iz parlamenta opet vratiti na teren suda.

Drugi standard od čije primene zavisi alokacija gubitka (banka platioca ako nije ispunila sve zahtevane standarde ili fond banaka ako banka jeste primenila sve standarde) jeste „scenario bez krivice“ (no - blame scenario), što bi opet u slučaju eventualnog spora, zahtevalo procenu suda, da li je banka u konkretnom slučaju ispunila sve standarde koji se od nje očekuju. [7]

Dakle, i sa zakonodavnom intervencijom sudovi će morati da se upuštaju u određena „politička“ razmatranja, odnosno da u svakom konkretnom slučaju daju određeno značenje pravnim standardima.

Praksa Finansijskog ombudsmana

Finansijski ombudsman (The Financial Ombudsman Service, FOS) je u Ujedinjenom Kraljevstvu uspostavljen od strane parlamenta u cilju rešavanja pritužbi korisnika na postupanje davalaca finansijskih usluga, na fer i nepristrasan način. Kada je reč o prevarama sa autorizovanim platnim nalogom, finansijski ombudmsan je imao različite odluke detaljno uzimajući u obzir sve okolnosti konkretnog slučaja.

Tako je u slučaju korisnice koja je bila žrtva prevare sa autorizovanim platnim nalogom, koja je izvršena preko telefona, a gde je ona od strane prevaranta navedena da izvrši plaćanje na siguran račun jer su joj sredstva ugrožena, Ombudsman zaključio da je u konkretnom slučaju banka (koja je potpisnica Kodeksa) nije dokazala da je u smislu Kodeksa korisnica postupala sa krajnjom nepažnjom te je banci naložio da izvrši povraćaj ukupnog iznosa spornih transakcija (Vid. FOS, DRN-3130787, 28 January 2022).

[6] *Detaljnije o pojmu samoregulacije vid. Jovanić, 2019.*

[7] *Detaljnije o Kodeksu i dosadašnjim efektima njegove primene vid. Maher, 2021, 140.-145.*

Takođe, Ombudsman je u slučaju jednog preduzetnika koji je bio žrtva BEC prevare odlučio da mu njegova banka izvrši povraćaj celokupnog iznosa sporne međunarodne transakcije od 24.235,97 funti (iako je korisnik zahtevao da mu banka nadoknadi 50%). Ombudsman je u svojoj odluci ukazao da je banka od te institucije dobila više mišljenja koja jasno kažu da banka ima obavezu da prepozna i reaguje u slučaju sumnjivih (u smislu rizika od prevare) transakcija, te da je u konkretnom slučaju korisnik iznenada promenio račun na koji plaća dugogodišnjem poslovnom partneru, kao i da se radi o transakciji koja je za korisnika neuobičajeno visoka. Ombudsman je analizirao i sa kojim stepenom pažnje je postupao oštećeni preduzetnik i zaključio da na njegovoj strani ipak nije bilo nepažnje, jer je ispravo posumnjao i zahtevao da poslovni partner sa kojim je verovao da komunicira, obrazloži razlog promene računa, ali je prevarant koji je hakovao imejl primaoca bio izuzetno uverljiv koristeći naloge više radnika primaoca sredstava koji su potvrđivali razloge promene instrukcija za plaćanje. Ovakva odluka je doneta nezavisno od Kodeksa koji se, kako smo rekli ne primenjuje na međunarodne platne transakcije (Vid. FOS, DRN-3087679, 6 May 2022.).

Nakon ovih odluka iz 2022. godine, navešćemo i jednu odluku iz novembra 2023. godine (nakon presude Vrhovnog suda) u vezi sa ‘safe account’ prevarom (korisnik je izgubio 50.000 funti), gde se takođe radilo o međunarodnim transakcijama (Vid. FOS, DRN-4453209). Ombudsman sada nije našao odgovornost Banke kao u prvom slučaju koji smo naveli. Zapravo je zaključio da je banka korisnika ispunila obavezu da prepozna i reaguje u slučaju sumnjivih transakcija jer je detaljno upozorila korisnika, pri čemu su ta upozorenja bila dovoljno konkretna da obuhvate upravo scenario prevare kojoj je korisnik bio izložen. Tačno je da za razliku od prvog slučaja, ovde Banka prilikom izvršenja druge transakcije (prva je bila u iznosu od svega 76 funti) upozorila korisnika, ali je teško oteti se utisku da je Ombudsman prilikom donošenja ove odluke uzeo u obzir i presudu Vrhovnog suda u slučaju gospođe Filip.

Odgovor Evropske komisije - Predlog uredbe o platnim uslugama

Opis pravnog režima odgovornosti banke platioca u slučaju prevara sa autorizovanim platnim nalogom, te nužda da se radi utvrđivanja te odgovornosti u pomoć pozivaju opšte odredbe civilnog zakonika jasan su dokaz da specijalni režim koji je uvezen iz direktiva o platnim uslugama ima pravne praznine. Očigledno svesna tih praznina, Evropska komisija u svom predlogu novih propisa o platnim uslugama, ovaj put u formi uredbe (Proposal for a Regulation of the European Parliament and of the Council on payment services in the Internal Market and amending Regulation (EU) No 1093/2010, Brussels, 28.6.2023), jednim delom popunjava te praznine. Pored ovog predloga, postoji i Predlog treće direktive o platnim uslugama, ali se on bavi isključivo statusnim pitanjima u vezi sa pružaocima platnih usluga, kao što su osnivanje, nadzor i slično (Proposal for a Directive of the European Parliament and of the Council on payment services and electronic money services in the Internal Market[...], Brussels, 28.6.2023).

U poglavlju 4. Predloga uredbe koje je posvećeno autorizaciji platnih transakcija, u članu 49. predviđeno je da banka primaoca na zahtev banke platioca verifikuje da li račun na koji glasi platni nalog pripada licu koje je u tom nalogu navedeno kao primalac sredstava. Ako postoji neslaganje banka obaveštava o tome platioca, ali ako on i pored toga zahteva da se transakcija izvrši, takva transakcija će se smatrati odobrenom. Platioci će moći da isključe tu uslugu, ali će tada morati da budu upozoreni da sredstva mogu da završe na računu koji ne pripada primaocu iz naloga.

U svakom slučaju, platilac ne može snositi gubitke ako ga njegov pružalac platnih usluga nije obavestio o tome da postoji neslaganje, osim ako je optirao da ne koristi tu uslugu.

U slučaju prevare sa lažnim predstavljanjem (impersonation fraud, spoofing), gde je korisnik žrtva prevare nepoznatog lica koje se predstavljalo kao zaposleni njegovog pružaoca platnih usluga, taj pružalac bi u skladu sa članom 59. Predloga uredbe bio dužan da vrati korisniku celokupan iznos, na prevaru autorizovane transakcije, ako je korisnik prevaru odmah prijavio policiji i pod uslovom da pružalac platnih usluga ne može da dokaže da je korisnik postupao sa krajnjom nepažnjom ili da je eventualno i sam učesnik u toj prevari. Dakle, ovim se za razliku od Direktive 2015/2366 koja „pružaocu platnih usluga koji izvršava nalog u skladu sa jedinstvenom identifikacionom oznakom obezbeđuje široku zaštitu" (Benjamin, 2019), uvodi pretpostavka njegove odgovornosti, koju on može da obori dokazivanjem da je korisnik postupao sa krajnjom nepažnjom.

Kao što se vidi opet se primenjuje standard krajnje nepažnje kako je to bio slučaj i kod prve i druge direktive o platnim uslugama, s tim da je u slučaju tih propisa on korišćen samo kod zloupotrebe platnih instrumenata. Kada je reč o odgovornosti pružaoca platnih usluga u slučaju te vrste zloupotreba, Predlog uredbe je uglavnom u okvirima postojećih rešenja iz direktiva, uz dve razlike. Prva je ta, da nadležni organi (koji vrše nadzor nad primenom uredbe) mogu da umanje odgovornost platioca zbog toga što nije ispunio obaveze u pogledu korišćenja platnog instrumenta i njegove zaštite, ako nije postupao prevarno, tj. ako nije namerno odao određene podatke u vezi platnog instrumenta, uzimajući u obzir posebno prirodu sigurnosnih elementa i specifične okolnosti pod kojima je platni instrument izgubljen, ukraden ili zloupotrebljen. Druga razlika je ta, da ako nije primenjena tzv. jaka autentifikacija korisnika (strong customer authentication) nema odgovornosti platioca, osim ako je delao prevarno.

Pored navedenog poglavlja koje u pogledu zloupotreba i prevara uvodi strožija pravila (pretpostavke odgovornosti) za pružaoce platnih usluga, u 8. poglavlju Predloga uredbe daje se niz značajnih ovlašćenja organima država članica koji su nadležni za nadzor nad primenom tih pravila. Ta ovlašćenja uglavnom uključuju nadzor nad pružaocima platnih usluga na način koji se u Srbiji već sprovodi od strane Narodne banke Srbije (posredna i neposredna kontrola), a koji podrazumeva ovlašćenja da se tim pružaocima usluga nalažu određene mere radi otklanjanja nepravilnosti, kao i da im se izreknu administrativne novčane kazne. Ipak, usvajanje ovog predloga i njegova implementacija u srpsko zakonodavstvo donelo bi dodatne mogućnosti u toj kontroli poput mogućnosti da se od nadležnih organa pribavljaju podaci u vezi sa određenim krivičnim istragama i postupcima, kao i da se prema pružaocima platnih usluga koriste mere kao što su periodična kaznena plaćanja ili objavljivanje izrečenih mera i sankcija.

Zaključak

Kada se dakle analiziraju postojeći propisi, novi predlozi, kao i (kvazi) sudska domaća i uporedna praksa, može se izvesti zaključak da banke platioca nemaju razloga da budu ušuškane u uverenju da na njihovoj strani ne može postojati odgovornost za gubitak nastao usled prevare sa autorizovanim platnim nalogom. Bez obzira što je Vrhovni sud u UK suzio dosadašnje shvatanje dužne pažnje na strani banke, sve veći broj i obim zloupotreba u platnom prometu, pre ili kasnije dovešće do primene principa da rizik snosi onaj ko njime može bolje da upravlja. Da je to tako, potvrđuju između ostalog Kodeks, Predlog nove uredbe o platnim uslugama Evropske komisije, praksa Finansijskog ombudsmana u UK, pa i Narodne banke Srbije.

Do donošenja novih propisa ili određenih aktivnosti banaka u pravcu samoregulacije, sudovi, regulatori i supervizori bankarskog sektora, imaće presudnu ulogu u proceni postojanja eventualne odgovornosti banke platioca. Uostalom, i novi propisi će sigurno biti zasnovani na određenim pravnim standardima kako bi obuhvatili veliki broj različitih tipova prevara (sa autorizovanim i neautorizovanim transakcijama), što će opet značiti prilično široka diskreciona ovlašćenja za sudove i supervizore.

U svakom slučaju, prema postojećim domaćim propisima, eventualna odgovornost banke platioca u slučaju izvršenja autorizovanog platnog naloga koji je rezultat prevare, uglavnom ne bi trebalo da vodi ka njenoj isključivoj odgovornosti. Izostanak preduzimanja mera koje bi se u smislu domaćeg Zakona o bankama mogle shvatiti kao mere opreznog bankarskog poslovanja, odnosno izostanak upozorenja platiocu kada postoje pokazatelji potencijalne prevare, mogao bi u smislu srpskog civilnog zakonika voditi podeljenoj odgovornosti banke sa platiocem za nastalu štetu (shodnom, odnosno prilagođenom primenom člana 192. ZOO). S tim u vezi, u pogledu ispunjenosti uslova za aktiviranje obaveze banke platioca iz člana 751. stav 2. ZOO, najvažnije je utvrditi kako je banka postupala u konkretnom slučaju, u smislu postojanja odgovarajućih internih procedura za prepoznavanje i prevenciju prevara i načina njihove primene. Drugim rečima, važno je utvrditi da li je banka uspostavljanjem adekvatnih politika, procedura i softverskih alata, omogućila uobičajenom, razumnom bankaru da prepozna okolnosti koje zahtevaju proveru platnog naloga. Dakle, da bi se procenilo da li je u konkretnom slučaju razumni bankar mogao, odnosno morao da posumnja u ispravnost instrukcije, sud bi najpre morao da ceni ispunjenost standarda opreznog bankarskog poslovanja u izvršavanju predmetnih platnih transakcija. Da bi to cenio, sud bi trebalo da od stručnjaka u oblasti platnih usluga (ne od veštaka opšte ekonomske struke) ili institucija nadležnih za kontrolu banaka, pribavi mišljenje o postupanju banke u konkretnom slučaju.

Jer, „da bi banke ostvarile srazmernost između zaštite korisnika od internet prevara i troškova dodatne zaštite, sudovi bi prilikom odlučivanja o odgovornosti trebalo da prate jedinstvenu i objektivnu 'najbolju praksu' kako je određena od strane stručnjaka iz nadležnih institucija" (Tang, 2015). U suprotnom, nametanjem bezbednosnih zahteva u pružanju platnih usluga koji su izvan onoga što je ekonomski razumno i opravdano, moglo bi proizvesti negativne efekte za većinu korisnika tih usluga, jer bi se nesrazmerni troškovi bezbednosnih mehanizama prelili na cenu i/ili kvalitet usluga.[8] Osim toga, suviše rigorozni zahtevi prema banci mogli bi dovesti do moralnog hazarda na strani platioca.

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THE LIABILITY OF THE PAYER'S BANK IN CASE OF AUTHORISED PUSH PAYMENTS FRAUD

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Summary: The Authorised Push Payment (APP) fraud is a great danger for payers due to the fact that the value of these transactions is often significantly higher in comparison to unauthorised ones (misuse of payment instruments), while chargeback options are limited. Payers' banks are currently convinced that they cannot bear the losses in the case of APP fraud. Their assurance is based on special payment services regulations. Still, general rules of Serbian contract law, which should be applicable as additional rules, oblige the payer's bank to warn the payer if a bank finds that the payment order could be harmful for them. However, as a precondition for the activation of this bank's duty, a reasonable expectation that an ordinary prudent banker could notice something suspicious related to the payment order should arise. In this case, if the bank failed to warn the client, rules related to divided liability for damage from the Law on Contracts and Torts could be applied.

Key words : Authorised Push Payment fraud; Business Email Compromise; Payment service regulations; Quincecare Duty; Payer's bank's liability.

JEL classification: G21, K12, K22, K42

Introduction

The Internet and electronic communications, aside from vast benefits, also bring certain risks of which payment service users are often unaware, or which they overlook. While the risk of payment card fraud due to loss or theft of the card or its data is well known to payment service users, the Authorised Push Payments fraud is not familiar to the wider base of users, although the consequences of such fraud, in terms of losses, far surpass card fraud. The words authorised and push originate from the fact that the payer themself, as a fraud victim, instructs the bank to transfer the funds to an account controlled by criminals, making such a transaction authorised from the point of view of the bank.

The most dangerous form of APP fraud currently present in Serbia is the Business Email Compromise fraud. The scheme behind this fraud is usually based on the criminals gaining access to business correspondence (by accessing the email account of one of the parties in correspondence), and, by viewing all data from previous correspondences, convincingly lead one party to transfer funds into an account under their control.

Aside from the intent to warn the expert public and the greater audience of this ongoing challenge, this paper aims at considering existing regulation, local and comparative practices, and addressing the issue of a bank's and client's liability for losses (often amounting to several dozens, even hundreds of thousands of euros) caused by Authorised Push Payments frauds. Seeing as how such a transaction has been undoubtedly authorised by users, the banks are, seemingly, convinced that they cannot be responsible for the client's loss, based on existing regulation. However, is that truly the case? This paper tries to provide an answer to that question by analysing local regulations and providing an overview of the practice of the National Bank of Serbia, while relating them to certain rules of common law and

Data on Business Email Compromise Fraud

According to data from the National Bank of Serbia's questionnaire, the total amount lost in payment card frauds in 2021 is RSD 93 million (with 78.6 from online fraud, 2.5 from POS fraud, and 11.9 at ATMs). Users were refunded RSD 74.2 million. In 2022 the total amount lost in payment card fraud is RSD 179.7 million (with 129.8 from online fraud, 41.6 from POS fraud, and 8.2 at ATMs). A total of RSD 141 million was refunded to users.

When it comes to Business Email Compromise fraud in 2021, 105 transfers were completed, amounting to a total of RSD 251.5 million, while 2022 has seen 108 transactions amounting to RSD 418 million (99% of the total amount refers to legal entities' payments in international payment transactions). In 2021, 22 transactions were refunded, in the amount of RSD 54.2 million, while 22 transactions were also refunded in 2022, in the amount of RSD 68.8 million.

The aforementioned data indicates that, in the case of payment card fraud (in 2022), the average transaction amount is around RSD 9,000, while the average transaction amount in Business Email Compromise fraud is around RSD 3,870,000. Additionally, card users were refunded 78-80% of the misused funds, while payers' banks managed to refund 16-20% of funds in cases of BEC fraud.

Aside from this comparison and seeing as how all BEC transactions were done in international payment systems, it is also useful to compare the number and value of transactions in local and international payment systems (excluding card transactions). The Report of the National Bank of Serbia (Overall NBS RTGS System and Clearing System Indicators in 2022: https://nbs.rs/en/ciljevi-i-funkcije/platni-sistem/statistika/index.html) provides data from which we can extrapolate that the average number of daily payments per participant in the system exceeds 34,000, while the average value of transactions in this payment system is RSD 473,210, or around EUR 4,000. On the other hand, the example of one of the banks (with a significant share in international payment transactions) shows that in 2022 an average of 1,206 international transactions were completed daily, with a total value of EUR 45.9 million, and with an average transaction amount of EUR 38,000.

The Legal Framework Regarding Authorised Push Payment Fraud

The loss allocation rules are important not only because of their distributional consequences, but because of the incentives they create. The greater a party's liability for fraud losses, the greater incentive the party will have to take care to avoid fraud (Levitin, 2010). For payment-transaction fraud, questions of loss allocation are regulated by national rules implementing the liability regime for unauthorised payment transactions under the payment services directive. For other financial services, these questions are resolved according to general rules on contract and tort (Kjørven, 2020).

This is only partially factual (both for EU members and for Serbia), since the issue of liability in cases of Authorised Push Payment fraud was referred to in directives on payment services, through provisions regulating the situation where a transaction was done incorrectly, due to the payer entering an incorrect account number. On the other hand, although in APP fraud the payer enters and authorises an incorrect account number, it is unclear whether the provisions of European legislators were meant to regulate only technical errors and similar oversights of the payer, or if they were meant to allocate risk in the same manner (at the payer's expense) in cases of "error" caused by fraud.

Law on Payment Services

According to the Law on Payment Services (Official Gazette of the RS, no 139/2014, 44/2018, hereinafter: LPS), the legal position of an issuer of a payment order (payer) resulting from fraud is significantly less favourable than that of an owner of a misused payment card. Namely, the responsibility for the proper execution of an authorised payment order is governed by the provisions of Article 55, paragraph 1 and 2 of the LPS, which transposed the provisions of Article 74 paragraph 1 and 2 of the first Payment Services Directive (Directive 2007/64/EC, OJ L 319, 5.12.2007, hereinafter: PSD1). Provisions with the same content also exist in the currently valid, second Payment Services Directive (Directive (EU) 2015/2366, OJ L 337/35, 23.12.2015, hereinafter: PSD2). Those provisions stipulate that, if the payment order was executed in accordance with the unique identifier of the payee from that order, it is considered that the order was correctly executed in the part that refers to the determination of the payee, regardless of other data submitted to the payment service provider and that if the unique identifier provided by the payment service user to the payment service provider is incorrect, the payment service provider shall not be liable for the non-execution or incorrect execution of a payment transaction. In Article 2, paragraph 1, item 19) the LPS defines that the unique identifier is a combination of letters, numbers and/or symbols specified to the payment service user by the payment service provider to be used in a payment transaction to identify unambiguously the respective payment service user and/or its payment account.

The unanimously taken stance in practice is that the unique identifier in the local payment system in the number of a current account in a bank, that is, the number of some other payment account with an electronic money institution or a payment institution, while in the case of international payment systems, it is the International Bank Account Number (IBAN).

To summarise, the LPS is fully clear and unambiguous in this matter. If a bank transfers funds to an account listed in the payment order, authorised by the payer (in a way determined by the agreement on payment services)[1], the bank is not liable as a payer's payment service provider for the non-execution or incorrect execution in the payment transaction. In other words, in agreement with the mentioned provisions of the LPS, banks consider the owner of the account listed in the payment order as the payee, and not the person whose name, surname, address, etc. are listed in that payment order. The payer's bank must check the validity of the account listed in the payment order in terms of its logistical control (of all elements of the account number) but, in accordance with the mentioned provisions of the LPS, the bank is not obligated to "match" the account number and the recipient of the funds.

Nonetheless, from the moment when the payer reports a fraud, the bank is obligated, in accordance with Article 55, paragraph 3 of the LPS, to take all reasonable measures to return the funds, and, when the refund is no longer possible, to determine the flow of assets and notify the client. It is important to note that to accomplish the mentioned goal (refund, or information on the flow of assets), this provision defines the obligation of the recipient's bank to cooperate (submit certain information, i.e. on the recipient) with the payer's bank. However, in international transactions, where these kinds of frauds are most common, this cooperation in not always possible to ensure, as the banks are operating abroad. Acquiring data on the payment recipient who committed fraud depends solely on the willingness of their (foreign) bank to cooperate with the payer's bank and its correspondent bank. The low percentage of refunded assets in these cases is caused not only by the late reaction of the payer (who realises that they have been tricked only after several weeks, or even months), but also by the passivity of the recipient's bank. Interestingly, SWIFT (Society for Worldwide Interbank Financial Telecommunication), as opposed to SEPA (Single Euro Payments Area), has no standardised messages for fraud, which limits the possibility for the IT systems in banks to automatically block funds or generate warnings. Payers' banks currently send out two standardised messages in these cases, MT192 and MTn92, none of which necessarily points towards fraud. The first is a request for the recall of the previous message transferring the funds, and the second is a request for a return of funds, but with consent of the recipient.

The aforementioned points to the LPS, as a separate law defining the rights of payment service users, determining the loss in case of APP fraud is borne by the payer, as the submitter of the order. Unlike with payment card fraud, where Article 51 of the LPS weighs the payer's level of negligence, the LPS does not note the level of the user's negligence in cases of APP fraud. Even when the payer is a victim of a highly skilful, sophisticated, or complex fraud, which even a user acting with all due attention, as a good businessman, would fall victim to, the LPS is strict – the liability for the loss incurred as a consequence of such a fraud would fall to the payer, who had filled out, issued, and authorised the payment order. While in card transactions (a form of direct debit/pull payment) the lack of monitoring of such transactions by the card issuing bank (Article 59 of the LPS) may be the final argument of the user, opening the possibility of shared liability of the bank and the client, the LPS does not afford the same opportunity in case of push payments (credit transfer). The LPS only guarantees the obligation of the bank to contact the recipient's bank immediately following the report of fraud, mostly via a correspondent bank, and demand a return of funds, hoping that the recipient bank will react in a timely manner.

1 *Payment order authorisation can be done with a handwritten signature on a paper form, a qualified signature on an electronic document or via two-elements authentication. In addition to the LPS, the issue of (two-factor) authentication is also regulated by the Decision on Minimum Information System Management Standards for Financial Institutions ("Official Gazette of the RS", no. 23/2013, 113/2013, 2/2017, 88/2019 and 37/2021), which implemented certain authentication standards established by Directive 2015/2366 and Commission Delegated Reg-ulation 2018/389.*

Even when the recipient bank reacts in time, and with the willingness to refund the assets (usually with the evidence of fraud having been reported to the relevant authorities), it usually does so under the condition of a written guarantee of the payer's bank to settle its obligations to the recipient, if it is obliged to do so (letter of indemnity). With that in mind, the issue is whether the payer's bank would be obliged to send such a statement in the context of its obligation to take all reasonable measures to return the funds. Based on the model statement we have had access to[2] it can be seen that such a statement is an obligation of the payer's bank to refund the previously returned funds, not only in the case of a decision from a court or other competent authority in the recipient's bank's country, but also in the case of the recipient's demand without such a decision. Nonetheless, since the fraud at hand is well known to banks, it is difficult to accept that the recipient's bank, which had opened an account for an individual suspected of fraud, would be ready to demand a return of funds from the payer's bank solely based on the request from that individual, without an assessment of the validity of such a demand, i.e. without the individual initiating a procedure against the bank. Thus, it could be tentatively concluded, which would not hold true in certain cases and due to certain circumstances, that the payer's bank is obligated to submit such a statement to the recipient's bank, within the reasonable measures taken in order to return the funds (Art. 55, par. 3, LPS).

Application of the General Rules of Contract Law

Article 14, paragraph 2 of the LPS stipulates that the provisions of the Law on Contracts and Torts, (Official Gazette of the SFRY, No. 29/78, 39/85, 45/89 - Decision of the Supreme Court of Justice and 57/89, "Official Gazette of the FRY", No. 31/93, Official Gazette of Serbia and Montenegro, No. 1/2003 - Constitutional Charter and Official Gazette of the RS, No. 18/2020, hereinafter: the LCT) shall apply to all issues concerning the payment service contract which are not regulated by LPS.

The LPS governs the issue of liability for the improper execution of a payment transaction due to the wrong account number, but as previously stated, it cannot be assumed with certainty that when formulating such a rule, the legislator took into account APP fraud. In other words, the question could be raised as to whether Article 55 of the LPS is sedes materiae for the issue of liability for improperly executed transactions due to APP fraud, or whether there is actually a legal gap in that section, which should be filled by the application of the LCT.

Furthermore, it is clear that the primary obligation of the bank, as the order recipient, is to execute payment orders as they read in accordance with the agreed deadlines. In other words, its core duty is to transfer money from its client's account to the account indicated by that client in the payment order. In this regard, Article 36 of the LPS expressly states that the bank cannot refuse the execution of a payment order when all of the conditions set forth in the contract on payment services have been met, unless otherwise determined by some regulation. That other regulation could be the LCT and the provisions that establish standards regarding the manner of order execution, that is, when the order recipient can refuse the execution of that order. In this regard, Article 1057, paragraph 1 of the LCT (which in addition to the LPS regulates the contract on current bank accounts) stipulates that the bank is responsible for the execution of the depositor's order, according to the rules of the contract of order. However, among those rules of the contract of order are Article 751, paragraphs 1 and 2 of the LCT. The first stipulates the obligation for the client to execute the order according to the received instructions, with all the attention of a good businessman, staying within its limits and always looking after the interests of the client and being guided by them, while the second specifies that the client has the obligation to draw the orderer's attention and ask for new instructions when they believe that the execution of the order according to the received instructions is to the detriment of the orderer.

2 *"We hereby agree to indemnify you and hold you harmless against any actions, proceedings, claims and demands which may be brought against you and all losses, costs, charges, damages and expense which you may incur or sustain by reason of you having released the sum to us without the authority of your customer."*

These rules could accordingly be applied to the bank, as a "professional order receiver" in such a way that a higher level of attention should stand, from Article 18, paragraph 2 of the LCT – the standard of care of a good expert. In other words, "since the order recipient is an expert in the tasks from the order whose execution is accepted, they are obliged to warn of the error by acting with the standard of care of a good businessman and a good host. At the same time, the standard of care of a good businessman means the standard of care of a good expert" (Trajković, Perović (ed), 1995, 1282).

In this regard, it is reasonable to expect that with the standard of care of a good expert, and given its knowledge and experience in payment transactions, the bank in certain cases can recognise potential BEC fraud and, in accordance with Article 751, paragraph 2, warn its client.

In fact, one should not question the existence of the ever-present obligation of the bank to refuse the execution of the order and warn the user when it suspects fraud, but the key question is when the bank is obliged, i.e. when, as a professional provider of payment services, it can, i.e. should, doubt the correctness of the instructions received, which would activate its obligation from Article 751, paragraph 2 of the LCT.[3] In connection with this issue, it should be noted that Article 110 of the Law on Banks (Official Gazette of RS, No. 107/2005, No. 91/2010 and 14/2015, hereinafter: Law on Banks) recognizes the standard of prudent banking operations. Although this is primarily a standard that is used for prudential supervision, it can be used for banking conduct supervision as well, including the area of payment services. In this regard, it can be considered that caution on the part of the bank would be justified and expected if there is a certain experience or knowledge on the part of the bank that indicates that such caution is necessary when providing certain services, provided that such caution does not disrupt the provision of those services.

In circumstances where there is an increase in various forms of Authorised Push Payment fraud, it can be assumed that banks as providers of payment services have knowledge and certain experience that should lead them to act with an increased degree of caution when executing, above all, international payment transactions. In addition, and as previously shown, the number of payment orders in international payment traffic is not so large, while at the same time the individual value of those orders is significant and there is a low degree of refund in case of fraud. All this leads to the conclusion that the increased vigilance of the bank (which leads to additional administration) would not be disproportionate to the potential damage that can be avoided and would not jeopardise the provision of this type of payment services.

Related to abovementioned and as an example, "under the UCC, a bank is not liable for losses if it followed 'commercially reasonable' security procedures to verify the transactions" (Tang, 2015). To decide what is commercially reasonable, the US Commercial Code directs courts to consider "the wishes of the customer expressed to the bank, the circumstances of the customer known to the bank, including the size, type, and frequency of payment orders normally issued by the customer to the bank... and security procedures in general use by customers and receiving banks similarly situated" (Tang, 2015).

If we look at the cases of Business Email Compromise fraud in connection with which a complaint procedure was conducted before the National Bank of Serbia, it can be concluded that the first indicator of this fraud is the information that the fund recipient's headquarters (factory, branch office, etc.) and the headquarters or branch of the bank where the account from the payment order is located is not in the same country.

3 *Comparatively speaking, the counterpart of this standard from the LCT in the United Kingdom is the duty of care rule, i.e. in the case of banks, Quincecare duty. More on that later.*

Out of a total of 24 complaints related to BEC frauds that the National Bank of Serbia resolved, in 18 cases the country of the headquarters of the payee and the fraudulent recipient's bank differed. Another equally important indicator is a change of the account and bank to which a payment is made, in relation to the account (bank) to which the client had previously transferred funds to the same recipient. If these two indicators are combined, there is a very high degree of probability that it is a fraud. In addition to the above, an unusually high amount and/or frequency of transactions, as well as an unusual country of the payee's bank can be additional indicators. Moreover, since the bank has knowledge of every fraud committed against its clients, the presence of a bank to which BEC payments had previously been made would always have to be additionally checked. At the same time, Article 75, paragraph 2 of the LPS gives banks the possibility to exchange this data, so that they can have a specific grey list of banks to which such payments were made.

Therefore, the application of prudent banking standards when executing (international) payment orders in the current circumstances would mean, among other things, that the bank should collect and consolidate historical data and, thus, define indicators of fraud, and use those indicators when controlling the payment order. Should such indicators appear, the bank has the duty to recognize that the instructions may be harmful to the payer, which activates its obligation from Article 751, paragraph 2 of the LCT to warn the orderer. It is important to note here that banks have different degrees of automation in the execution of payment orders, different number, and structure of clients (residents/businesses) and payment orders, different ratio of domestic and international payment transactions, and generally different volume and structure of payment transactions. All this should be considered when assessing the fulfilment of the standard of prudent banking operations, and that standard should be assessed in relation to a specific bank.[4]

In any case, in circumstances where the number and value of BEC transactions, and other forms of APP fraud, are increasing, and when the bank is aware of this, it can hardly hide behind the exclusive application of Article 55, paragraph 2 of the LPS. In fact, that provision itself states that the bank is not obliged to check the correctness of the account number in the payment order, which does not mean that it is not obliged to warn the user if it has certain doubts regarding that account, or some other element of the payment order.

Based on the mentioned considerations, it could be concluded that, in a situation where the bank is aware of the existence of these types of fraud, as well as indicators that can signal fraud, it is not possible to assess the bank's liability solely from the aspects of LPS, but it is necessary to apply the standard of due diligence of a "professional order receiver", which, in the sense of the LCT, is the standard of care of a good expert. This does not mean (except in some exceptional cases) that the failure of the payer's bank to spot the fraud and warn the user can lead to the conclusion that it is liable for the entire amount of the loss caused by the fraud, but it would have to be assumed that the payer's bank contributed to that occurrence, due to its failure, i.e. increasing the damage incurred. In other words, it is clear who caused the damage, but all other participants in the payment transaction: the payer, the payee, and their banks, may have a certain (sometimes key) contribution to the incurrence of the damage. Therefore, in a specific case in which a failure of the payer's bank with regard to its obligation from Article 751, paragraph 2 of the LCT was established, the rule of shared responsibility from Article 192 of that law could be applied (with necessary adjustments).

4 *More on this in the US case, see Tang, 2015.*

Practice of the NBS

According to our knowledge, there is currently no domestic court practice related to APP fraud, but there is a practice of the National Bank of Serbia in complaints procedures commenced mainly by legal entities. In the period from 2021 until the end of 2023, the National Bank of Serbia resolved 24 complaints from users (mainly businesses) regarding improper execution of payment transactions due to BEC fraud. In those procedures, the National Bank of Serbia is authorised to determine whether the bank acted in accordance with the regulations governing payment services. In this regard, in its findings, the National Bank of Serbia first assessed the bank's actions from the aspects of the previously mentioned provisions of the LPS, finding that, in terms of those provisions, there is no liability of the bank for an incorrectly executed payment transaction. Nevertheless, the National Bank of Serbia also gave an opinion on the bank's actions from the aspects of Article 751 of the LCT. In this regard, the cases considered can be divided into several categories.

The first category consists of those cases where the bank has a subsidiary obligation from Article 751 par. 1 and 2 of the LCT entirely fulfilled, because after receiving a payment order with questionable instructions (in the sense of suspected fraud), the bank warned the user and demanded from them to check those instructions, but despite the warning, the users confirmed the initial instructions. In those cases, the National Bank of Serbia made it clear that the question of the bank's liability for contributing to the occurrence of damage cannot be raised, even from the aspects of the aforementioned provisions of the LCT. The second category consists of cases where the bank did not react to certain indicators, as they were individual and not combined indicators (for example, the payer is transferring the funds to a specific payee for the first time, and there is no indicator of a change in the account number). In that situation, the National Bank of Serbia expressed the opinion that, even if the question of the bank's shared liability for contributing to the damage could be raised, that contribution would be small. The third category includes cases where BEC fraud indicators were combined, and the bank did not react and warn the payer. In such cases, the National Bank of Serbia expressed the view that the application of the rule of shared liability for damage comes into consideration, with a potentially more significant degree of the bank's liability for contributing to the incurrence of the damage. In all cases where the NBS expressed a position regarding the application of that rule, that position was expressed in the form of an opinion (within the notice of findings) because, according to the current regulations, the NBS does not have the authority to determine damages.

Practice in the United Kingdom

Even comparatively speaking there is no rich case law related to Authorised Push Payment fraud. However, in July 2023, a very interesting case was concluded before the United Kingdom Supreme Court, where the victims (a retired couple who lost £700,000 in savings) of a highly sophisticated APP fraud sued the bank. The judgment in this case is a precedent that will have extremely significant consequences for the judicial practice in the United Kingdom, and perhaps more widely, and for that reason it is given a lot of space in this paper (Judgment, Philipp v Barclays Bank UK PLC, [2023], 25, 12/07/2023, hereinafter: SC Judgment). In addition, the United Kingdom also has the practice of the Financial Ombudsman Service, which in several cases of APP fraud made decisions in favour of injured payers.

Another interesting ruling from 2023 comes from the United States, where the Federal Court in Virginia found the peyee's bank is liable for damages suffered by the payer as a victim of BEC fraud (Studco Building Systems US, LLC v. 1st Advantage Federal Credit Union). Since concerns the liability of the payee's bank, not the payer's bank, we will not consider this case further, but it is listed for informational purposes only.

Liability of the Payer's Bank in the Case of Mrs Philipp v. Barclays

After Mr Philipp was contacted by an unknown person who introduced himself as a high-rank-ing official in the Financial Conduct Authority, and after that person, using social engineering, succeeded in gaining his trust and convincing him and his wife (Mrs Philipp) that their funds are not safe in their bank and investment fund, Mr Philipp first transfers the savings of GBP 950,000 to his wife's account in another bank (Barclays), and from there, she transfers GBP 700,000 to accounts in the United Arab Emirates in two transactions. A third transaction of GBP 250,000 was not carried out, because Barclays blocked the accounts based on information from the police that its clients were victims of fraud.[5] The name of this type of fraud is vishing, and this specific form is called safe account fraud.

The Stance of the Court of Appeal

After the first-instance court granted summary judgment refusing to find any liability on the part of the bank, the appellate court allowed the plaintiffs' appeal, finding that the bank could be held liable for its failure to exercise Quincecare duty. This rule of law of contractual liability of the bank to the customer was described, but not applied, in the case of Barclays Bank plc v Quincecare Ltd. Even prior to this case, the bank's duty of care towards the client had been recognised. Thus, in a judgment from the early seventies, the UK court held "that the bank was in breach of a duty of care owed to its customer to make inquiries before paying the cheque in circumstances where there were reasonable grounds for believing that the authorised signatories were 'misusing their authority for the purpose of defrauding their principal or otherwise defeating his true intentions'" (Karak Rubber Co Ltd v Burden, No 2 [1972] 1 WLR 602, according to SC Judgment, para 41). The Quincecare duty rule was applied in the Singularis case (Judgment, Singularis Holdings Ltd v Daiwa Capital Markets Europe Ltd, UKSC 50, 30/10/2019), where it was judged that the broker, i.e. the investment bank, violated the duty of care towards the client (company), when, without further investigation of the relevant circumstances, the bank carried out a transaction at the behest of a representative, (who is also the sole owner), even though any reasonable banker would realize that there are obvious signs that the owner of the company is abusing the company by instructing funds to be transferred to other segments of their business operations (See SC Judgment, para. 50).

It clearly follows from the above that the previous judicial practice described and applied the rule of duty of care of the bank exclusively in cases where the representative of the legal entity tried to misuse the company's funds. In this regard, the Court of Appeal tried to reinterpret the Quincecare duty in such a way as to extend it to the cases when a natural person issues an order to their bank, as a result of fraud. Analysing the aforementioned (and other) cases where the application of the duty of care was considered, the Court of Appeal notes that the crucial question is not whether such a duty exists, but when it is activated, i.e., what (lower) level of knowledge activates such an obligation for the bank. Referring to the Singularis case, this Court concludes that these are situations where there are conditions where an ordinarily prudent banker would examine those circumstances (see: The Court of Appeal, Approved Judgment [2022], EWCA Civ 116, 14/03/2022, para. 28; hereinafter: CA Judgment).

5 *For a detailed account of the facts, that is, for the manner in which the fraud was committed see The High Court of Justice, Business & Property Courts in Bristol, Approved Judgment, [2021] EWHC 10 (Comm), Judge Russen QC, Fiona Lorraine Philipp and Barclays Bank UK PLC, 18/01/2021, para 27 – 71.*

The court recognizes that the obligations, the execution of the payment order as it reads (and within the short, agreed to period – aut. comm.) and the application of reasonable skill and care (in the sense of preventing damage to the payer – aut. comm.) are performed in tension, and how, in a given case, resolving those tensions depends on the specific circumstances (see: CA Judgment, para. 34).

To the bank's argument that such a way of applying the Quincecare duty would prevent the normal execution of payment orders, the court replies that it is wrong to understand that rule in the context of APP fraud as the bank's obligation to examine each order from the aspects of such fraud, but rather the bank's obligation not to execute the order without additional checks only when there are circumstances that would lead an ordinary prudent banker to perform additional checks. Therefore, the court points out that the crucial information is what those circumstances are, that would lead an ordinary prudent banker to carry out additional checks in connection with the payment order, and in this connection the court states that it is necessary to determine all the facts in a specific case, i.e., it is not possible to pass a judgment in abbreviated procedure, as it was done by the first-instance court. In connection with those circumstances in this specific case, the Court of Appeal cites several: Ms Philipp's account history; that Ms Filip came in person to a bank branch that is not her usual branch; that she demanded the transfer of a huge sum of money, unprecedented in her case; that she had received that money in her account just a few days before; and that the transfer was made to the account of Lambi Petroleum in the UAE (see: CA Judgment, para. 71). It should also be pointed out that the court, with regard to the objective assessment of the circumstances that would lead to the examination of the client's order, as well as in relation to the administrative limitations of such examinations, recognises the importance of certain banking standards and good practice, primarily to assess what is feasible in this regard (see: CA Judgment, para 55).

A Critical Overview of the Supreme Court's Judgement

With this judgement, the Supreme Court not only refused to expand the previous understanding of the Quincecare duty, but also contested its existence, finding that it was actually a general rule on the duty of care of the bank as an order recipient, which it narrowed in the process. The court devoted several paragraphs of the judgment to the explanation of its understanding of the duty of care, and significantly less space to the explanation as to why such a duty did not exist in the specific case.

The Supreme Court did not accept the position of the Appellate Court that the logic behind the reasoning of the judgments in which the rule of Quincecare duty was considered is not based on the fact that the order to the bank was issued by the representative of the bank's client, and not the client themselves, and that it is therefore possible to extend that rule to the case when the order is issued by the client themselves, a natural person. On the contrary, the Supreme Court states that "as just noted, in Singularis Baroness Hale regarded this common factor as a defining characteristic of the 'Quincecare duty'" (SC Judgment, para 53.).

In the opinion of the Supreme Court, the first flaw in the understanding of the Court of Appeal (which it follows from the judgment in the Quincecare case), is that it assumes a tension between the bank's duty of care and its obligation to execute the client's payment order, i.e., it tries to reach a reasonable conclusion (which had already been reached in the case of Selengor and Karak), starting from a wrong assumption (see: SC Judgment, para 62). The Supreme Court expresses the view that the primary obligation of the bank as the payer (to which all others are subordinate) is to execute the user's order as it reads, and the duty to apply reasonable skill and care is activated only if the validity or content of the order is unclear or leaves a certain choice to the bank in regarding the manner of execution, and that from such a duty it is not possible to create a duty not to execute the order (see: SC Judgment, paragraphs 63 - 64). The Supreme Court tries to support this claim by referring to the rule of duty of care (applicable to any contract for the supply of goods or the provision of services), which is prescribed in the laws (Statutory Law), as an obligation to provide services with reasonable skill and care.

Referring to some judgments (not related to the Quincecare cases), the Supreme Court reduced the bank's duty of care to the fact that such diligence must be applied if the payment instruction leaves the bank free to choose the method of transfer, or in a situation where the instruction does not clearly inform what the bank should actually do (stating that, in such a situation, the duty of care means that the bank requires clarification of the instruction from the payer; See: SC Judgment, para. 34 - 37).

It could be said that the Supreme Court here completely sets aside the Selengor and Karak judgments (although it had previously claimed that reasonable conclusions had been reached in those judgments) because in these cases duty of care was not only understood as an obligation to demand clarification of incomplete instructions, but as an obligation for the bank to refrain from executing the order until it performs an additional investigation, if a reasonable and prudent banker would have reason to believe that the agent is trying to defraud his principal, the bank's client. The Supreme Court tries to "cover up" this stance by introducing, instead of the misuse of authority of the company's representative, the understanding that, in those cases, the authority to issue such orders does not actually exist (absence of authority), so the validity of those orders is disputed (see: SC Judgment, para. 69 - 89). The Court thus concludes that when the principles related to the right of representation are applied to the series of Quincecare cases (Selangor, Karak Rubber, Lipkin Gorman, Singularis), the rationale for the legal conclusions presented in those cases becomes clear. In a situation where the representative tries to pursue their own interest to defraud the company of which they represent, they do not have the actual authority to issue a payment order on behalf of the company (the representative generally has the presumed authority, as the company's representative to the bank, to issue payment orders, but not if the circumstances suggest a level of dishonesty which is obvious to the bank, and which would lead a reasonable banker to check the authority of the representative before executing the instruction; see SC Judgment, para. 90).

In other words, the Supreme Court considers that, even in cases on the Quincecare line, the bank does not have any special duty to refrain from executing the payment order, but, in those cases, the order has not really been authorised by the client, i.e. it has not even been issued, and the bank is obliged to recognize this in certain circumstances.

The Supreme Court concludes that "Quincecare duty is not, as that epithet might suggest, some special or idiosyncratic rule of law. Properly understood, it is simply an application of the general duty of care owed by a bank to interpret, ascertain and act in accordance with its customer's instructions. Where a bank is "put on inquiry" in the sense of having reasonable grounds for believing that a payment instruction given by an agent purportedly on behalf of the customer is an attempt to defraud the customer, this duty requires the bank to refrain from executing the instruction without first making inquiries to verify that the instruction has actually been authorised by the customer" (SC Judgment, para 97.).

However, the duty of care, defined in this way, is difficult to apply, e.g. in the case of Singularis, where the court found a violation of the duty of care on the part of the bank, and where the payment order which primarily harmed the company's creditors (and not the company itself, other owners, investors, etc.) was issued by a representative who was, simultaneously, the sole shareholder, director, etc. In other words, the Supreme Court obviously creates a sort of fiction in order to avoid conflict between the bank's two duties, namely that, when it recognizes potential abuse in the representative's order, the bank actually recognises that it does not have the authority to execute such an order, so it does not refrain from executing the order, but assumes that the order has not even been issued.

Based on the aforementioned, the Supreme Court concludes that such principles cannot be applied to a case where the client is a victim of fraud, because, in that situation, there is no doubt about the validity of the authorisation, since the client themselves give clear instructions to the bank, and there is no need to examine the order from the aspect of their authority to issue the instructions as such (see: SC Judgment, para. 100).

Although Ms Philipp's representative points out that, even in the case of APP fraud, as well as in cases where representatives try to defraud their orderers, the payment order does not reflect the true intention of the client, the Supreme Court rejects such an argument with the explanation that the fact that the intentions or wishes stemmed from incorrect beliefs does not make them less realistic or truly existing (see: SC Judgment, para. 101-102). In this regard, the Supreme Court sets aside the fact that in paragraphs 40 and 41 it cited the judgments of Selengor and Karak in the part where it is stated that the authorised signatories were "misusing their authority for the purpose of defrauding their principal or otherwise defeating his true intentions".

The Supreme Court further states that in the UK law, fraud does not cause the nullity of a contract or other legal transaction, but the person affected by the fraud can request such a transaction to be annulled, with that annulment affecting only the relationship with the person who committed the fraud, but not in relation to third parties, in this case the bank. In other words, the Supreme Court concludes that the fact that the client's order was caused by fraud authorises that client to request a refund from the person who committed the fraud, but does not call into question the validity of the payment order, nor does it provide a basis for a claim against the bank (see: SC Judgment, para. 103-105).

However, it should be noted that the Supreme Court accepts that the duty of care, in the sense of additional examination of instructions, exists when dealing with a person with a lack of mental capacity (see: SC Judgment, para. 99). In this regard, it is surprising that no parallel was drawn in that part with an individual who is a victim of fraud, especially in the case of the Philipp couple, who, as pensioners, had been so influenced by frauds, i.e. had been deluded in such a way that they were rejecting the warnings of their friends and the police, and the last transaction was prevented precisely thanks to their efforts, even though Mrs. Philipp insisted that the payment transaction be carried out. In other words, such a level of delusion certainly led to a lack of mental capacity when making decisions, i.e. issuing a payment order.

The Supreme Court did, however, consider limitations on the execution of a valid warrant issued by a genuinely authorised person. As examples, the Supreme Court cites cases where a transporter, who undertook the obligation to transport and unload goods to a factory, and who, upon arriving at that place, found the factory on fire, would have acted unreasonably if they had adhered to the assumed obligation. The Supreme Court finds that the logic here is such that it is reasonable to refrain from an order when it is clear that its execution would harm the orderer, provided that the circumstances indicating such harm had been unknown to the orderer when they issued the order. Applying this to the case of Ms Philipp, the Court finds that such a rule would be valid in a situation where the bank receives information from the police that its client is a potential victim of abuse (which is what happened for the last transaction, whereupon the bank refused to execute the order despite Ms Philipp's insistence). Nonetheless, as the Court concludes, the circumstances indicating fraud were well known to the client when she issued the payment orders, because she confirmed all those circumstances through the payment instructions, and at the same time she was unwavering in her intention to execute the orders, so the bank had no reason to suspects that the client is unfamiliar with those circumstances (see: SC Judgment, paras 107-110).

The Supreme Court actually contradicts itself here, because the circumstances of the fraud were also well known to the client with regard to the last transaction that the bank refused to perform, and the bank refused it not because the circumstances indicating the fraud were not known to the client, but because the bank received information from the police that it is definitely a fraud. Therefore, the logic referred to by the Court cannot be applied here, but the difference exists in the degree of knowledge on the part of the bank as the order recipient.

In the end, the Supreme Court found the conflict of two contradictory duties of the bank unacceptable for a different reason, that is not directly related to this case, nor indeed only to Authorised Push Payment frauds. Namely, the Court considers that the judge in the Quincecare case, having noticed a conflict (between two duties of the bank, which in reality does not exist), could not resolve that conflict in a principled way, but had to rely on political considerations (see: SC Judgment, para. 65-66). The problem with this approach is that it is not an appropriate method for identifying what duty is owed by a party pursuant to a contract. What rule would represent a "sensible compromise" or "fair balance" between broad policy goals is a matter for legislators and other policy-makers to consider. In deciding whether a party to a contract can be regarded as having undertaken an obligation to the other party without having done so expressly, the aim of the courts is the more modest one of seeking to give effect to the presumed common intention of the contracting parties (SC Judgment, para 67.).

This attitude deserves a special observation. Namely, in the absence of certain rules to regulate new circumstances, such as APP fraud, i.e., when those specific circumstances were not taken into account when prescribing those rules, the court would have to (especially in the common law system) determine that balance, when there is a reason for it in a general provision of law or case law, as there had been in the Quincecare cases. Here, the famous Lon L. Fuller should be quoted: "The common law is not the work of any one judge, but of many, collaborating through time. In the course of its history the implementation of its rules has been improved and refined. At the same time, the rules themselves have often been revised to make possible an effective implementation of them. Though the common law is said to be built- on precedent, there is no controlling verbal formulation of the meaning of any particular precedent. What the court said in a former case is always subject to reinterpretation as new situations arise. The scope of the precedent is determined not only in the light of the end-in-view pursued by the court that decided it, but in the light of ends then out of view because not stirred into active consciousness by the facts of the case being decided" (Fuller, 1958).

Therefore, the advantage of the common law system compared to the continental one, lies in the fact that the courts create law and, through the reinterpretation of precedents, they can adapt the law to new situations and concrete cases much faster, without having to (as is the case in the continental system) wait for the legislator who, as a rule, lags behind in practice (and reality), and even when they react, it often takes time for the courts to articulate what the legislator had actually "said" or "meant to say". That advantage was not used here.

Contingent Reimbursement Model Code for Authorised Push Payment Scams

The opinion of the Supreme Court that we should wait for the legislator was certainly influenced by the fact that the banks themselves took an initiative to independently and voluntarily regulate this area (through self-regulation)[6] under the auspices of the Lending Standards Board (a UK organization undertaking activities regarding the self-regulation of banks and other creditors). Thus, a part of the banks (including Barclays) voluntarily accepted the application of the Contingent Reimbursement Model Code for Authorized Push Payment Scams, which entered into force in May 2019, and which determines in which cases the payer's and payee's banks are obliged to compensate the payer for the loss (https://www.lendingstandardsboard.org.uk/wp-content/). The Code applies only to domestic transactions. In addition, two key standards, rules of law in that code, should be pointed out, the method of application of which depends on the allocation of loss (user's or bank'/banks').

The first standard is gross negligence, where the payment service provider is not obliged to compensate the user for the loss if they prove the existence of such negligence. The Code lists several explicit examples of such negligence, such as: 1) ignoring effective warnings given by the payment service provider; 2) failure to take appropriate action by the user after a clear negative result of the payee's confirmation; 3) issuing a transfer order without a reasonable basis for the user to believe that the recipient is the person to whom they wanted to transfer funds, or that the transfer is being made in return for real goods and services, etc. - while taking into account the characteristics of the user, and the complexity and sophistication of the fraud scheme. In addition to these exempli causa cases of gross negligence, the Code also includes the general concept of gross negligence. It would appear even in the UK this standard proves necessary, so it is to be expected that the legislator will use this, or a similar standard, when prescribing the rules for the allocation of losses, which will bring the ball back from the parliament's court to the court's.

Another standard, the application of which depends on the allocation of loss (the payer's bank, if it had not met all the required standards, or the bank's fund, if the bank had applied all the standards) is the "no-blame scenario", which again, in the event of a dispute, would require a court assessment on whether or not the bank, in that specific case, had met all the standards expected of it.[7]

Therefore, even with legislative intervention, the courts will have to engage in certain "political" considerations, i.e., give a certain meaning to legal standards in each specific case.

The Financial Ombudsman Service's Practice

The Financial Ombudsman Service (FOS) was established in the United Kingdom by the Parliament to resolve user complaints about the conduct of financial service providers in a fair and impartial manner. When it comes to Authorised Push Payment fraud, the Financial Ombudsman has made distinct decisions in detail, taking into account all the circumstances of a specific case.

Thus, in the case of a user who was a victim of APP fraud, which was carried out over the phone, and where she was instructed by the fraud to make a payment to a secure account, because her funds were at risk, the Ombudsman concluded that, in this particular case, the bank (which is a signatory to the Code) did not prove that, in terms of the Code, the beneficiary acted with extreme negligence, and ordered the bank to refund the total amount of the disputed transactions (see: FOS, DRN-3130787, 28 January 2022).

6 *For more on the definition of self-regulation see: Jovanić, 2019.*

7 *For more on the Code and the recent effects of its application see: Maher, 2021, 140-145.*

Similarly, in the case of an entrepreneur who was a victim of BEC fraud, the Ombudsman decided that his bank should reimburse him the entire amount of the disputed international transaction of GBP 24,235.97 (although the beneficiary demanded that the bank reimburse him 50%). In their decision, the Ombudsman pointed out that the bank had received several opinions from that institution, clearly stating that the bank has an obligation to identify and react in case of suspicious (in terms of fraud risk) transactions, and that, in this particular case, the user had suddenly changed the account to which they had been paying a long-term business partner, as well as that the transaction amount was unusually high for the user. The Ombudsman also analysed the level of attention the defrauded entrepreneur had used and concluded that there was no negligence on their part, because they had actually suspected and demanded that the business partner with whom they believed they were communicating explain the reason for changing the account, but the fraud who had hacked into the recipient's email was extremely convincing, using the accounts of multiple employees of the recipient of the funds who confirmed the reasons for the change in payment instructions. This decision was made independently of the Code, which, as stated, does not apply to international payment transactions (see: FOS, DRN-3087679, 6 May 2022).

After these decisions from 2022, one more decision from November 2023 (after the Supreme Court's judgement) is worth mentioning, where the user lost GBP 50,000 in a "safe account" fraud, which also involved international transactions (see: FOS, DRN-4453209). The Ombudsman did not find the bank liable now, as in the first case we mentioned. In fact, they concluded that the user's bank fulfilled the obligation to recognise and react in case of suspicious transactions, because it warned the user in detail, and those warnings were specific enough to include the very fraud scenario to which the user was exposed. It is true that, unlike the first case, here the bank warned the user during the execution of the second transaction (the first was in the amount of only GBP 76), but it is difficult to evade the impression that the Ombudsman also took into account the judgment of the Supreme Court in the case of Mrs Philipp when making this decision.

Response of the European Commission - Proposal for a Regulation on Payment Services

The description of the legal framework of the payer's bank's liability in case of Authorised Push Payment fraud, and the need to invoke the general provisions of the Civil Code for the purpose of determining this liability are clear evidence that the special framework imported from the payment services directives has legal gaps. Noticeably aware of these gaps, the European Commission in its proposal for new regulations on payment services, this time in the form of a regulation (Proposal for a Regulation of the European Parliament and of the Council on Payment Services in the Internal Market and Amending Regulation (EU) No 1093/ 2010, Brussels, 28.6.2023), partly fills those gaps. In addition to this proposal, there is also a Proposal for a third directive on payment services, but it deals exclusively with status issues related to payment service providers, such as the establishment, supervision, etc. (Proposal for a Directive of the European Parliament and of the Council on Payment Services and Electronic Money Services in the Internal Market [...], Brussels, 28 June 2023).

In Chapter 4 of the proposed regulation, which is dedicated to the authorisation of payment transactions, Article 49 stipulates that the payee's bank, at the request of the payer's bank, verifies whether the account on which the payment order is written belongs to the person named in that order as the recipient of the funds. If there is a discrepancy, the bank informs the payer about it, but if the payer still requests that the transaction be carried out, such a transaction will be considered approved. Payers will be able to turn off the service, but they will then have to be warned that the funds may end up in an account that does not belong to the intended recipient of the order. In any case, the payer cannot bear losses if their payment service provider did not inform them that there was a discrepancy, unless they had chosen not to use that service.

In the case of impersonation fraud (spoofing) where the user is a victim of fraud by an unknown person who presented themselves as an employee of their payment service provider, that provider would, in accordance with Article 59 of the draft regulation, be obliged to return the entire amount to the user, on fraud of an authorised transaction, if the user immediately reported the fraud to the police, and on the condition that the payment service provider cannot prove that the user acted with extreme negligence, or that they were possibly a participant in that fraud. Therefore, in contrast to Directive 2015/2366, which "provides the broad protection accorded to a payment service provider acting on a unique identifier" (Benjamin, 2019), this introduces a presumption of his responsibility, which can be refuted by proving that the payer acted with gross negligence.

Thus, the standard of gross negligence is applied again, as was the case with the first and second payment services directives, with the fact that, in the case of those regulations, it was used only in the case of misuse of payment instruments. When it comes to the liability of the payment service provider in case of this type of abuse, the Proposal for the Regulation is mostly within the framework of the existing solutions from the Directives, with two differences. The first is that the competent authorities (who supervise the implementation of the regulation) can reduce the liability of the payer, due to their not fulfilling their obligations regarding the use of the payment instrument and its protection, if they did not act fraudulently, i.e. if they have not intentionally disclosed certain data regarding the payment instrument, taking into account, in particular, the nature of the security elements and the specific circumstances under which the payment instrument was lost, stolen or misused. Another difference is that, if the so-called strong customer authentication is not applied, the payer is not held liable, unless they had acted fraudulently.

In addition to the aforementioned Chapter, which introduces stricter rules (assumptions of responsibility) for payment service providers in terms of abuse and fraud, Chapter 8 of the Draft Regulation gives a number of significant jurisdictions to the authorities of member states that are responsible for supervising the application of those rules. These jurisdictions mainly include the supervision of payment service providers in a way that is already carried out in Serbia, by the National Bank of Serbia (on - site and off - site supervision), which includes the authority to impose certain measures on these service providers in order to eliminate irregularities, as well as to impose administrative fines. Nevertheless, the adoption of this proposal and its implementation into the Serbian legislation would bring additional possibilities in that control, such as the possibility to obtain data from the competent authorities in connection with certain criminal investigations and procedures, as well as to use measures such as periodic penal payments or the publication of imposed measures and sanctions.

Conclusion

Therefore, when the existing regulations, new proposals, as well as (quasi)judicial domestic and comparative practices are analysed, it can be concluded that the payer's bank has no reason to be lulled into the belief that there can be no liability on their side for the loss caused by Authorised Push Payment fraud. Regardless of the fact that the Supreme Court in the UK has narrowed down the current understanding of duty of care on the part of the bank, the increasing number and scope of fraud in payment transactions will sooner or later lead to the application of the principle that the risk is borne by those who can better manage it. This is additionally confirmed, among other things, by the Code, the proposal for a new regulation on payment services by the European Commission, the practice of the Financial Ombudsman in the UK, and the National Bank of Serbia.

Until the adoption of new regulations or certain activities of banks in the direction of self-regulation, courts, regulators and supervisors of the banking sector will have a decisive role in assessing the existence of possible liability of the payer's bank. After all, the new regulations will certainly be based on certain legal standards to cover many different types of fraud (with authorised and unauthorised transactions), which will again mean fairly broad discretionary jurisdictions for courts and supervisors.

In any case, according to existing domestic regulations, the eventual liability of the payer's bank in the event of the execution of an authorised payment order resulting from fraud should generally not lead to its sole liability. Failure to take measures which, in terms of the domestic Law on Banks, could be understood as measures of prudent banking operations, i.e., failure to warn the payer when there are indicators of potential fraud, could, in terms of the Serbian Civil Code, lead to shared responsibility of the bank with the payer for the resulting damage (corresponding, i.e., adjusted by the application of Article 192 of the LCT). In this regard, regarding the fulfilment of the conditions for activating the obligation of the payer's bank from Article 751, paragraph 2 of the LCT, the most important thing is to determine how the bank acted in a specific case, in terms of the existence of appropriate internal procedures for the recognition and prevention of fraud and the manner of their application. In other words, it is important to determine whether the bank, by establishing adequate policies, procedures, and software tools, enabled a common, reasonable banker to recognise circumstances that require checking the payment order. Therefore, in order to assess whether, in a specific case a reasonable banker could, or had to, suspect the correctness of the instruction, the court would first have to assess the fulfilment of the standard of prudent banking operations in the execution of the payment transactions in question. In order to appreciate this, the court should obtain an opinion from an expert in the field of payment services (not from experts in the general economic profession) or institutions responsible for supervision of banks, on the bank's actions in a specific case. For the reason that "in order for banks to achieve a balance between protecting consumers against online banking fraud and the costs of additional safeguards, courts should follow uniform and objective "best practices" determined by agency experts when adjudicating liability" (Tang, 2015).Otherwise, by imposing security requirements in the provision of payment services that are beyond what is economically speaking reasonable and justified, negative effects could be produced for the majority of users of those services, as the disproportionate costs of security mechanisms would spill over into the price and/or quality of services.[8] In addition, overly rigorous requirements for the bank could lead to moral hazard on the part of the payer.

8 *For more on this see: Burrow, 2013, 394-398.*

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KOMPARATIVNA ANALIZA STABILNOSTI BANKARSKOG SEKTORA ZEMALJA ZAPADNOG BALKANA

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Rezime: Bankarski sektor predstavlja veoma važan segment finansijskog sistema nezavisno da li je reč o bankocentričnim ili tržišno orijentisanim finansijskim sistemima. Za zemlje Zapadnog Balkana, očuvanje stabilnosti bankarskog sektora je posebno značajan preduslov ostvarenja finansijske stabilnosti s obzirom na dominantnu ulogu bankarskog sektora u strukturi finansijskog sistema. Odsustvo stabilnosti bankarskog sektora može negativno uticati, ne samo na stabilnost finansijskog sektora, već i ekonomskog sistema u celini. Dodatno, obezbeđenje stabilnosti bankarskog sektora u privredama Zapadnog Balkana ima poseban značaj usled činjenice da je bankarski sektor ključni izvor finansiranja privrednih aktivnosti u ovim ekonomijama. Shodno navedenom, cilj istraživanja ogleda se u identifikovanju nivoa stabilnosti bankarskog sektora u zemljama Zapadnog Balkana. Rezultati istraživanja sugerišu da bankarski sektori posmatranih zemalja beleže zadovoljavajuće i u određenoj meri ujednačene nivoe finansijske stabilnosti.

Ključne reči : finansijska stabilnost, bankarski sektor, Zapadni Balkan

JEL klasifikacija: G21, G28, F36

Uvod

Globalni finansijski sistem se krajem XX i tokom prve decenije XXI veka suočio sa ozbiljnim izazovima. Azijska finansijska kriza iz 1997. godine pokazala je da je neophodno značajnu pažnju posvetiti kretanjima u finansijskom sektoru, s obzirom na ekonomske posledice koje mogu proisteći iz odsustva finansijske stabilnosti (Edwards, 2003; Arner i Taylor, 2009). Međutim, globalna finansijska kriza iz 2008. godine u velikoj meri je doprinela promeni pristupa u pogledu finansijske stabilnosti. Ključni uzrok ovih kriza bila su upravo dešavanja u finansijskom sektoru (Dugalić et al., 2021). Nakon globalne recesije iz 2008. godine, području finansijske stabilnosti se pristupa strateški i sistematično. Stabilnost finansijskog sektora se posmatra kao jedan od neizostavnih preduslova održivog rasta i razvoja ne samo u nacionalnim okvirima već i na globalnom nivou (Shirakawa, 2012; Ahulu et al., 2021). Po tom osnovu, razvijaju se sistemi za praćenje i upravljanje stabilnošću finansijskog sistema, pri čemu se posebno apostrofira važnost primene makroprudencijalnih mera u domenu monetarne politike (Borio, 2014; Grbić, 2022).

U cilju postizanja stabilnosti, kako nacionalnih finansijskih sistema, tako i globalnog finansijskog sistema u celini, Međunarodni monetarni fond dizajnirao je set indikatora finansijske stabilnosti, namenjene proceni i unapređenju finansijske stabilnosti na globalnom nivou. Kako bi se obezbedila harmonizovanost u postizanju finansijske stabilnosti na globalnom nivou, centralne banke nacionalnih ekonomija uskladile su svoje sisteme praćenja i upravljanja finansijskom stabilnošću sa standardima i smernicama Međunarodnog monetarnog fonda. Pritom, najveći deo ovih standarda usmeren je ka depozitnim institucijama odnosno bankarskom sektoru, pri čemu su obuhvaćeni i ostali delovi finansijskog sistema.

U zemljama Zapadnog Balkana bankarski sektor je najznačajniji segment finansijskog sistema (Muller-Jentsch, 2007; (Grbić i Luković, 2020). Nerazvijenost tržišta kapitala, političko i ekonomsko uređenje tokom druge polovine XX veka primarno su uticali da poslovne banke imaju dominantan položaj u odnosu na druge finansijske institucije (Dugalić i Štimac, 2014; Jakšić i Purić, 2014). Po tom osnovu postizanje stabilnosti bankarskog sektora je veoma značajno za ostvarenje finansijske stabilnosti u ovim ekonomijama. Analogno tome, predmet rada se bazira na ispitivanju stepena finansijske stabilnosti bankarskog sektora u zapadnobalkanskim ekonomijama. Cilj istraživanja je dvojak. Osnovni cilj istraživanja je da se ustanovi da li je u periodu od 2007. zaključno sa 2021. godinom došlo do pogoršanja, odnosno poboljšanja stabilnosti bankarskog sektora u posmatranim zemljama. Posredstvom izvedenog cilja istraživanja nastoji se utvrditi da li se bankarski sektor Srbije odlikovao višim ili nižim stepenom stabilnosti u poređenju sa ostalim ekonomijama Zapadnog Balkana.

Rad je strukturiran iz četiri dela. U prvom delu rada teorijski je razmatran koncept finansijske stabilnosti. U drugom delu rada prikazani su najznačajniji indikatori finansijske stabilnosti dizajnirani od strane Međunarodnog monetarnog fonda. Treći deo rada baziran je na analizi finansijske stabilnosti bankarskih sektora zemalja Zapadnog Balkana. Procena finansijske stabilnosti posmatranih finansijskih sistema vršena je posredstvom osnovnih indikatora finansijske stabilnosti, pri čemu je u analizu uključen i z score kao jedan od najznačajnijih i najčešće korišćenih pokazatelja. U četvrtom delu rada prikazana su zaključna razmatranja.

O finansijskoj stabilnosti

Postizanje stabilnosti finansijskog sistema veoma je važan preduslov za uspešno funkcionisanje nacionalne ekonomije (Creel et al., 2015; Jayakumar et al., 2018). Osvrtom na ulogu koju finansijski sistem ima u finansiranju privrednih aktivnosti može se istaći da stabilan finansijski sistem doprinosi rastu i razvoju nacionalne ekonomije, ali paralelno pozitivno utiče na stabilnost ekonomskog sistema jedne zemlje. Imajući u vidu međuzavisnost i kompleksne interakcije između različitih elemenata finansijskog sistema, kako međusobno, tako i sa realnim sektorom, finansijsku stabilnost je teško precizno definisati. Usled toga, ne postoji opšte prihvaćena definicija finansijske stabilnosti.

Sistem Federalnih rezervi (2023) ističe da je finansijski sistem stabilan kada banke, drugi zajmodavci i finansijska tržišta mogu da obezbede domaćinstva, zajednice i preduzeća finansijskim sredstvima koja su im potrebna da investiraju i participiraju u ekonomiji bilo kada ona dobro funkcioniše ili pak kada je suočena sa određenim poremećajima. Prema definiciji Evropske centralne banke (2022), finansijska stabilnost predstavlja stanje u kom je finansijski sistem sposoban da podnese prisustvo šokova i finansijskih neravnoteža. Svetska banka (2023) pod stabilnim finansijskim sistemom podrazumeva sistem koji je u stanju da efikasno alocira resurse, procenjuje i upravlja finansijskim rizicima, ali i koji doprinosi održavanju zaposlenosti blizu prirodnog nivoa i koji je sposoban da eliminiše nepovoljna kretanja koja mogu uticati na monetarnu stabilnost ili nivo zaposlenosti. Preciznije rečeno, finansijski sistem je stabilan kada je u mogućnosti da apsorbuje finansijske neravnoteže bilo da one nastaju endogeno ili pak kao rezultat značajnih nepovoljnih i nepredviđenih događaja. Po tom osnovu stabilan finansijski sistem posredstvom samokorektivnih mehanizama apsorbuje šokove sprečavajući da neželjeni događaji imaju nepovoljan uticaj na realnu ekonomiju. Shodno tome ističe se da je finansijska stabilnost od presudne važnosti za postizanje ekonomskog rasta s obzirom da se većina transakcija realnog sektora obavlja posredstvom finansijskog sistema.

Schinasi (2004) pod stabilnim finansijskim sistemom podrazumeva sistem koji je sposoban da:

- olakša i obezbedi efikasnu alokaciju ekonomskih resursa (prostorno i vremenski), ali i drugih ekonomskih procesa (poput akumulacije bogatstva, finansiranja ekonomskog rasta i obezbeđenja društvenog prosperiteta);

- proceni, kvantifikuje, alocira i upravlja finansijskim rizicima i

- zadrži svoju sposobnost da obavlja svoje ključne funkcije, čak i u slučaju kada je izložen dejstvu eksternih šokova ili finansijskih neravnoteža.

Slično prethodnim pojmovnim određenjima, Narodna banka Srbije (2023) pod finansijskom stabilnošću podrazumeva sposobnost čitavog finansijskog sistema (sačinjenog od finansijskih posrednika, finansijskih tržišta i finansijske infrastrukture) da efikasno alocira finansijske resurse i omogući ostvarenje ključnih makroekonomskih funkcija, kako u normalnim uslovima, tako i u uslovima finansijske neravnoteže ili potresa u domaćem i međunarodnom okruženju (Drvendžija, 2015). Tokom protekle decenije značajna pažnja posvećena je razvoju sistemskog pristupa regulaciji i superviziji finansijskog sistema u cilju očuvanja njegove stabilnosti. Razlozi tome ogledaju se ne samo u činjenici da finansijski sistem ima daleko veći uticaj na ekonomsku aktivnost nego što je to ranije isticano, već i usled visokih troškova finansijske krize i činjenice da očuvanje cenovne stabilnosti nije jedini dovoljan uslov za postizanje finansijske stabilnosti.

U sklopu pojmovnog određenja finansijske stabilnosti značajno je ukazati i na stanovište Fabrisa i Lubirića (2023) koji ističu da je finansijski sistem stabilan u situacijama kada finansijske institucije dobro posluju, odnosno kada su u stanju da stanovništvu i privredi obezbede resurse i usluge neophodne za njihov rast i razvoj. U periodima finansijske nestabilnosti, kriza se veoma brzo može proširiti iz realnog u finansijski sektor, s obzirom da banke nisu u stanju da finansiraju profitabilne projekte i izvršavaju svoje obaveze. Navedeno se u krajnjoj instanci može negativno odraziti ne samo na stabilnost finansijskog sektora, već makroekonomsku stabilnost privrede u celini.

Izuzev nacionalnih okvira očuvanje finansijske stabilnosti značajno je i na globalnom nivou. Globalizacija finansijskog sistema i tesna povezanost među finansijskim institucijama na globalnom nivou uticala je da se nestabilnost jednog finansijskog sistema veoma brzo može preneti i na finansijske sektore ostalih zemalja (Acedanski i Karkowska, 2022). To je potvrdila ekonomska kriza iz 2008. godine, koja se najpre pojavila u finansijskom sektoru Sjedinjenih Američkih Država da bi se veoma brzo prenela na finansijske sisteme Velike Britanije, Irske i Islanda, a potom i na ostatak sveta. To praktično znači da se finansijska kriza veoma brzo i lako može preneti i na ekonomije sa stabilnim i zdravim finansijskim sistemima. U tom cilju, tokom poslednjih nekoliko godina sve su prisutnije inicijative za uspostavljanje odgovarajućih regulativa, pristupa i smernica za praćenje, upravljanje i očuvanje finansijske stabilnosti na međunarodnom nivou.

Indikatori finansijske stabilnosti

Značaj finansijske stabilnosti kao preduslova održivog ekonomskog rasta stvorio je potrebu za kvantifikovanjem i monitoringom finansijske stabilnosti. Azijska finansijska kriza iz 1997. godine, kao i globalna ekonomska kriza iz 2008. godine dodatno su potvrdile neophodnost postojanja indikatora za procenu stabilnosti finansijskih sistema. S obzirom na globalizaciju svetske privrede i činjenicu da se finansijska nestabilnost može veoma lako i brzo iz jednog finansijskog sistema preneti na druge, neophodno je bilo razviti globalni okvir za procenu i praćenje finansijske stabilnosti. U tu svrhu zvaničnici Međunarodnog monetarnog fonda su 2006. godine dizajnirali set indikatora za procenu finansijske stabilnosti, dok su u 2009., 2013. i 2019. godini vršene određene izmene i dopune prethodno navedenog seta indikatora (International Monetary Fund, 2019).

Prema smernicama Međunarodnog monetarnog fonda indikatori finansijske stabilnosti su podeljeni u dve grupe: osnovne i dopunske. Osnovni set indikatora obuhvata 12 pokazatelja i oni su prvenstveno usmereni na depozitne institucije. Revizijom Međunarodnog monetarnog fonda 2019. godine osnovni set indikatora je proširen na 18 pokazatelja i dodatnu dimenziju koja obuhvata kretanja na tržištu nekretnina. Posredstvom njih se posmatraju performanse depozitnih institucija u pogledu solventnosti (adekvatnosti kapitala) zatim likvidnosti, profitabilnosti, kvaliteta aktive i njihove osetljivosti na tržišni rizik što je prikazano u tabeli 1. Sa druge strane, drugu grupu indikatora finansijske stabilnosti čine dopunski, odnosno podsticajni indikatori. Ovaj set indikatora čini 28 pokazatelja pri čemu se najveći broj indikatora odnosi na depozitne institucije (13), zatim finansijske korporacije (2), nefinansijske korporacije (5), odnosno sektor domaćinstva (2), tržišnu likvidnost (2) i tržište nekretnina (4) (San Jose et al., 2008). Identično, kao i u pogledu osnovnog seta indikatora, revizijom iz 2019. godine broj pokazatelja u sklopu podsticajnog seta indikatora povećan je na 35.

Tabela 1. Osnovni indikatori finansijske stabilnosti za depozitne institucije

Kriterijum	Indikator
Adekvatnost kapitala	• Regulatorni kapital u odnosu na rizikom ponderisanu aktivu • Regulatorni osnovni kapital u odnosu na rizikom ponderisanu aktivu • Nenaplativi krediti umanjeni za rezer visanja za kapital

Kvalitet aktive	• Problematični krediti u odnosu na uk upne kredite • Sektorska distribucija kredita u odnosu na ukupne kredite
Profitabilnost	• Prinos na aktivu • Prinos na kapital • Kamatna marža na bruto prihod • Nekamatni rashodi prema bruto prihodima
Likvidnost	• Likvidna aktiva u odnosu na ukupnu aktivu • Likvidna aktiva u odnosu na kratkoročne obaveze
Osetljivost na tržišni rizik	• Neto otvorena devizna pozicija u odnosu na kapital

Izvor: Medjunarodni monetarni fond (2019). Financial Soundness Indicators Compilation Guide. str. 2

Osnovni indikatori se smatraju vitalnim za analizu stabilnosti finansijskog sektora kroz evaluaciju finansijske stabilnosti depozitnih institucija posredstvom pet dimenzija. Osvrtom na tabelu 1 može se ustanoviti da se vrednosti prikazanih indikatora dobijaju na bazi osnovnih kategorija prikazanih u bilansu stanja odnosno bilansu uspeha. Indikatori bazirani na adekvatnosti kapitala procenjuju da li depozitne institucije poseduju dovoljno kapitala da apsorbuju potencijalne gubitke u odnosu na aktivu ponderisanu rizikom ili pak u odnosu na problematične kredite. Indikatori kvaliteta aktive prikazuju ranjivost depozitnih institucija od potencijalnih gubitaka koji mogu nastati po osnovu problematičnih kredita ili pak neadekvatne sektorske diversifikacije kreditnih plasmana. Indikatori profitabilnosti procenjuju efikasnost depozitnih institucija u pogledu korišćenja svoje aktive i kapitala u pogledu sposobnosti generisanja dodatnih prihoda i minimiziranja određenih kategorija troškova. U pogledu dimenzije likvidnosti procenjuje se sposobnost depozitnih institucija da zadovolje iznenadnu tražnju za likvidnom aktivom. Poslednja, ali ne i manje bitna dimenzija finansijske stabilnosti odnosi se na procenu osetljivosti depozitnih institucija na tržišne rizike. Suština indikatora osetljivosti na tržišni rizik je da prikažu u kojoj meri su depozitne institucije sposobne da posredstvom kapitala ublaže negativne promene koje mogu proisteći usled volatilnosti deviznog kursa (Asian Development Bank, 2015).

U cilju praćenja finansijske stabilnosti na globalnom nivou, centralne banke nacionalnih ekonomija dostavljaju izveštaje Međunarodnom monetarnom fondu o finansijskoj stabilnosti njihovih finansijskih sistema. Pomenutim izveštajima je prvenstveno obuhvaćen set osnovnih indikatora, pri čemu se podaci distribuiraju u različitim dinamikama (mesečno ili kvartalno). Kada je reč o dopunskim, odnosno o podsticajnim indikatorima, nacionalne ekonomije nisu u obavezi da dostavljaju Međunarodnom monetarnom fondu podatke koji se odnose na ovu grupu indikatora. Međutim, dostavljanje pomenute grupe indikatora se preporučuje kako bi se dobili što adekvatniji zaključci u pogledu stabilnosti njihovih finansijskih sistema.

Dodatno, treba istaći da značajan broj centralnih banaka publikuje izveštaje o stabilnosti finansijskog sistema, čija je metodologija usklađena sa smernicama Međunarodnog monetarnog fonda.

Navedeno je karakteristično za zemlje Zapadnog Balkana, čije centralne banke redovno, u različitim dinamikama publikuju izveštaje o stabilnosti finansijskog sistema. S obzirom na karakteristike njihovih finansijskih sistema, izveštajima o stabilnosti finansijskog sistema primarno je obuhvaćen bankarski sektor, pri čemu se posmatraju i ostali segmenti i učesnici finansijskog sistema, u cilju dobijanja što objektivnijih zaključaka o stabilnosti finansijskog sistema.

Analiza stabilnosti bankarskog sektora zemalja Zapadnog Balkana

Finansijski sistemi zemalja Zapadnog Balkana odlikuju se izraženom bankocentričnošću. Usled toga, stabilnost bankarskog sektora ima veoma značajnu ulogu u ostvarenju stabilnosti njihovih finansijskih sistema. U sklopu praćenja rezultata sprovedenih mera usmerenih ka očuvanju finansijske stabilnosti, centralne banke posmatranih zemalja publikuju godišnje izveštaje o stabilnosti bankarskog sektora koji predstavljaju dominantan izvor podataka korišćenih u radu. Pored toga, u radu su korišćeni podaci sa sajta Međunarodnog monetarnog fonda, prvenstveno za inicijalne godine posmatranog vremenskog intervala.

Adekvatnost kapitala i kvalitet aktive

Adekvatnost kapitala predstavlja jedan od preduslova stabilnosti bankarskog sektora. Adekvatna kapitalizovanost bankarskog sektora ujedno svedoči o njegovoj zadovoljavajućoj solventnosti i većoj otpornosti na iznenadne poremećaje (Todorović, 2003; Alihodžić i Nadžaković, 2022). Procena kapitalizovanosti bankarskog sektora najčešće se vrši posredstvom dva indikatora; adekvatnosti ukupnog i adekvatnosti osnovnog kapitala (Zelenović i Vunjak, 2014). Adekvatnost (ukupnog) kapitala predstavlja odnos između ukupnog kapitala bankarskog sektora i rizikom ponderisane aktive. Prema standardima Bazelskog komiteta za bankarsku supervizije, regulatorni minimum adekvatnosti kapitala iznosi 8% u odnosu na rizikom ponderisanu aktivu. Pritom, nacionalne supervizorske institucije mogu propisati i strožije standarde adekvatnosti kapitala. Primera radi, u Republici Srbiji do 2017. godine regulatorni zahtevi u pogledu adekvatnosti kapitala iznosili su 12% u odnosu na rizikom ponderisanu aktivu (Narodna banka Srbije, 2019). Sa druge strane, indikator adekvatnosti osnovnog kapitala predstavlja odnos između osnovnog kapitala i rizikom ponderisane aktive. Regulatorni minimum ovog indikatora adekvatnosti kapitala propisan od strane Bazelskog komiteta iznosi 6%.

Tabela 2. Adekvatnost kapitala, period 2007-2021. godine, (u %)

Godina	Srbija	Crna Gora	BiH	Albanija	Severna Makedonija
2007.	23,3	17,1	17,1	17,1	17,0
2008.	21,9	15,0	16,3	17,2	16,2
2009.	21,4	15,8	16,1	16,2	16,4
2010.	19,9	15,9	16,2	15,4	16,1
2011.	19,1	16,5	17,1	15,6	16,8

2012.	19,9	14,7	17,0	16,2	17,1
2013.	20,9	14,4	17,8	19,1	16,8
2014.	20,0	16,2	16,3	17,7	15,7
2015.	20,9	15,5	14,9	15,8	15,5
2016.	21,8	16,1	15,8	16,0	15,2
2017.	22,6	16,4	15,7	16,6	15,7
2018.	22,3	15,6	17,5	18,7	16,5
2019.	23,4	17,7	18,0	18,7	16,3
2020.	22,4	18,5	19,2	18,7	16,7
2021.	20,8	18,5	19,6	18,0	17,3

Izvor: Izveštaji o finansijskoj stabilnosti koje publikuju centralne banke posmatranih zemalja;

Medjunarodni monetarni fond (2023)

Posmatrajući adekvatnost kapitala bankarskih sektora zemalja Zapadnog Balkana u periodu od 2007. zaključno sa 2021. godinom na bazi tabele 2, može se ustanoviti da su bankarski sistemi posmatranih ekonomija adekvatno kapitalizovani. Tokom svih godina posmatranog perioda vrednost adekvatnosti kapitala je znatno premašivala regulatorne minimume od 8%. Takođe, ono što se dodatno može primetiti je da većina posmatranih bankarskih sektora beleži povećanje vrednosti stope adekvatnosti kapitala u odnosu na početak posmatranog perioda. Izuzetak predstavlja jedino bankarski sektor Srbije u kome je nivo adekvatnosti kapitala bio niži na kraju 2021. u odnosu na 2007. godinu. Među posmatranim ekonomijama, u periodu 2007-2021. godina, bankarski sektor Srbije beležio je najviše vrednosti adekvatnosti kapitala, dok je bankarski sektor Severne Makedonije bio manje kapitalizovan u odnosu na bankarske sektore ostalih zapadno balkanskih ekonomija.

Slične tendencije se mogu primetiti i u pogledu adekvatnosti osnovnog kapitala, prikazanoj u tabeli 3. Adekvatnost osnovnog kapitala u svim posmatranim bankarskim sektorima bila je znatno iznad regulatornih zahteva Bazelskog komiteta (6%). Takođe, kao i u pogledu adekvatnosti ukupnog kapitala, prisutan je trend povećanja nivoa adekvatnosti osnovnog kapitala. Tako, na kraju posmatranog perioda nivo adekvatnosti osnovnog kapitala bio je za 6,1 p.p. viši u Bosni i Hercegovini, odnosno 2,5 p.p. u Crnoj Gori i 2.3 p.p. u Albaniji. Pritom, bankarski sektori Srbije i Severne Makedonije beleže nešto sporije nivoe rasta stope adekvatnosti osnovnog kapitala, pri čemu se može primetiti da bankarski sektor Srbije beleži nešto više nivoe u poređenju sa ostalim posmatranim bankarskim sektorima.

Tabela 3. Adekvatnost osnovnog kapitala, period 2007-2021. godina, (u %)

Godina	Srbija	Crna Gora	BiH	Albanija	Severna Makedonija
2007.	n.p.	14,9	12,6	n.p.	15,7
2008.	17,9	15,1	12,0	n.p.	14,0
2009.	16,5	13,5	12,4	n.p.	13,8
2010.	15,9	12,9	12,6	14,6	13,4

2011.	18,1	14,0	13,6	14,4	14,1
2012.	19,0	12,9	14,1	14,6	14,5
2013.	19,3	13,0	15,2	14,8	14,4
2014.	17,6	14,4	14,3	13,8	13,7
2015.	18,8	14,2	13,8	13,5	13,9
2016.	20,0	14,8	15,0	13,8	13,9
2017.	21,6	15,0	14,8	15,1	14,2
2018.	21,1	14,4	16,5	17,0	15,0
2019.	22,4	18,1	17,5	17,1	14,8
2020.	21,6	17,4	18,1	17,2	15,3
2021.	19,7	17,4	18,7	16,9	15,8

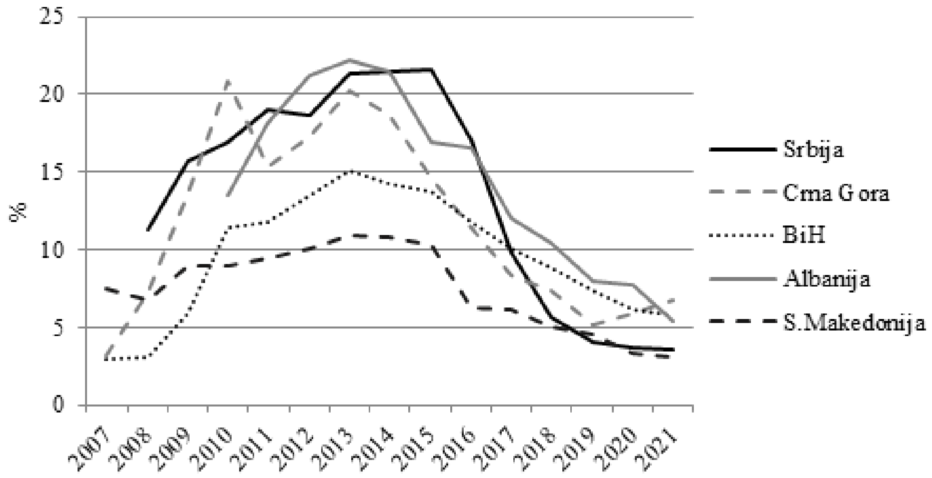
Izvor: Izveštaji o finansijskoj stabilnosti koje publikuju centralne banke posmatranih zemalja;

Medjunarodni monetarni fond (2023)

Kvalitet aktive predstavlja još jedan veoma značajan indikator stabilnosti bankarskog sektora, budući da viši kvalitet aktive bankarskog sektora pozitivno utiče na njegovu finansijsku stabilnost. Za procenu kvaliteta aktive najčešće se koristi učešće problematičnih kredita u ukupnim kreditima. Pokazatelj učešća problematičnih kredita u ukupnim kreditima predstavlja bitnu meru kvaliteta aktive, s obzirom na to da krediti predstavljaju dominantan udeo ukupne bilansne aktive posmatranih bankarskih sektora (Tmava et al., 2018). Problematični krediti predstavljaju stanje duga plasmana koji su u docnji preko 90 dana ili sa docnjom ispod 90 dana, ukoliko banka proceni da je kreditna sposobnost dužnika toliko ugrožena, da se otplata duga u celosti, dovodi u pitanje (International Monetary Fund, 2005).

Na slici 1 prikazano je učešće problematičnih kredita u ukupnim kreditima u bankarskim sektorima zemalja Zapadnog Balkana. Ono što se može primetiti da je u posmatranim sektorima zabeleženo značajno smanjenje nivoa problematičnih kredita u odnosu na početak posmatranog perioda. U periodu od 2009. zaključno sa 2016. godinom učešće problematičnih kredita u ukupnim kreditima je u većini posmatranih bankarskih sektora bilo dvocifreno, nakon čega dolazi do kontinuiranog smanjenja njihovog učešća. Navedeno se može objasniti činjenicom da su neke od centralnih banaka posmatranih ekonomija usvojile sistemske pristupe za reduciranje obima problematičnih kredita imajući u vidu posledice koje mogu nastati po stabilnost bankarskog sistema. Tako, sredinom 2015. godine u Albaniji je kreiran Akcioni plan za smanjenje obima problematičnih kredita (Bank of Albania, 2015). Narodna banka Srbije je krajem 2012. godine izvršila izmene regulative, kako bi obezbedila uslove za smanjenje problematičnih kredita u bankarskom sektoru Srbije. Eliminisana su određena ograničenja koja se odnose na prenos potraživanja od pravnih lica (Stakić, 2014). Strateški korak u upravljanju problematičnim kreditima učinjen je u avgustu 2015. godine usvajanjem Strategije za rešavanje problematičnih kredita (Narodna Banka Srbije, 2021a).

Slika 1. Učešće problematičnih kredita u ukupnim kreditima, period 2007-2021. godina, (u %)



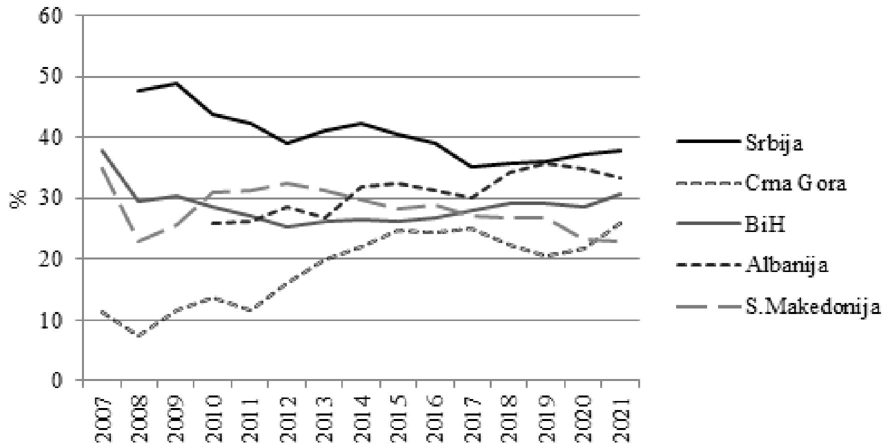
Izvor: Izveštaji o finansijskoj stabilnosti koje publikuju centralne banke posmatranih zemalja; Medjunarodni monetarni fond (2023)

Na kraju 2021. godine najniži udeo problematičnih kredita u ukupnim kreditima zabeležen je u bankarskim sektorima Severne Makedonije i Srbije, dok je njihov udeo najviši u bankarskom sektoru Crne Gore. Međutim, ono što je svakako pozitivno je da je u posmatranom periodu zabeleženo smanjenje udela problematičnih kredita, kao i da su oni na kraju perioda na relativno niskom nivou. Na taj način se smanjuje mogućnost da problematični krediti budu uzrok krize u bankarskim sektorima zemalja Zapadnog Balkana, što je veoma važno kako za stabilnost finansijskog sistema, tako i za uspešno funkcionisanje ovih ekonomija s obzirom na važnu ulogu bankarskog sektora kao primarnog izvora finansiranja ekonomskog rasta (Erić et al., 2012).

Likvidnost

Još jedna bitna determinanta stabilnosti bankarskog sektora i finansijskog sistema u celini je likvidnost. Za procenu likvidnosti postoji čitav niz indikatora među kojima se najčešće koriste indikator ukupne likvidnosti (odnos likvidne i ukupne aktive), a zatim odnos između likvidne aktive i kratkoročnih obaveza. Pored ovih širih pokazatelja likvidnosti, postoje i indikatori uže likvidnosti koji se iskazuju kao odnos između likvidne aktive u užem smislu i ukupne aktive, odnosno likvidne aktive u užem smislu i kratkoročnih obaveza (Narodna banka Srbije, 2021b).

Slika 2. Indikator ukupne likvidnosti, period 2007-2021. godine, (u %)



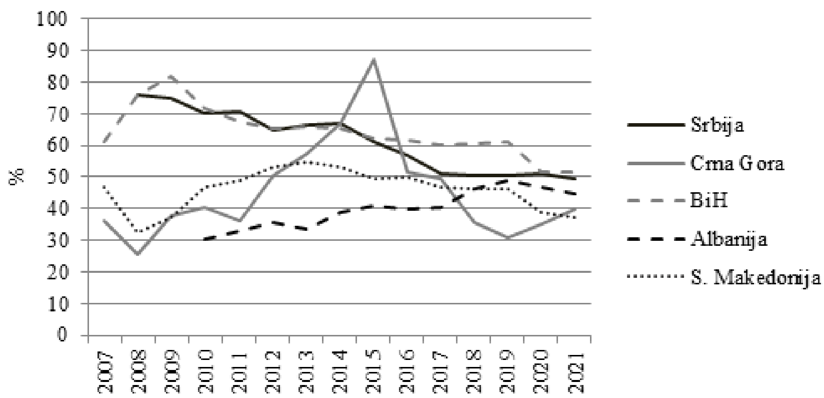
Izvor: Izveštaji o finansijskoj stabilnosti koje publikuju centralne banke posmatranih zemalja;

Medjunarodni monetarni fond (2023)

Posmatrajući vrednosti indikatora ukupne likvidnosti za bankarske sektore zemalja Zapadnog Balkana, prikazane na slici 2, može se ustanoviti da bankarski sektor Srbije od 2008. godine beleži više nivoe likvidnosti u poređenju sa bankarskim sektorima ostalih zemalja Zapadnog Balkana. Pritom, može se primetiti da bankarski sektori Crne Gore i Albanije beleže poboljšanje likvidnosti u odnosu na početak posmatranog perioda. Sa druge strane, u bankarskim sektorima Srbije, Bosne i Hercegovine i Severne Makedonije ostvareno je blago pogoršanje indikatora ukupne likvidnosti na kraju, u odnosu na početak posmatranog perioda.

Slični zaključci u pogledu likvidnosti bankarskih sektora zemalja Zapadnog Balkana mogu se proizvesti ukoliko se likvidnost posmatra kao odnos između likvidne aktive i kratkoročnih obaveza (slika 3). Posmatrajući od 2008. godine, bankarski sektor Srbije je beležio najbolje performanse u pogledu likvidnosti, da bi od 2015. godine bankarski sektori Crne Gore odnosno Bosne i Hercegovine beležili nešto više nivoe likvidnosti. Na kraju u odnosu na početak posmatranog perioda poboljšanje likvidnosti beleže bankarski sektori Crne Gore i Albanije, dok bankarski sistemi preostalih zemalja Zapadnog Balkana beleže pogoršanje vrednosti ovog indikatora.

Slika 3. Likvidnost u odnosu na kratkoročne obaveze, period 2007-2021. godina, (u %)



Izvor: Izveštaji o finansijskoj stabilnosti koje publikuju centralne banke posmatranih zemalja; Medjunarodni monetarni fond (2023)

Profitabilnost

Profitabilnost bankarskog sektora je takođe značajna determinanta njegove stabilnosti. U ekonomskoj literaturi postoji polarizacija mišljenja u pogledu uticaja profitabilnosti na finansijsku stabilnost. Novija istraživanja ne baziraju se isključivo na analizi uticaja profitabilnosti na stabilnost banaka i bankarskog sektora, već je u fokusu istraživanja ispitivanje međuzavisnosti između ovih pojmova, odnosno u kojoj meri stabilnost banaka doprinosi njihovoj profitabilnosti. Tan i Ancor (2016) su ispitivali međuzavisnost profitabilnosti i finansijske stabilnosti kineskih komercijalnih banaka u periodu od 2002., zaključno sa 2013. godinom. Rezultati istraživanja sugerišu da veći rizik od nesolventnosti, odnosno manja stabilnost dovodi do povećanja profitabilnosti kineskih komercijalnih banaka. Sa druge strane, veća profitabilnost banaka smanjuje otpornost banaka na potencijalne šokove i negativno utiče na njihovu stabilnost. Nguyen i Le (2022) su posmatrali međuzavisnost odnosa između stabilnosti banke, profitabilnosti i rasta kredita u jugoistočnoj Aziji u periodu između 2006. i 2017. godine. Njihovi nalazi sugerišu da banke koje posluju stabilno beleže veću profitabilnost i manji rast kredita. Sa druge strane, rast kreditiranja pozitivno utiče na profitabilnost banke, ali ispoljavanju negativne efekte na finansijsku stabilnost, dok profitabilnost pozitivno utiče na finansijsku stabilnost i na rast kredita.

Natalya i saradnici (2015) takođe u svom istraživanju sugerišu da profitabilnost nepovoljno utiče na profitabilnost banaka ističući da visoka profitabilnost dovodi od većeg preuzimanja rizika i potencijalne nestabilnosti banaka. Značajne implikacije o pogledu uticaja profitabilnosti na finansijsku stabilnost pruža istraživanje Meiselmana i saradnika (2020) koje ukazuje da visoki nivoi profitabilnosti u „dobrim“ vremenima mogu biti indikator povećanog sistemskog rizika u periodima kriza i nestabilnosti, posebno ukoliko se visoki nivoi profita ostvaruju iz nekamatonosnih prihoda. Niz istraživanja u novijem periodu upravo ukazuje da povećanje izvora profita iz nekamatonosnih izvora pozitivno utiče na profitabilnost banaka, ali se pretežno negativno odražava na njihovu finansijsku stabilnost. Tako, Kohler (2013) ispitujući uticaj nekamatonosnih prihoda na finansijsku stabilnost banaka u nemačkom bankarskom sektoru ističe da ovaj uticaj zavisi od poslovnog modela banke. Kod banaka usmerenih ka poslovanju sa stanovništvom povećanje nekamatonosnih prihoda pozitivno utiče na njihovu stabilnost. Sa druge strane investicione banke postaju znatno manje stabilne sa porastom nekamatonosnih prihoda. Antao i Karnik (2022) su takođe ustanovili da porast nekamatonosnih prihoda ne čini poslovne banke stabilnijim. Navedeno je posebno bilo izraženo tokom globalne finansijske krize iz 2008. godine, pri čemu je nivo nekamatonosnih prihoda beležio pad nakon krize, što sugeriše da je u ovom periodu došlo do povećanja finansijske stabilnosti. U tom kontekstu u pogledu razumevanja implikacija profitabilnosti na finansijsku stabilnost značajno je adekvatno posmatrati izvore profitabilnosti banaka, posebno u onim bankarskim sistemima gde se profitabilnost banaka značajno bazira na nekamatonosnim prihodima (Teng Teng et al., 2019).

Tabela 4. Stopa prinosa na aktivu (ROA), period 2007-2021. godina, (u %)

Godina	Srbija	Crna Gora	BiH	Albanija	Severna Makedonija
2007.	1,7	0,8	0,8	2,0	1,8
2008.	2,1	-0,5	0,5	1,7	1,4
2009.	1,0	-0,6	0,1	1,2	0,6
2010.	1,1	-2,7	-0,5	1,2	0,8
2011.	0,0	-0,06	0,8	1,0	0,4
2012.	0,4	-1,9	0,7	0,6	0,6
2013.	-0.1	0,1	-0,07	0,6	0,8
2014.	0,1	0,8	0,8	0,9	1,0
2015.	0,3	-0,08	0,3	0,7	1,6
2016.	0,7	0,2	1,1	1,0	2,1
2017.	2,1	0,9	1,5	1,1	2,5
2018.	2,2	0,6	1,3	0,9	2,2
2019.	1,8	1,2	1,4	1,2	1,9
2020.	1,1	0,5	0,8	1,3	1,3
2021.	1,2	0,8	1,3	1,3	1,5

Izvor: Izveštaji o finansijskoj stabilnosti koje publikuju centralne banke posmatranih zemalja;

Medjunarodni monetarni fond (2023)

Za analizu profitabilnosti bankarskih sektora zemalja Zapadnog Balkana korišćeni su tradicionalni indikatori za merenje profitabilnosti; stopa prinosa na aktivu (ROA) i stopa prinosa na kapital (ROE). Posmatrajući stopu prinosa na aktivu, u inicijalnim godinama posmatranog perioda bankarski sektori Crne Gore i Bosne i Hercegovine su beležili nešto slabije vrednosti ovog indikatora u odnosu na bankarske sektore ostalih zemalja Zapadnog Balkana. Ono što se može takođe ustanoviti je da su izuzev bankarskog sektora Bosne i Hercegovine i Crne Gore bankarski sektori ostalih zapadno balkanskih ekonomija zabeležili blago smanjenje vrednosti stope prinosa na aktivu na kraju u odnosu na početak posmatranog perioda. Kao što se iz tabele 4 može zaključiti najvišu vrednost stope prinosa na aktivu u posmatranom periodu beleži bankarski sektor Severne Makedonije, dok je najnižu vrednost pomenutog indikatora ima bankarski sektor Crne Gore.

Slični zaključci u pogledu profitabilnosti bankarskih sektora zemalja Zapadnog Balkana mogu se proizvesti ukoliko se posmatra stopa prinosa na kapital (ROE) prikazana u tabeli 5. Izuzev bankarskog sektora Bosne i Hercegovine, ostali posmatrani bankarski sektori zabeležili su smanjenje vrednosti stope prinosa na kapital, pri čemu je najveće povećanje vrednosti stope prinosa na kapital zabeleženo u bankarskom sektoru Albanije.

U poređenju sa ostalim bankarskim sektorima, bankarski sektori Albanije i Severne Makedonije su beležili više nivoe stope prinose na kapital, tako da je na kraju 2021. godine najvišu stopu prinosa na kapital imao bankarski sektor Albanije, a najnižu bankarski sistem Crne Gore.

Tabela 5. Stopa prinosa na kapital (ROE), period 2007-2021. godine, (u %)

Godina	Srbija	Crna Gora	BiH	Albanija	Severna Makedonija
2007.	8,5	7,1	8,6	20,7	15,2
2008.	9,0	-7,4	3,9	11,4	12,5
2009.	4,6	-7,5	0,8	4,6	5,6
2010.	5,3	-25,8	-5,5	7,6	7,3
2011.	0,2	-1,1	5,5	0,8	3,4
2012.	2,0	-19,4	4,3	3,8	3,8
2013.	-0,4	0,5	-1,2	6,4	5,7
2014.	0,6	5,6	4,4	10,5	7,4
2015.	1,5	-0,9	0,9	13,2	10,4
2016.	3,3	1,2	6,2	7,2	13,6
2017.	10,5	6,9	9,0	15,7	13,5
2018.	11,3	4,9	8,5	13,0	13,5
2019.	9,8	9,1	9,1	13,5	16,0
2020.	6,5	3,7	5,6	10,7	11,7
2021.	7,8	5,6	9,6	12,9	11,3

Izvor: Izveštaji o finansijskoj stabilnosti koje publikuju centralne banke posmatranih zemalja;

Medjunarodni monetarni fond (2023)

Na bazi prikazanih podataka može se zaključiti da je većina bankarskih sektora posmatranih ekonomija beležila zadovoljavajuću profitabilnost. Izuzetak može predstavljati bankarski sektor Crne Gore koji je u nekoliko navrata tokom posmatranog perioda beležio negativne vrednosti ključnih indikatora profitabilnosti. Međutim, za donošenje relevantnijih zaključaka o uticaju profitabilnosti na stabilnost bankarskih sektora posmatranih ekonomija neophodno je dodatno posmatrati strukturu ključnih izvora profitabilnosti prevashodno u pogledu učešća nekamatonosnih prihoda. Imajući u vidu činjenicu da se poslovne banke u analiziranim bankarskim sektorima pretežno bave depozitno-kreditnim poslovima može se očekivati da nekamatonosni prihodi imaju manje učešće u strukturi ukupnih prihoda. Po tom osnovu porast profitabilnosti bankarskog sektora ne mora nužno nepovoljno uticati na njegovu stabilnost u slučaju zemalja Zapadnog Balkana.

Z score

Izuzev indikatora za procenu finansijske stabilnosti formulisanih od strane Međunarodnog monetarnog fonda postoje i drugi indikatori za procenu stepena finansijske stabilnosti. Među njima posebno treba izdvojiti z score. U ekonomskoj literaturi postoji mnoštvo istraživanja koja su procenu stabilnosti finansijskih institucija vršili posredstvom z scora (Kasman i Kasman, 2015; Barra i Zotti, 2018). Najveći broj istraživanja je posredstvom z scora procenjivao stabilnost bankarskog sektora (Demirgüç-Kunt et al., 2008; Čihák i Hesse, 2008; Lepetit i Strobel, 2015; Hafeez et al., 2022) pri čemu se posredstvom z scora može posmatrati i finansijska stabilnost ostalih finansijskih institucija (Moreno et al., 2020). Nezavisno od brojnosti istraživanja i tipa finansijskih institucija čija se stabilnost procenjuje, suština z scora ogleda se u činjenici da je njegova vrednost u inverznom odnosu sa verovatnoćom nastupanja nesolventnosti. Preciznije rečeno, viša vrednost z scora implicira manju verovatnoću nastupanja problema nesolventnosti (Sysoyeva, 2020). Kao ključni nedostatak z scora ističe se činjenica da se on bazira na računovodstvenim podacima, tako da neretko može pružiti manje objektivne zaključke o stabilnosti bankarskog sektora (Grbić, 2019).

Tabela 6. Z score, period 2007-2021. godine

Godina	Srbija	Crna Gora	BiH	Albanija	Severna Makedonija
2007.	15,2	5,3	12,4	15,6	11,5
2008.	16,5	5,3	13	19,2	11,1
2009.	13,9	7,6	13,5	20,2	9,9
2010.	12,8	4,1	14,1	21	9,4
2011.	13,8	7,3	17,9	22,2	9,2
2012.	13,6	6,4	18,8	22,3	9,6
2013.	13,3	9,3	17,8	22,1	10
2014.	13,2	10,4	18,7	22,2	9,9
2015.	14,3	8,8	18	22,1	10,2
2016.	13,3	8,9	18,5	23,8	10,6
2017.	14,4	9,2	19	21,7	11,1
2018.	13,3	9,3	17,1	20	11,1
2019.	12,6	10	16,8	20,6	11,2
2020.	11,1	9,4	15,3	20,2	11,3
2021.	10,3	8,9	15,3	19,1	9,5

Izvor: Global Economy (2023). Banking system Z scores.

Polazeći od činjenice da viša vrednost z scora implicira manju verovatnoću od nesolventnosti, odnosno veću stabilnost bankarskog sektora, na bazi prikazanih podataka u tabeli 6 može se ustanoviti da je bankarski sektor Albanije beležio najviše vrednosti finansijske stabilnosti tokom čitavog posmatranog perioda. Bankarski sektori Srbije i Severne Makedonije su u inicijalnim godinama posmatranog perioda beležili nešto više vrednosti z scora, pri čemu od 2010. godine bankarski sektor Bosne i Hercegovine beleži više vrednosti z scora. Ono što se takođe može primetiti je da većina posmatranih bankarskih sistema zabeležila povećanje vrednosti z scora na kraju u odnosu na početak posmatranog perioda. Izuzetak predstavljaju bankarski sektori Severne Makedonije i Srbije, pri čemu je bankarski sektor Srbije ostvario najveće smanjenje z scora u posmatranom periodu.

ZAKLJUČAK

Bankarski sektor je najznačajniji segment finansijskog sistema zemalja Zapadnog Balkana. Poslovne banke imaju dominantnu ulogu u strukturi aktive i kapitala finansijskog sektora, tako da stabilnost bankarskog sektora predstavlja jednu od najvažnijih determinanti uspostavljanja finansijske stabilnosti. Posmatrajući bankarske sektore zemalja Zapadnog Balkana može se ustanoviti da se oni odlikuju približno identičnim karakteristikama. Poslovne banke se dominantno bave depozitno-kreditnim poslovima i ujedno su najznačajniji izvor finansiranja ekonomskog rasta. Pored toga bankarski sektori posmatranih ekonomija odlikuju se zadovoljavajućom kapitalizovanošću, kako u pogledu adekvatnosti ukupnog, tako i u pogledu adekvatnosti osnovnog kapitala. Dodatno, analizirani bankarski sektori imaju relativno nisko učešće problematičnih kredita, zadovoljavajuću likvidnost, uz određene razlike u pogledu profitabilnosti.

Rezultati istraživanja sugerišu da bankarski sektori zemalja Zapadnog Balkana beleže zadovoljavajuće nivoe finansijske stabilnosti. Adekvatnost ukupnog i osnovnog kapitala je iznad regulatornih zahteva Bazelskog komiteta, što ukazuje da su posmatrani bankarski sektori u mogućnosti da apsorbuju potencijalne gubitke. Međutim, ono što se može primetiti je da je na kraju u odnosu na početak posmatranog perioda došlo do blagog pogoršanja solventnosti u svim posmatranim bankarskim sektorima (izuzev Albanije), dok u pogledu adekvatnosti osnovnog kapitala poboljšanje beleže bankarski sektori Srbije i Albanije. Takođe u posmatranom periodu svi bankarski sistemi beleže poboljšanje kvaliteta aktive s obzirom da je udeo problematičnih kredita u ukupnim kreditima bio niži u svim posmatranim ekonomijama izuzev Crne Gore. Kada je reč o likvidnosti, poboljšanje likvidnosti u posmatranom periodu ostvarili su bankarski sektori Crne Gore i Albanije, dok je u ostalim ekonomijama došlo do blagog pogoršanja pozicije likvidnosti. Posmatrajući profitabilnost, niže vrednosti stope prinosa na aktivu u odnosu na početak posmatranog perioda zabeležio je bankarski sektor Albanije, dok su u pogledu stope prinosa na kapital pogoršanje zabeležili bankarski sektori Crne Gore i Albanije. Na kraju, posmatrajući stabilnost bankarskog sektora posredstvom vrednosti z scora, može se zaključiti da većina posmatranih zemalja beleži povećanje vrednosti ovog indikatora izuzev Crne Gore i Severne Makedonije.

Bankarski sektor Srbije u poređenju sa ostalim bankarskim sektorima beleži nešto više nivoe adekvatnosti kapitala i likvidnosti. Međutim, učešće problematičnih kredita u ukupnim kreditima je značajno smanjeno, ali je nešto više u poređenju sa bankarskim sektorom Severne Makedonije. Kada je reč o profitabilnosti, bankarski sektor Srbije beleži više nivoe profitabilnosti jedino od bankarskog sektora Crne Gore, pri čemu je nivo stope prinosa na aktivu i stope prinosa na kapital niži u poređenju sa bankarskim sektorima ostalih posmatranih ekonomija. Na kraju, u pogledu vrednosti z scora, bankarski sektori Albanije i Bosne i Hercegovine

Uprkos formulisanju relevantnih zaključaka, istraživanje poseduje i određena ograničenja. Primarno ograničenje istraživanja ogleda se u relativno kratkom periodu posmatranja usled nedostupnosti podataka za raniji period (posebno u slučaju Srbije, Crne Gore i Albanije). Takođe, istraživanjem je obuhvaćeno pet zemalja, tako da bi se sveobuhvatniji zaključci o stepenu finansijske stabilnosti mogli dobiti proširenjem uzorka na ostale evropske ekonomije (zemlje članice Evropske unije) ili pak druge uporedive zemlje u razvoju, što može predstavljati dobru osnovu za buduća istraživanja.

Na kraju treba istaći da rezultati istraživanja pružaju značajne implikacije koje mogu biti od koristi nacionalnim supervizorima, ali i menadžmentu banaka u posmatranim ekonomijama. Prikazani rezultati mogu pomoći supervizorskim institucijama da identifikuju oblasti u kojima je moguće sprovesti određena poboljšanja, što bi se pozitivno odrazilo ne samo na performanse bankarskog sektora već i na stabilnost finansijskog sistema. Sa druge strane, rezultati istraživanja pružaju objektivne informacije menadžmentu banaka koje posluju u posmatranim regionima najpre da sagledaju njihove performanse, kako u odnosu na domaći bankarski sektor, tako i iz regionalne perspektive, što u krajnjoj instanci može doprineti unapređenju poslovnih performansi i stepena finansijske stabilnosti.

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COMPARATIVE ANALYSIS OF THE BANKING SECTOR STABILITY IN THE WESTERN BALKAN COUNTRIES

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Abstract: The banking sector is an important segment of the financial system, regardless of whether it is a bank-based or market-based system. In Western Balkan countries, preserving the banking sector's stability remains a particularly important condition for achieving financial stability, considering the dominant role of the banking sector in the financial system. The absence of stability in the banking sector can negatively affect not only the stability of the financial sector, but also the economic system as a whole. Additionally, ensuring the stability of the banking sector in the Western Balkan economies is of particular importance due to the fact that the banking sector is a key source of financing economic activities in these economies. Accordingly, the aim of the research is to identify the level of stability of the banking sector in the Western Balkan countries. The research results suggest that the banking sectors of the observed countries report satisfactory and relatively uniform levels of financial stability.

Key words : Financial stability, Banking sector, Western Balkans

JEL classification: G21, G28, F36

Introduction

The global financial system faced serious challenges at the end of the 20th and during the first decade of the 21st century. The 1997 Asian financial crisis showed that it is necessary to pay increased attention to the financial sector disruptions, considering the economic consequences that may arise from the absence of financial stability (Edwards, 2003; Arner & Taylor, 2009). However, the 2008 financial crisis greatly contributed to a change in approach to financial stability analysis. The primary causes of the aforementioned crises were the financial sector turmoils (Dugalić et al., 2021). After the 2008 global recession, the financial stability has been approached in a strategic and systematic manner. The financial sector stability has been seen as one of the crucial prerequisites for sustainable economic growth and development not only in national frameworks but also at the global level (Shirakawa, 2012; Ahulu et al., 2021). Based on this, frameworks for monitoring and managing the stability of the financial system were being developed, with the importance of applying macroprudential measures of monetary policy being emphasized in particular (Borio, 2014; Grbić, 2022).

In order to measure and assess the stability of national systems and the global financial system as a whole, the International Monetary Fund designed a set of financial stability indicators, intended to improve financial stability at the global level. In order to ensure harmonization in achieving global financial stability, central banks across the world have harmonized their systems of monitoring and managing financial stability with the standards and guidelines provided by the International Monetary Fund. The largest part of these standards is aimed at depository institutions (banking sector), but other segments of the financial system are also covered.

In the Western Balkan countries, the banking sector is the most important segment of the financial system (Muller-Jentsch, 2007; Grbić & Luković, 2020). Capital market underdevelopment, political and economic system shaping during the second half of the 20th century primarily influenced commercial banks to have a dominant position compared to other financial institutions (Dugalić & Štimac, 2014; Jakšić & Purić, 2014). Therefore, achieving the stability of the banking sector is crucial for the overall financial system stability in these economies. Analogously, the subject of the paper is the examination of the level of banking sector stability in the Western Balkan economies. The primary goal of the research is to assess whether deterioration or improvement has been recorded in the level of stability of banking sectors in the observed countries during the 2007-2021 period (Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, and Serbia). Also, an attempt is made to determine whether the banking sector of Serbia was characterized by a higher or lower degree of stability compared to other Western Balkans countries.

The paper consists of four parts. In the first part, the theoretical considerations regarding the financial stability concept are given. The second part of the paper introduces the most significant indicators of financial stability designed by the International Monetary Fund. In the third part, an analysis of the banking sector stability levels in the Western Balkan countries is provided. The assessment of the financial stability levels was conducted by means of the basic financial stability indicators, with the inclusion of the z score as one of the most frequently used indicators. The fourth part of the paper provides the concluding remarks.

About Financial Stability

Achieving financial system stability is an important condition for the successful functioning of the national economy (Creel et al., 2015; Jayakumar et al., 2018). By looking at the role that the financial system plays in financing economic activities, it can be pointed out that a stable financial system contributes to the growth and development of the national economy, but at the same time positively affects the stability of the national economic system. Bearing in mind the interdependence and complex interactions between different elements of the financial system, the task of providing the precise financial stability definition is challenging. As a result, there is no generally accepted definition of financial stability.

The Federal Reserve System (2022) emphasizes that the financial system is stable when banks, other lenders, and financial markets can provide households, communities, and business entities with the financial resources they need to invest and participate in the economy, even in the case when it is facing disruptions. European Central Bank (2022) defines financial stability as a state in which the financial system is able to withstand the presence of shocks and financial imbalances. World Bank (2023) defines a stable financial system as a system fitted to efficiently allocate resources, assess, and manage financial risks, but also to contribute to maintaining employment close to the economy's natural rate. Additionally, a stable financial system is able to eliminate adverse financial asset price movements that may affect monetary stability or the level of employment. More precisely, the financial system is stable when it is able to absorb financial imbalances, whether they arise endogenously or as a result of unanticipated exogenous shocks. Encompassing all the approaches, it can be concluded that a stable financial system is able to absorb shocks through self-correcting mechanisms, preventing adverse events from having an unfavorable impact on the real economy.

Schinasi (2004) defines stable financial system as a system capable of:

- facilitating and ensuring efficient use of economic resources (spatially and temporally), but also other economic processes (such as accumulation of wealth, economic growth financing and social prosperity);
- assessing, quantifying, allocating and managing financial risks;
- maintaining the ability to perform even when exposed to external shocks or financial imbalances.

Similar to previous definitions, the National Bank of Serbia (2023) defines financial stability as the ability of the entire financial system (financial intermediaries, financial markets and financial infrastructure) to efficiently allocate financial resources and enable the realization of key macroeconomic functions, both in normal conditions and in conditions of financial imbalance or turmoils in the domestic and international markets. During the past decade, the development of a systemic approach to the regulation and supervision of the financial system in order to preserve its stability has received significant attention. The explanation can be found not only in the fact that the financial system has a far greater influence on economic activity than was previously emphasized, but also in the high costs of the financial crisis and the fact that price stability preservation is not a sufficient condition for achieving financial stability (Drvendžija, 2015).

In discussing the financial stability conceptual definition, it is important to point out the view of Fabris and Luburić (2023), who state that the financial system is stable in situations where financial institutions operate well, i.e., they are able to provide households and companies with the resources and services necessary for their growth and development. In periods of financial instability, the crisis can spread quickly from the real sector to the financial sector since banks are unable to finance profitable projects and fulfill their duties. Eventually, the aforementioned can have a negative impact not only on the financial sector's stability, but also on the macroeconomic stability of the national economy as well.

Apart from the national frameworks, the preservation of financial stability is also important on a global level. The financial system's globalization and the financial institutions' global interconnectedness has influenced that the instability of one country's financial system can very quickly be transferred to the financial sectors of other countries (Acedanski & Karkowska, 2022). This was confirmed by the Economic crisis of 2008, which first erupted in the US financial sector but then quickly spread to the financial systems of Great Britain, Ireland and Iceland, and then to the rest of the world. Practically, this means that the financial crisis can very quickly and easily be transferred to economies with previously stable and healthy financial systems. For that reason, over the last few years more and more global initiatives have been endorsed to establish appropriate regulations, approaches, and guidelines for monitoring, managing and preserving financial stability at the international level.

Indicators of Financial Stability

The importance of financial stability, as a necessary condition for sustainable economic growth, created the need for its quantification and monitoring. The 1997 Asian financial crisis, as well as the global financial crisis of 2008, additionally confirmed the demand for indicators to measure the financial system's stability. Given the rising globalization trends and the fact that financial instability is very easily and quickly transferred from one financial system to another, it was necessary to develop a global framework for assessing and monitoring financial stability. For this purpose, in 2006, the officials of the International Monetary Fund designed a set of indicators for assessing financial stability, while in 2009, 2013 and 2019, improvements and additions were made to the aforementioned set of indicators (International Monetary Fund, 2019).

According to the guidelines of the International Monetary Fund (2019), financial stability indicators are divided into two groups: basic and supplementary. The basic set of indicators includes 12 indicators primarily aimed at depository institutions. With the revision of the International Monetary Fund guidelines in 2019, the basic set of indicators was expanded with new indicators to a level of 18 indicators and the additional dimension of the developments in the real estate market. By using indicators, the performance and progress of depository institutions can be monitored in terms of solvency (adequacy of capital), liquidity, profitability, quality of assets and their sensitivity to market risk, as shown in Table 1.

On the other hand, the second group of financial stability indicators consists of supplementary or incentive indicators. This set of indicators consists of 28 indicators, with the largest number of indicators referring to depository institutions (13), followed by financial corporations (2), non-financial corporations (5), households (2), market liquidity (2) and the real estate market (4) (San Jose et al., 2008). As was the case with the basic indicators set, the number of supplementary indicators was increased to 35 in 2019 revision.

Table 1. Basic Financial Stability Indicators for Depository Institutions

Criteria	Indicator
Capital adequacy	•Regulatory capital to risk-weighted assets •Regulatory (Tier 1) capital to risk-weighted assets •Nonperforming loans net of provisions to capital

Asset quality	• Nonperforming loans to total loans • Loan concentration by economic activity
Profitability	• Return on assets (ROA) • Return on capital (ROE) • Interest margin to gross income • Noninterest expenses to gross income
Liquidity	• Liquid assets to total assets • Liquid assets to short term liabilities
Market risk sensitivity	• Net open position in foreign exchange to capital

Source: International Monetary Fund (2019). Financial Soundness Indicators Compilation Guide. p. 2

Basic indicators are crucial for the financial sector stability analysis, since they encompass five dimensions of depository institutions' financial stability. By looking at Table 1, it can be pointed out that the calculation of indicator values is conducted by using the data from the balance sheet and the income statement. Capital adequacy indicators assess whether depository institutions have enough capital to absorb potential losses stemming from risk-weighted assets or problem loans. Asset quality indicators show the vulnerability of depository institutions against potential losses that may arise from problem loans or inadequate sectoral allocation of bank loans. Profitability indicators measure the efficiency of depository institutions in using their assets and capital to generate additional income or minimize costs. Regarding liquidity dimension, the ability of depository institutions to satisfy an unexpected demand for liquid assets is measured. The last, but not the least important dimension of financial stability refers to the assessment of the sensitivity of depository institutions to market risks. The key goal of market risk sensitivity indicators is to show the extent to which depository institutions are capable of mitigating adverse movements that may arise from exchange rate fluctuations, for example (Asian Development Bank, 2015).

As a way to monitor global financial stability, central banks across the world regularly submit reports concerning national financial system stability to the International Monetary Fund. These reports primarily cover a set of basic indicators, whereby the data are distributed in different dynamics (monthly or quarterly). When it comes to supplementary indicators, central banks are not obliged to submit data related to this group of indicators. However, calculation and public disclosure of these indicators is recommended as a way to adequately assess the stability of the national financial systems all over the world. In addition, it should be noted that a significant number of central banks provide self-initiated financial stability reports, with the methodology fully aligned with the guidelines of the International Monetary Fund.

This is the case with Western Balkan countries, since central banks of the observed countries publish financial stability reports on a regular basis, but with different frequencies. Considering the bank-based nature of financial systems in these countries, financial stability reports primarily cover the banking sector, but other financial system segments and participants are also included to derive the most objective conclusions about the financial stability levels.

Analysis of the Stability of the Banking Sector of Western Balkan Countries

The financial systems of Western Balkan countries are characterized by their distinct bank-based nature. As a result, the stability of the banking sector plays an important role in achieving overall financial stability. As part of monitoring the results of implemented measures aimed at preserving financial stability, the central banks of the observed countries publish annual banking sector stability reports, which provide the source of data used in the analysis. In addition, data from the official website of the International Monetary Fund were used, primarily for the initial years of the observed time interval.

Capital Adequacy and Asset Quality

Capital adequacy is one of the prerequisites for the banking sector's stability. Adequate capitalization of the banking sector also supports the satisfactory solvency and greater robustness in coping with unexpected disruptions (Todorović, 2003; Alihodžić & Nadžaković, 2022). The banking sector's capitalization is most often assessed by the calculation of two indicators: the total capital adequacy and the core capital adequacy (Zelenović & Vunjak, 2014). Adequacy of total capital is measured as the ratio of total banking sector's capital to risk-weighted assets. According to the Basel Committee for Banking Supervision standards, the regulatory minimum of capital adequacy is 8% of risk-weighted assets. At the same time, national regulatory authorities can prescribe even stricter capital adequacy standards. For example, regulatory requirements for capital adequacy amounted to 12% of risk-weighted assets in Serbia until 2017 (National Bank of Serbia, 2019). The core capital adequacy indicator is calculated as a ratio of core (Tier 1) capital to risk-weighted assets. The regulatory minimum for this capital adequacy indicator is 6%, as prescribed by the Basel Committee.

Table 2. Regulatory Capital to Risk-Weighted Assets, 2007-2021 (in %)

Year	Serbia	Montenegro	Bosnia and Herzegovina	Albania	North Macedonia
2007	23.3	17.1	17.1	17.1	17.0
2008	21.9	15.0	16.3	17.2	16.2
2009	21.4	15.8	16.1	16.2	16.4
2010	19.9	15.9	16.2	15.4	16.1
2011	19.1	16.5	17.1	15.6	16.8

2012	19.9	14.7	17.0	16.2	17.1
2013	20.9	14.4	17.8	19.1	16.8
2014	20.0	16.2	16.3	17.7	15.7
2015	20.9	15.5	14.9	15.8	15.5
2016	21.8	16.1	15.8	16.0	15.2
2017	22.6	16.4	15.7	16.6	15.7
2018	22.3	15.6	17.5	18.7	16.5
2019	23.4	17.7	18.0	18.7	16.3
2020	22.4	18.5	19.2	18.7	16.7
2021	20.8	18.5	19.6	18.0	17.3

Annual Financial Stability Reports published by Central Banks of the observed countries;

International Monetary Fund (2023)

By observing the capital adequacy of the banking sectors in the Western Balkan countries in 2007-2021 period (Table 2), it can be concluded that all national banking systems are adequately capitalized. During the entire period, the capital adequacy indicator significantly exceeded the regulatory minimum of 8%. Also, what can be additionally noticed is that the majority of the observed banking sectors recorded an increase in capital adequacy rate during the observed period. The only exception is the Serbian banking sector, where the level of capital adequacy was lower at the end of 2021 compared to 2007. In 2007-2021 period, the Serbian banking sector recorded the highest values of capital adequacy (23.4% in 2019), while the banking sector of North Macedonia recorded the lowest level of regulatory capital adequacy (15.2% in 2016).

Similar tendencies can be observed in the adequacy of the core capital, as shown in Table 3. The adequacy of Tier 1 (core) capital in all observed banking sectors was significantly above the regulatory requirements prescribed by the Basel Committee (6%). As well as with regard to the adequacy of the total capital, an increasing trend in the adequacy of core capital is evident. Thus, at the end of the observed period, the level of core capital adequacy was by 6.1 p.p. higher in Bosnia and Herzegovina, 2.5 p.p. in Montenegro and 2.3 p.p. in Albania. In the observed period, the Serbian banking sector recorded the highest levels of the core capital adequacy (22.4% in 2019).

Table 3. Tier 1 (core) Capital Adequacy, 2007-2021 Period, (in %)

Year	Serbia	Montenegro	Bosnia and Herzegovina	Albania	North Macedonia
2007	n.p.	14.9	12.6	-	15.7
2008	17.9	15.1	12.0	-	14.0
2009	16.5	13.5	12.4	-	13.8
2010	15.9	12.9	12.6	14.6	13.4

2011	18.1	14.0	13.6	14.4	14.1
2012	19.0	12.9	14.1	14.6	14.5
2013	19.3	13.0	15.2	14.8	14.4
2014	17.6	14.4	14.3	13.8	13.7
2015	18.8	14.2	13.8	13.5	13.9
2016	20.0	14.8	15.0	13.8	13.9
2017	21.6	15.0	14.8	15.1	14.2
2018	21.1	14.4	16.5	17.0	15.0
2019	22.4	18.1	17.5	17.1	14.8
2020	21.6	17.4	18.1	17.2	15.3
2021	19.7	17.4	18.7	16.9	15.8

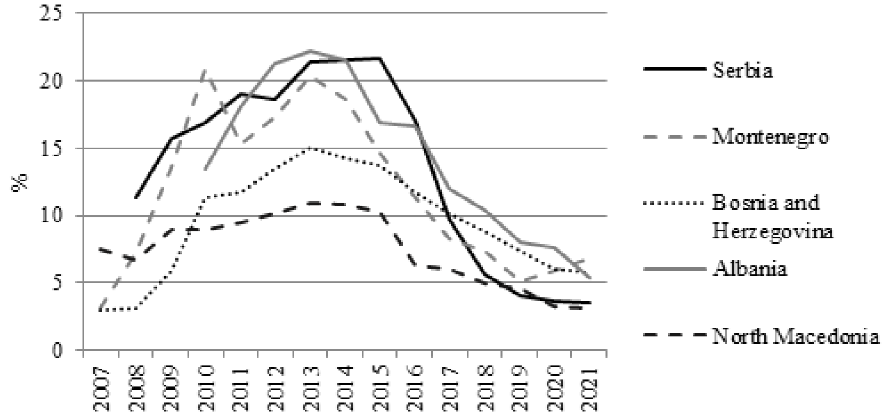
Annual Financial Stability Reports published by Central Banks of the observed countries;

International Monetary Fund (2023)

The quality of assets is an important indicator of the banking sector stability, since the higher quality of assets creates a positive effect on financial stability. The share of problem loans in total loans is most often used to assess the quality of assets. The indicator of the share of non-performing loans in total loans is an important measure of asset quality, since loans account for a dominant share in total assets of the observed banking sectors (Tmava et al., 2018). Problem loans are loans where payments of interest and/or principal are past due by 90 days or more, or if the bank assesses that the debtor's creditworthiness is so threatened that the full repayment of the debt is called into question (International Monetary Fund, 2005).

Figure 1 shows the share of non-performing loans in total loans in the banking sectors of Western Balkan countries. What can be noticed is that a significant decrease in the share of problem loans was recorded during the observed period. Between 2009 and 2016, the share of non-performing loans in total loans was in double digits in most of the observed banking sectors, after which there was a continuous decrease in their share. The above can be explained by the fact that some of the central banks have adopted systemic approaches to reduce the volume of problem loans, bearing in mind the consequences that may arise for the banking stability system. Thus, in the middle of 2015, an Action Plan for reducing the volume of problem loans was implemented in Albania (Bank of Albania, 2015). At the end of 2012, the National Bank of Serbia amended the regulations in order to ensure the conditions for reducing problem loans in the banking sector of Serbia. Certain restrictions related to the transfer of claims from legal entities have been eliminated (Stakić, 2014). A strategic step in the management of problem loans was made in August 2015 with the adoption of the Strategy for Solving Problem Loans (National Bank of Serbia, 2021a).

Figure 1. Share of Non-Performing Loans in Total Loans, 2007-2021



Source: Annual Financial Stability Reports published by Central Banks of the observed countries;

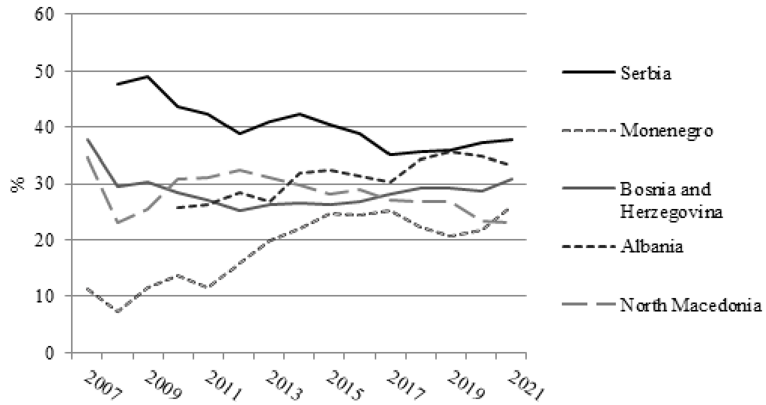
International Monetary Fund (2023)

At the end of 2021, the lowest share of problem loans in total loans was recorded in the banking sectors of North Macedonia and Serbia, while their share was the highest in the banking sector of Montenegro (Figure 1). However, what is certainly positive is that in the observed period a decrease in the share of problem loans was recorded in all countries, making it relatively low at the end of the period. In this way, the possibility of problem loans being the cause of crisis in the Western Balkan countries' banking sectors is reduced, which is very important for both the stability of the financial system and successful functioning of these economies, given the important role of the banking sector as the primary source of financing economic growth (Erić et al., 2012).

Liquidity

Another important determinant of the banking sector stability is liquidity. To assess liquidity, there is a whole series of indicators, among which the indicator of total liquidity (the ratio of liquid to total assets) is most often used, followed by liquid assets to short-term liabilities indicator. In addition to these broad liquidity indicators, there are narrow liquidity indicators expressed as the ratio between narrow liquid assets and total assets, and liquid assets in the narrow sense and short-term liabilities (National Bank of Serbia, 2021b)

Figure 2. Total Liquidity Indicator, 2007-2021.

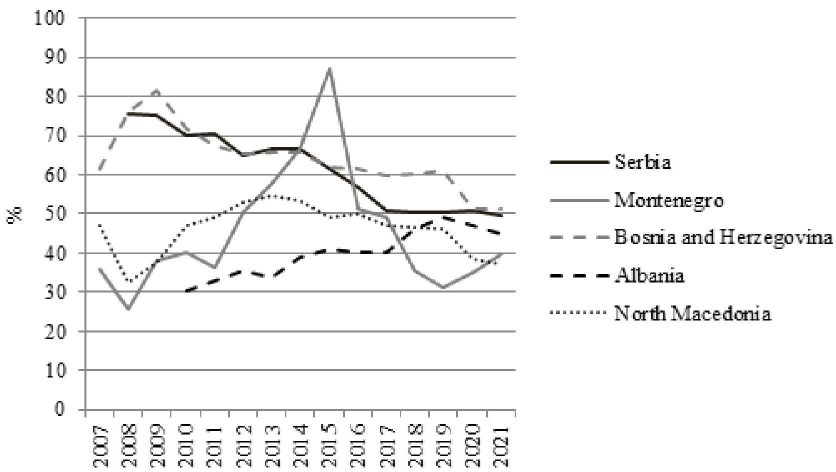


Source: Annual Financial Stability Reports published by Central Banks of the observed countries; International Monetary Fund (2023)

By observing the total liquidity indicator values for Western Balkan countries banking sectors shown in Figure 2, it can be concluded that since 2008, the Serbian banking sector has recorded higher levels of liquidity compared to the other Western Balkan countries. At the same time, it can be noted that the banking sectors of Montenegro and Albania recorded an improvement in liquidity during the observed period. On the other hand, in the banking sectors of Serbia, Bosnia and Herzegovina and North Macedonia, a slight deterioration of the total liquidity indicator has occurred during the observed period.

Similar conclusions regarding the liquidity of the Western Balkan countries' banking sectors can be drawn if liquidity is viewed as the ratio of liquid assets to short-term liabilities (Figure 3). In 2007-2014 subperiod, the banking sectors of Serbia and Bosnia and Herzegovina recorded the highest values of narrow liquidity indicator. In 2015, the Montenegrin banking sector reported the peak value of approximately 87%. In the rest of the period, the Bosnian banking sector has recorded the highest levels of liquidity. The banking sectors of Montenegro and Albania recorded an improvement in liquidity during the observed period, while the banking systems of the remaining countries recorded deterioration.

Figure 3. Ratio of Liquid Assets to Short Term Liabilities, 2007-2021



Source: Annual Financial Stability Reports published by Central Banks of the observed countries; International Monetary Fund (2023)

Profitability

The banking sector's profitability is also a significant determinant of its stability. In economic literature, an opinion polarization exists regarding the impact of profitability on financial stability. Newer research is not focused exclusively on the analysis of the impact of profitability on banking sector stability, but rather on examining the interdependence between these concepts, that is, to what extent the sector stability contributes to profitability. Tan and Ancor (2016) examined the interdependence of profitability and financial stability of Chinese commercial banks in 2002-2013. The results of the research suggest that a higher risk of insolvency, or lower stability, led to an increase in the profitability of Chinese commercial banks. On the other hand, higher profitability of banks reduces banks' resistance to potential shocks and negatively affects their stability. Nguyen and Le (2022) looked at the interdependence of the relationships between bank stability, profitability, and credit growth in Southeast Asia between 2006 and 2017. Their findings suggest that stable banks recorded higher profitability and lower loan growth.

On the other hand, credit growth has a positive effect on the bank's profitability, but has a negative effect on financial stability, while profitability has a positive effect on financial stability and loan growth. Natalya et al. (2015) also suggest that profitability adversely affects the profitability of banks, pointing out that high profitability leads to greater risk-taking and potential bank instability.

Significant implications regarding the impact of profitability on financial stability are provided by the research of Meiselman et al. (2020), which indicates that high levels of profitability in "good" times can be an indicator of increased systemic risk in periods of crisis and instability, especially if high levels of profit are realized from non-interest-bearing income. A number of research in the recent period indicates that the increase in the profits stemming from non-interest-bearing sources has a positive effect on the profitability of banks but has a predominantly negative impact on their financial stability. Thus, Kohler (2013), examining the impact of non-interest-bearing income on the financial stability of banks in the German banking sector, points out that this impact depends on the bank's business model. In the case of banks focused on retail operations, the increase in non-interest-bearing income has a positive effect on their stability. On the other hand, investment banks become significantly less stable with the increase in non-interest income. Antao and Karnik (2022) also found that an increase in non-interest income does not make commercial banks more stable. The above was especially evident during the Global financial crisis of 2008, where the level of non-interest-bearing income recorded a decline after the crisis, which suggests that there was an increase in financial stability during this period. In this context, in terms of understanding the implications of profitability on financial stability, it is important to adequately observe the sources of bank profitability, especially in those banking systems where bank profitability is significantly based on non-interest income (Teng Teng et al., 2019).

Table 4. Return on assets (ROA), 2007-2021, (in %)

Year	Serbia	Montenegro	Bosnia and Herzegovina	Albania	North Macedonia
2007	1.7	0.8	0.8	2.0	1.8
2008	2.1	-0.5	0.5	1.7	1.4
2009	1.0	-0.6	0.1	1.2	0.6
2010	1.1	-2.7	-0.5	1.2	0.8
2011	0.0	-0.06	0.8	1.0	0.4
2012	0.4	-1.9	0.7	0.6	0.6
2013	-0.1	0.1	-0.07	0.6	0.8
2014	0.1	0.8	0.8	0.9	1.0
2015	0.3	-0.08	0.3	0.7	1.6
2016	0.7	0.2	1.1	1.0	2.1
2017	2.1	0.9	1.5	1.1	2.5
2018	2.2	0.6	1.3	0.9	2.2
2019	1.8	1.2	1.4	1.2	1.9
2020	1.1	0.5	0.8	1.3	1.3
2021	1.2	0.8	1.3	1.3	1.5

Source: Annual Financial Stability Reports published by Central Banks of the observed countries; International Monetary Fund (2023)

Traditional indicators for measuring profitability were used to analyze the profitability of the banking sectors of the Western Balkan countries; rate of return on assets (ROA) and rate of return on equity (ROE). By observing the rate of return on assets, it can be said that in the initial years of the observed period, the banking sectors of Montenegro and Bosnia and Herzegovina recorded slightly lower values compared to the banking sectors of other countries (Table 4). With the exception of the banking sectors of Bosnia and Herzegovina and Montenegro, the banking sectors of the other Western Balkan countries recorded a slight decrease in the value of ROA. The highest value of ROA in the observed period was recorded in North Macedonia (2.5% in 2017), while the lowest value was recorded in Montenegro (-2.7 in 2010).

Similar conclusions regarding the profitability of the Western Balkan countries' banking sectors can be made, if the rate of return on equity (ROE) is observed (Table 5). With the exception of the banking sector of Bosnia and Herzegovina, the other banking sectors recorded a decrease in the value of the rate of return on capital, whereby the largest increase has been recorded in the Albanian banking sector. Compared to other banking sectors, the banking sectors of Albania and North Macedonia recorded higher rates of ROE. At the end of 2021, the banking sector of Albania recorded the highest value of ROE (12.9%), while Montenegro recorded the lowest (5.6%).

Table 5. Return on equity (ROE), 2007-2021, (in %)

Year	Serbia	Montenegro	Bosnia and Herzegovina	Albania	North Macedonia
2007	8.5	7.1	8.6	20.7	15.2
2008	9.0	-7.4	3.9	11.4	12.5
2009	4.6	-7.5	0.8	4.6	5.6
2010	5.3	-25.8	-5.5	7.6	7.3
2011	0.2	-1.1	5.5	0.8	3.4
2012	2.0	-19.4	4.3	3.8	3.8
2013	-0.4	0.5	-1.2	6.4	5.7
2014	0.6	5.6	4.4	10.5	7.4
2015	1.5	-0.9	0.9	13.2	10.4
2016	3.3	1.2	6.2	7.2	13.6
2017	10.5	6.9	9.0	15.7	13.5
2018	11.3	4.9	8.5	13.0	13.5
2019	9.8	9.1	9.1	13.5	16.0
2020	6.5	3.7	5.6	10.7	11.7
2021	7.8	5.6	9.6	12.9	11.3

Source: Annual Financial Stability Reports published by Central Banks of the observed countries; International Monetary Fund (2023)

On the basis of IMF financial soundness indicators values, it can be concluded that the banking sectors of the Western Balkan countries recorded satisfactory profitability in the observed period. An exception may be the banking sector of Montenegro, which recorded negative values of key profitability indicators on several occasions during the observed period. However, in order to make more relevant conclusions about the impact of profitability on the stability of the banking sectors of the observed economies, it is necessary to additionally observe the structure of the key sources of profitability, primarily with regard to the share of non-interest-bearing income. Bearing in mind the fact that commercial banks in the observed banking sectors are predominantly engaged in deposit-loan operations, it can be expected that non-interest-bearing income has a smaller share in the structure of total income. On this basis, the increase in the profitability of the banking sector does not necessarily have an adverse effect on its stability in the case of the countries of the Western Balkans.

Z score

Apart from the IMF financial soundness indicators, there are other indicators for assessing the financial stability levels. Among them, the z score should be singled out. In the economic literature, there are many studies that assessed the stability of financial institutions using the z score (Kasman & Kasman 2015; Barra & Zotti, 2018). Many studies assessed the stability of the banking sector by measuring z score (Demirgüç-Kunt et al., 2008; Cihak & Hesse, 2010; Lepetit & Strobel, 2015; Hafeez et al., 2022), but some researchers measured the financial stability of other financial institutions (Moreno et al., 2020). Regardless of the number of studies and the type of financial institutions whose stability is assessed, the essence of z score is reflected in the fact that its value is inversely related to the probability of insolvency. More precisely, a higher value of z score implies a lower probability of insolvency problems (Sysoyeva, 2020). The key disadvantage of z score lies in the fact that it is based on accounting data, so it can often provide fewer objective conclusions about the stability of the banking sector (Grbić, 2019).

Table 6. Z Score, 2007-2021

Godina	Srbija	Crna Gora	BiH	Albanija	Severna Makedonija
2007	15.2	5.3	12.4	15.6	11.5
2008	16.5	5.3	13	19.2	11.1
2009	13.9	7.6	13.5	20.2	9.9
2010	12.8	4.1	14.1	21	9.4
2011	13.8	7.3	17.9	22.2	9.2
2012	13.6	6.4	18.8	22.3	9.6
2013	13.3	9.3	17.8	22.1	10
2014	13.2	10.4	18.7	22.2	9.9
2015	14.3	8.8	18	22.1	10.2
2016	13.3	8.9	18.5	23.8	10. 6

2017.	14.4	9.2	19	21.7	11.1
2018.	13.3	9.3	17.1	20	11.1
2019.	12.6	10	16.8	20.6	11.2
2020.	11.1	9.4	15.3	20.2	11.3
2021.	10.3	8.9	15.3	19.1	9.5

Source: Global Economy (2023). Banking system Z scores.

CONCLUSION

The banking sector is the most important segment of the Wester Balkan countries' financial systems. Commercial banks have a dominant role in the structure of assets and capital of the financial sector, so the stability of the banking sector is one of the most important determinants of overall financial stability. The analysis of the banking sectors of the Western Balkans countries has shown that they have almost identical characteristics. Commercial banks are dominantly engaged in deposit-loan operations and are also the most important source of financing economic growth. In addition, the observed banking sectors are characterized by satisfactory capitalization both in terms of the adequacy of the total and in terms of the adequacy of the core capital. Additionally, the analyzed banking sectors have a relatively low share of problem loans, satisfactory liquidity, with certain variations regarding profitability.

The research results suggest that Western Balkan countries' banking sectors record satisfactory financial stability levels. The adequacy of total and core capital is above the regulatory requirements of the Basel Committee, which indicates that the observed banking sectors are able to absorb potential losses. However, what can be noticed is that in the observed period there was a slight deterioration of solvency in all the observed banking sectors, except Albania, while in the case of the core capital adequacy, the banking sectors of Serbia and Albania recorded an improvement. Also, in the observed period, all banking systems recorded an improvement in the quality of assets, since the share of problem loans in total loans was lower in all observed economies, except for Montenegro. When it comes to liquidity, the improvement of liquidity in the observed period occurred in Montenegro and Albania, while in other economies there was a slight liquidity deterioration. Regarding profitability, the decrease in the rate of return was recorded in the Albanian banking sector, while the banking sectors of Montenegro and Albania recorded a decrease in the rate of return on equity. Finally, looking at the stability of the banking sector by means of z score points out that most of the observed countries record an increase in stability, except for Montenegro and North Macedonia.

The Serbian banking sector records slightly higher levels of capital adequacy and liquidity compared to other banking sectors. However, the share of problem loans in total loans has significantly decreased in the observed period but is slightly higher compared to the banking sector of North Macedonia. When it comes to profitability, the Serbian banking sector records lower levels of rate of return on assets and rate of return on equity compared to all the other countries, except Montenegro. Finally, regarding z score values, only banking sectors of Albania and Bosnia and Herzegovina recorded slightly higher values compared to the Serbian banking sector.

Despite formulating relevant conclusions, the research has certain limitations. The primary limitation of the research is reflected in the relatively short observation period due to the unavailability of data for an earlier period (especially in the case of Serbia, Montenegro and Albania). Also, the research included five countries, so more comprehensive conclusions about the degree of financial stability could be obtained by expanding the sample to other European economies (EU member countries) or other developing countries, which can represent a good basis for future research.

In the end, it should be pointed out that the results of the analysis provide significant implications that can be useful to national supervisors, but also to the bank managers in the observed economies. The presented results can help supervisory institutions to identify areas where certain improvements can be implemented, which would have a positive impact not only on the performance of the banking sector but also on the stability of the financial system. On the other hand, the results of the research provide objective information to bank managers to assess their performance both in relation to the domestic banking sector and from a regional perspective, which in the last instance can contribute to the improvement of business performance and the degree of financial stability.

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ISLAMSKO OSIGURANJE DEPOZITA U TEORIJI I PRAKSI

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Rezime: Razvoj i konkurentnost islamskog bankarstva, kao relativno mladog segmenta globalnog finansijskog tržišta, uslovljeni su, pre svega, poverenjem aktuelnih i potencijalnih ulagača u sposobnost islamskih banaka da poverenim ulozima upravljaju u skladu sa ugovorom i dobrom poslovnom praksom. Osiguranje depozita jedan je od bitnih instrumenata pomoću kojih se može jačati poverenje deponenata u stabilnost bankarskog sistema. U ovom radu analiziran je model islamskog osiguranja depozita. Ciljevi rada su da se sagledaju njegova teoretska osnova i odlike njegove prakse, eventualna odstupanja poslovne prakse od teoretskih postulata i izazovi primene islamskog osiguranja depozita u različitim pravnim sistemima. Analizom prakse islamskog osiguranja depozita, dolazi se do zaključka da ona u većini zemalja odstupa od šerijatski usklađenog modela osiguranja depozita. Tome su prevashodno doprineli bankarski propisi koji uglavnom ne prepoznaju specifičnost odnosa koji islamska banka formira sa svojim deponentima i, samim tim, potrebu islamskih banaka za autentičnim pristupom osiguranju depozita.

Ključne reči : islamsko bankarstvo, osiguranje depozita, Šerijat, takaful, kafalah bi al ujr

JEL klasifikacija : G21, G22, K15, Z12

Uvod

Konvencionalne banke garantuju svojim deponentima isplatu uloga u punom iznosu (Garcia, 1999, str. 4). Snaga te garancije, pak, uslovljena je poslovnim performansama i perspektivama banke, o kojima su deponenti daleko slabije informisani nego menadžeri i akcionari banke. Nedovoljna informisanost stvara kod deponenata osećaj neizvesnosti, koji ih konačno može voditi paničnom povlačenju uloga (Calomiris, 1990, str. 284). Da bi se sprečila ova negativna pojava i kompletan splet njom izazvanih teških posledica, uveden je eksterni sistem garantovanja uloga u vidu osiguranja depozita (Diamond & Dybvig, 1983, str. 401, 404). Evolucija osiguranja depozita započeta je osnivanjem Sigurnosnog fonda Države Njujork (New York State's safety fund) u 19. veku (Thies & Gerlowski, 1988, p. 678). Međutim, ovaj pokušaj uspostavljanja državnog sistema osiguranja depozita se, kao i slični pokušaji u drugih pet američkih saveznih država u istom periodu, pokazao neuspešnim (Calomiris & Jaremski, 2016, str. 97). Ipak, uvođenje osiguranja depozita na nivou federacije nije imalo podršku saveznih zakonodavaca sve dok se nije desila velika ekonomska kriza 1929. godine, a pre toga, u prvim decenijama 20. veka, i neuspešan pokušaj osam saveznih američkih država da osnuju održive sisteme osiguranja depozita (Ibid). Tek nakon toga je odobreno osnivanje Savezne korporacije za osiguranje depozita (Federal Deposit Insurance Corporation – FDIC). Primena osiguranja depozita u svetu doživljava ekspanziju tek u poslednjih nekoliko decenija, kada su mnoge zemlje započele proces društvene i ekonomske transformacije. Jedan od elemenata tog procesa bilo je i uspostavljanje sistema osiguranja depozita, što je neretko bio plod pritisaka Svetske banke, Međunarodnog monetarnog fonda i Evropske unije (Demirgüç-Kunt, Kane & Laeven, 2008, str. 435). Ipak, implementatori osiguranja depozita moraju biti svesni njegovog destabilizacionog potencijala (detaljnije Demirgüç-Kunt & Detragiache, 2002; Demirgüç-Kunt & Kane, 2002; Demirgüç-Kunt, Kane & Laeven, 2008; Anginer, Demirgüç-Kunt & Zhu, 2014), zbog kojeg ga je bivši predsednik Savezne korporacije za osiguranje depozita[1] uporedio sa nuklearnom elektranom .

Koncepcija islamskog bankarstva je, pak, znatno drugačija u odnosu na konvencionalno bankarstvo. Islamske banke ne mogu poslovanje zasnivati na kamati i rizičnim ulaganjima, i njihovo finansiranje i ulaganje se sprovodi po principu podele rizika (Ghosh, 2017, str. 213). Pošto finansiranje islamskih banaka najčešće ne podrazumeva preuzimanje fiksnih obaveza, njihovi zahtevi za obaveznim kapitalom su manji nego u slučaju konvencionalnih banaka (Ibid). Shodno navedenim činjenicama, može se dovesti u pitanje potreba za postojanjem osiguranja depozita islamskih banaka. Međutim, bez detaljnije analize poslovne prakse islamskih banaka i izazova koje im poslovno okruženje nameće, nemoguće je doći do valjanog zaključka po ovom pitanju. Najpre, treba biti svestan činjenice da islamske banke neretko izlaze iz teoretskih okvira šerijatski optimizovanog bankarstva (Ibid). Takođe, treba uzeti u obzir i to da se islamske banke ne razvijaju u jedinstvenom i jednoobraznom pravnom prostoru, već u različitim pravnim sistemima. Ostvarenjem izuzetno visokih stopa tržišnog rasta u različitim zemljama i pravnim sistemima, islamskim bankama je kao uslov održivosti rasta i konkurentnosti nametnuta obaveza osiguranja depozita (interpretirano prema Hamed, 2015, str. 5). S obzirom na to da konvencionalno osiguranje depozita uključuje pojedine elemente, poput kamate (*riba*, detaljnije Islamic Deposit Insurance Group, 2010; Jaffer, et. al., 2010; Hussain & Pasha, 2011) i preterane neizvesnosti (*garar*, detaljnije El-Qalqili, 2017), koji su šerijatski neprihvatljivi, bilo je neophodno kreirati novu koncepciju osiguranja depozita, koja bi bila oblikovana prema šerijatskim principima i čija bi osnovna funkcija zaštite deponenata bila očuvana.

[1] *„Sistem osiguranja depozita je kao nuklearna elektrana. Ako ga gradite bez primene mera predostrožnosti, znate da će vas oduvati sa lica Zemlje. Pa čak i ako ih primenjujete, ne možete biti sigurni da neće" (L. William Seidman, navedeno u Thies & Gerlowski, 1988, p. 677).*

U ovom radu analiziran je model islamskog osiguranja depozita. Ciljevi rada su da se sagledaju njegova teoretska osnova i odlike njegove prakse, eventualna odstupanja poslovne prakse od teoretskih postulata i izazovi primene islamskog osiguranja depozita u različitim pravnim sistemima. U skladu sa ciljem rada, kreirana je i njegova struktura. U prvom delu predstavljene su teorijska koncepcija i praktična primena islamskog osiguranja depozita. U drugom delu analizirane su specifičnosti osiguranja depozita islamskih banaka u pojedinim zemljama. Na kraju, u zaključku je dat kratak osvrt na teoriju i praksu islamskog osiguranja depozita i odstupanja koja među njima postoje.

Teorijska koncepcija i praktična primena islamskog osiguranja depozita

Svrha islamskog osiguranja depozita je da se u skladu sa šerijatskim principima zaštite ulozi deponenata islamskih banaka, što za posledicu treba da ima jačanje poverenja u islamske banke, njihove stabilnosti i konkurentnosti (Hamed, 2015, str. 5). Prema mišljenju većine šerijatskih stručnjaka, najprimereniji oblik islamskog osiguranja depozita je *takaful*, koji funkcioniše po principu uzajamnog osiguranja, gde banke uplaćuju doprinose u zajednički fond i solidarno snose eventualne gubitke, dok fondom upravlja *takaful* operator u svojstvu agenta (detaljnije Lahsasna, 2016; Lekpek & Ibrović, 2021). S druge strane, postoji i *kafalah bi al ujr* oblik islamskog osiguranja depozita, kod kojeg islamske banke uplaćuju naknadu osiguravaču za pružanje usluge osiguranja depozita (Ibid). Preovlađujući stav je da je šerijatska valjanost ovog modela islamskog osiguranja upitna zbog komercijalizacije garancije, koju većina šerijatskih stručnjaka smatra nedozvoljenom (detaljnije Islamic Deposit Insurance Group, 2010; Abubakar, et al., 2016; Hamisu & Hassan, 2017; Noor & Haron, 2018). Zaštitom koju pruža islamsko osiguranje depozita ne mogu biti pokriveni svi depoziti islamskih banaka (navedeno prema Abubakar, et al., 2016; Hamisu & Hassan, 2017; Fendi, 2020). Pravo vlasnika transakcionih depozita na zaštitu njihovih uloga putem osiguranja depozita se među šerijatskim stručnjacima ne dovodi u pitanje. S druge strane, većina šerijatskih stručnjaka smatra da takvo pravo nemaju vlasnici investicionih depozita, koji sa bankom formiraju partnerski odnos i s njom dele profit i gubitke.

Razumevanje potreba islamskih banaka i njihovih deponenata može biti značajan prvi korak u stvaranju valjanog okruženja za njihovo delovanje, a što konačno može finansijskom sistemu doneti brojne koristi, u vidu rasta broja pružalaca finansijskih usluga, raznovrsnosti finansijskih usluga i broja njihovih korisnika. U poređenju sa deponentima konvencionalnih banaka, deponenti islamskih banaka su pod snažnijim uticajem religije, manje su spremni na panično povlačenje uloga i pokazuju veću štedljivost, naročito u periodu privredne ekspanzije (Farooq & Zaheer, 2015, str. 122; Akhtar, Akhter & Shahbaz, 2017, str. 306). Ipak, deponente islamskih banaka[2] ne treba percipirati kao religiozne idealiste koji zaradu na uloge nisko kotiraju na listi prioriteta. Istraživanja su pokazala da promena tržišnih kamatnih stopa i te kako utiče na njihova očekivanja po osnovu prinosa na depozite u islamskim bankama (Akhtar, Akhter & Shahbaz, 2017, str. 306; Aysan, et al., 2018, str. 13). Da bi zadovoljile njihova očekivanja, islamske banke izdvajaju deo profita u posebne rezerve za čijim sredstvima posežu u periodu kada iz redovnog poslovanja ne bi mogle obezbediti deponentima zadovoljavajući prinos (detaljnije Iqbal & Mirakhor, 2009, str. 224-226; Hamza, 2016, str. 34). Postoji stav da se na ovaj način krše šerijatski propisi i narušavaju interni odnosi u banci (Ibid).

[2] *Reč je o vlasnicima investicionih depozita, jer vlasnici transakcionih depozita ne ostvaruju prinos na svoje uloge.*

U praksi postoje tri modela osiguranja depozita islamskih banaka (Islamic Deposit Insurance Group, 2010, str. 4): a) osiguranje depozita islamskih banaka u okviru konvencionalnog sistema osiguranja depozita, b) postojanje posebnog sistema islamskog osiguranja depozita uz konvencionalni sistem osiguranja depozita i c) postojanje isključivo islamskog osiguranja depozita. Shodno, primenjenom modelu javljaju se različiti pristupi uređenju pojedinih pitanja, poput (Ibid, str. 6): obaveznosti članstva u sistemu osiguranja depozita, razdvajanja premija osiguranja depozita islamskih banaka od premija osiguranja depozita konvencionalnih banaka u fondu osiguranja, usklađenosti upravljanja fondom sa šerijatskim principima, ujednačenosti limita pokrića i premija osiguranja za depozite islamskih i konvencionalnih banaka. Poseban sistem islamskog osiguranja depozita, po drugom ili trećem modelu, ima pet zemalja, pri čemu Sudan, Bahrein i Jordan koriste *takaful*, dok Malezija i Nigerija koriste *kafalah bi al* ujr formu osiguranja depozita (Mustafa & Najeeb, 2018, str. 488-489). Kad je u pitanju osiguranje pojedinih vrsta depozita, transakcioni depoziti su osigurljivi u svim sistemima, dok se praksa osiguranja investicionih depozita razlikuje (Hamed, 2015, str. 12). Primera radi, i u Jordanu i u Sudanu je primenjen *takaful* model osiguranja depozita, međutim, u Sudanu je dozvoljeno osiguranje svih investicionih depozita, dok su u Jordanu osiguranjem pokriveni samo neograničeni investicioni depoziti (Ibid, str. 16), čija namena nije unapred određena dogovorom ulagača i banke (detaljnije Van Greuning & Iqbal, 2008, str. 193-196). U sistemima koji osiguranjem pokrivaju i investicione depozite, doprinosi za njihovo osiguranje u fondu se odvajaju od doprinosa za osiguranje transakcionih depozita (Hamed, 2015, str. 16). Osnovice za obračun premije osiguranja depozita islamskih banaka se razlikuju u različitim zemljama. U Indoneziji se u obzir uzimaju ukupni depoziti, u Jordanu prihvatljivi depoziti, u Sudanu prosečan godišnji iznos osiguranih depozita, a u Turskoj, Maleziji i Jemenu ukupni pokriveni depoziti (Ibid, str. 18). Kad su premijske stope u pitanju, u Jemenu, Indoneziji, Sudanu i Jordanu se koristi proporcionalna premijska stopa, dok u Turskoj i Maleziji koriste premijske stope prilagođene riziku (Ibid, str. 19). Svi sistemi osiguranja depozita koji pokrivaju depozite islamskih banaka imaju unapred definisane izvore pomoćnog finansiranja, za slučaj da fond osiguranja depozita ne raspolaže dovoljnim finansijskim sredstvima za izvršenje svojih obaveza. Nedostajuća sredstva se obezbeđuju uz pomoć države, finansijskog tržišta i/ili konvencionalnog fonda za osiguranje depozita, na bazi emisije *sukuk* obveznica, beskamatnih i klasičnih pozajmica (navedeno prema Ibid, str. 21).

Na osnovu navedenih činjenica, može se zaključiti da još uvek nisu zaživeli opšteprihvaćeni standardi islamskog osiguranja depozita, koji bi se primenjivali u svim zemljama u kojima praksa osiguranja islamskih depozita postoji (Kammer, et al., 2015, str. 24). U različitim zemljama različite su odlike islamskih banaka, kao i šerijatska tumačenja pojedinih finansijskih pitanja, ali su im zajednički problemi, poput nedostatka stručnog kadra i opšteprihvaćenih šerijatskih principa (Hamed, 2015, str. 29). Zbog pomenute neusklađenosti propisa, u praksi se dešavaju brojni propusti. Tako su u Maleziji pojedine odredbe zakona kojim je uređeno pitanje *kafalah bi al ujr* osiguranja protivne šerijatskim propisima (detaljnije Muneeza & Mustapha, 2020, str. 173). Takođe, postoje i slučajevi zloupotrebe *takaful* osiguranja depozita, gde se pomoću *takaful* forme prikriva suština primenjenog mehanizma osiguranja islamskih depozita, koja se u odnosu na konvencionalno osiguranje depozita minimalno razlikuje (detaljnije Maali & Atmeh, 2015, str. 145). Problematičan je i različit tretman investicionih depozita u različitim zemljama, jer je jasno da su islamske banke u zemljama u kojima su investicioni depoziti pokriveni osiguranjem u povoljnijem tržišnom položaju nego islamske banke u zemljama u kojima to nije slučaj (interpretirano prema Kammer, et al., 2015, str. 24). Takođe, i pitanje premijske stope nije uređeno na jedinstven način. Prevashodno je problematična primena premijskih stopa prilagođenih riziku, zato što: a) postoji stav o šerijatskoj neprihvatljivosti primene različitih premijskih stopa, odnosno stopa doprinosa kod takaful osiguranja (Hamed, 2015, str. 19), i b) potrebno je prethodno razviti valjane instrumente za merenje specifičnih rizika islamskih banaka (Kammer, et al., 2015, str. 24).

Značajan iskorak u prevazilaženju problema disharmonije propisa kojima se reguliše islamsko osiguranje depozita napravljen je kreiranjem „Osnovnih principa za efektivne islamske sisteme osiguranja depozita" (Core Principles for Effective Islamic Deposit Insurance Systems) 2021. godine, koji su nastali u saradnji Međunarodne asocijacije osiguravača depozita (International Association of Deposit Insurers – IADI) i Odbora za islamske finansijske usluge (Islamic Financial Services Board – IFSB). Prilikom oblikovanja osnovnih principa islamskog osiguranja depozita, pošlo se od ranije definisanih „Osnovnih principa za efektivne sisteme osiguranja depozita", koji su bili namenjeni konvencionalnim sistemima osiguranja depozita (detaljnije BCBS & IADI, 2009). Principi islamskog osiguranja depozita su kreirani modifikovanjem originalnih konvencionalnih principa, primenom različitih amandmana, i uključivanjem novog principa koji se tiče šerijatskog upravljanja osiguranjem depozita (detaljnije IADI & IFSB, 2021).

Praksa islamskog osiguranja depozita u pojedinim zemljama

Islamsko bankarstvo decenijama ostvaruje visoke stope rasta i postaje prisutno u sve više zemalja. Međutim, njegov značaj se nedovoljno prepoznaje, čak i u zemljama u kojima islamske banke posluju. U prilog tome govori činjenica da u malom broju zemalja postoji osiguranje depozita koje prepoznaje potrebe i principe poslovanja islamskih banaka, što je, između ostalog, i posledica još uvek malog udela depozita islamskih banaka u ukupnim depozitima i nerešenog pitanja osigurljivosti investicionih depozita (Islamic Deposit Insurance Group, 2010, str. 2). U nastavku će biti predstavljena praksa islamskog osiguranja depozita u Maleziji, Turskoj, Jordanu, Bahreinu i Indoneziji. Iako je suština osiguranja depozita islamskih banaka u svim navedenim zemljama ista, postoje izvesni detalji po kojima se njihova praksa islamskog osiguranja depozita razlikuje.

Malezija

Malezija[3] je sistem osiguranja depozita uspostavila 2005. godine i stavila ga u nadležnost Perbadanan Insurans Deposit *Malaysia (PIDM),* specijalizovane državne institucije, koja osim o osiguranju depozita, brine i o sektoru *takaful* i konvencionalnog osiguranja. Ova institucija čvrsto sarađuje sa malezijskom centralnom bankom (Bank Negara Malaysia – BNM), ključnom regulatornom i nadzornom institucijom u malezijskom bankarskom sistemu, u cilju ostvarenja stabilnosti bankarskog i finansijskog sektora. Učešće banaka koje imaju dozvolu za poslovanje u Maleziji u sistemu osiguranja depozita je obavezno. To se odnosi i na konvencionalne i na islamske banke. Pokriće depozita osiguranjem je ograničeno na 250.000 malezijskih ringita po deponentu po banci i primenjuje se posebno za islamske i konvencionalne banke. Osiguranjem su pokriveni transakcioni, ali ne i investicioni depoziti islamskih banaka. Sistem osiguranja depozita se finansira plaćanjem premije od strane banaka-članica, koje trošak premije osiguranja depozita ne smeju prebaciti na teret deponenata. Shodno navedenom, može se zaključiti da su depoziti islamskih banaka osigurani po *kafalah bi al ujr* modelu.

[3] *Osiguranje depozita islamskih banaka u Maleziji je predstavljeno prema Perbadanan Insurans Deposit Malaysia (n. d.) i Perbadanan Insurans Deposit Malaysia (2020).*

Iznos premije se utvrđuje množenjem iznosa ukupnih osiguranih depozita i propisane premijske stope. Propisana premijska stopa je prilagođena riziku osigurane banke. Visina premije se određuje na osnovu kvantitativnih kriterijuma, na koje otpada maksimalno 60 bodova koje banka može ostvariti, i kvalitativnih kriterijuma, na koje se odnosi preostalih 40 bodova. Veći broj bodova ukazuje na bolji finansijski položaj i niži nivo rizičnosti posmatrane banke. Kod kvantitativnih kriterijuma u obzir se uzimaju kapitalizovanost banke, s jedne strane, i pokazatelji profitabilnosti i profila aktive i izvora finansiranja, čije vrednosti se pojedinačno boduju sa 10 ili 15 bodova zavisno od pokazatelja, s druge strane. Poređenjem nivoa kapitalizovanosti banke i zbira bodova ostvarenih po osnovu navedena tri pokazatelja po principu matrice, određuje se matrična kategorija banke koja može biti od M1, što je najbolja kategorija, do M7, i svakoj kategoriji se dodeljuje određeni broj bodova, najviše 60, najmanje 15. Ti bodovi se potom dodaju bodovima određenim na osnovu kvalitativnih kriterijuma, čija je struktura sledeća: supervizorski rejting nosi najviše 35 bodova, a „ostale informacije" preostalih 5. Na osnovu ukupnog broja bodova određuje se premijska kategorija: za više od 85 bodova je prva kategorija, dok je za manje od 50 bodova četvrta kategorija. Na osnovu bodova i premijske kategorije, *PIDM* do 15. maja tekuće godine određuje visinu premijske stope za svaku banku, na osnovu koje se određuje premijska obaveza koju banke treba da izmire do 31. maja tekuće godine.

Istraživanja pokazuju da je uvođenje sistema osiguranja depozita različito delovalo na konvencionalne i islamske banke u Maleziji (navedeno prema Abdullah, 2020, str. 47). Konvencionalne banke su spoznale osiguranje depozita kao vid sopstvene zaštite i upustile se u unosnije i rizičnije poslovne poduhvate. Islamske banke, pak, prateći šerijatske principe koji podstiču prihvatanje umerenog rizika i stvaranje nove vrednosti, nisu bitnije promenile svoj rizični profil. Sistem osiguranja depozita utiče na poverenje deponenata u malezijski bankarski sistem i njihovu spremnost na povlačenje uloga iz banaka zavisno od njihove informisanosti o ovom sistemu. Prema jednom istraživanju sprovedenom među klijentima malezijskih islamskih banaka, čak sto puta je veća šansa da svoj ulog povuku deponenti koji nisu adekvatno informisani o sistemu osiguranja depozita u odnosu na one koji to jesu (Abduh, 2014, str. 52).

Turska

Turska je praksu osiguranja depozita započela 1933. godine, ali je tek 1999. godine uspostavila održiv sistem, kada je osnovan Fond za osiguranje štednih depozita (Savings Deposit Insurance Fund of Turkey – SDIF) koji je poveren na upravljanje Agenciji za regulaciju i superviziju banaka (Banking Regulation and Supervision Agency – BRSA) (Cabukel & Frisch, 2012, str. 143). Stabilnost turskog bankarskog sistema održava se u saradnji četiri državne finansijske institucije: Centralne banke Turske (Central Bank of Turkey – CBT), Trezora, Agencije za regulaciju i superviziju banaka i Fonda za osiguranje štednih depozita (Ibid, str. 148). Sistem osiguranja depozita uključuje i na isti način tretira i konvencionalne i islamske banke, koje se u Turskoj nazivaju participacionim bankama. Praksa osiguranja depozita islamskih banaka u Turskoj je započeta 2001. godine, najpre kreiranjem posebnog sistema pod kontrolom samih islamskih banaka, koji je potom 2005. godine uključen u konvencionalni sistem (Islamic Deposit Insurance Group, 2010, str. 3). Uključivanje turskih islamskih banaka u sistem osiguranja depozita je imalo izuzetan značaj za unapređenje njihovog statusa. Od zasnivanja prakse islamskog bankarskog poslovanja polovinom 80-ih godina XX veka, islamske banke u Turskoj su imale neravnopravan pravni, društveni i medijski položaj u odnosu na konvencionalne banke (Yanīkkaya & Pabuçcu, 2017, str. 50).

U prilog tome govori i činjenica da islamske banke nisu bile pokrivene osiguranjem depozita sve do 2001. godine. Te godine se desila snažna ekonomska kriza u Turskoj, tokom koje je propala u tom momentu najveća islamska banka u Turskoj (Ibid). Taj događaj je podstakao ,,juriš na depozite" od strane deponenata drugih islamskih banaka, nakon čega je tržišno učešće islamskih banaka na turskom bankarskom tržištu smanjeno za čak 50% (Ibid). Činjenica je da je ovako snažan potres na islamskom bankarskom tržištu u Turskoj prevashodno bio izazvan nepostojanjem zaštite uloga deponenata islamskih banaka i da je to ključni razlog uključivanja islamskih banaka u sistem osiguranja depozita već te godine (Ibid). Istraživanja pokazuju da je uključenjem turskih islamskih banaka u sistem osiguranja depozita, njihova tržišna disciplina ojačana (Aysan, et al., 2017, str. 257).

Osiguranjem depozita pokriveni su svi depoziti turskih banaka, bez obzira na to da li je štednja u turskim lirama, devizama ili plemenitim metalima, pri čemu je osiguranje ograničeno na 200.000 turskih lira po deponentu po banci (Savings Deposit Insurance Fund, 2023, str. 28). Osiguranjem depozita nisu pokriveni depoziti većinskih akcionara banaka i sa njima povezanih lica, članova uprave banke, deponovani novac za koji se utvrdi da je stečen kriminalom i ostali depoziti koji prema važećem zakonu nisu pokriveni osiguranjem (Ibid, str. 29). Premija osiguranja se određuje shodno procenjenoj rizičnosti konkretne banke (navedeno prema Ibid, str. 29-30). Prilikom određivanja premijske stope u obzir se uzimaju adekvatnost kapitala, kvalitet aktive, profitabilnost, likvidnost i drugi faktori rizičnosti banke. Za prva četiri kriterijuma rizičnosti banke određuje se nekoliko pokazatelja i shodno ostvarenoj vrednosti tih pokazatelja bankama se dodeljuju bodovi, za prvi kriterijum najviše 25, drugi 20, a preostala dva po 10 bodova. Po osnovu petog kriterijuma najviše se može dobiti 35 bodova, na osnovu supervizorskog rejtinga i „ostalih informacija". Na osnovu ukupnog broja bodova određuje se premijska kategorija, pri čemu banke sa više od 80 bodova se svrstavaju u kategoriju A i za njih važi premijska stopa od 15 bazičnih poena, dok najslabijoj D kategoriji pripadaju banke sa manje od 50 bodova, čija premijska stopa iznosi 23 bazična poena. Banke imaju obavezu da u specijalizovani informacioni sistem koji je uspostavila Agencija za regulaciju i superviziju banaka, unesu vrednosti finansijskih indikatora i popune tabelu premije rizika, koja se prosleđuje Fondu za osiguranje štednih depozita. Na osnovu te tabele i rejtinga supervizora, Fond određuje premijske stope i iznose premija za svaku banku, koja potom 15 dana kasnije treba Fondu da uplati utvrđeni iznos (Ibid, str. 30-31).

Jordan

Jordan[4] je 2000. godine osnovao Korporaciju za osiguranje depozita (Jordan Deposit Insurance Corporation), u okviru koje je 2019. godine kreiran poseban fond za osiguranje depozita islamskih banaka (Deposit Insurance Fund for Islamic Banks). Na ovaj način prepoznate su potrebe islamskih banaka i njihovih deponenata i pružena im je adekvatna zakonska zaštita. Islamsko osiguranje depozita u Jordanu funkcioniše po *takaful* principu. Osiguranjem su obuhvaćene sve islamske banke koje posluju u Jordanu. Osigurana suma je ograničena na 50.000 jordanskih dinara po deponentu po banci. Osiguranje pokriva transakcione i neograničene investicione depozite islamskih banaka denominovane u jordanskim dinarima, i samo izuzetno stranim sredstvima plaćanja, dok su vladini, međubankarski i ograničeni investicioni depoziti islamskih banaka izuzeti iz osiguranja.

4 *Osiguranje depozita islamskih banaka u Jordanu je predstavljeno prema Jordan Deposit Insurance Corporation (n. d.).*

Fond ima više izvora finansiranja. Na prvom mestu to su godišnje članarine koje banke-članice uplaćuju fondu u visini 2,5‰ na iznos osiguranih depozita, potom prinosi na ulaganja u šerijatski valjane finansijske instrumente, beskamatni krediti i grantovi. U Fondu se razdvajaju članarine plaćene po osnovu transakcionih depozita i članarine plaćene po osnovu neograničenih investicionih depozita. U slučaju likvidacije Fonda, sva njegova sredstva, nakon pokrića obaveza, prenose se u vlasništvo državnog fonda koji prikuplja i upravlja verskim porezom *zekatom*.

Istraživanja pokazuju da je u Jordanu poslovanje islamskih banaka manje rizično u odnosu na poslovanje konvencionalnih banaka (Matar, 2017). Ipak, na osnovu njih se ne može videti da li postojanje sistema osiguranja depozita uticalo na takvo stanje stvari.

Bahrein

Bahrein[5] je 1993. godine postao prva zemlja koja je, uz postojeći konvencionalni sistem osiguranja depozita, uspostavila i sistem islamskog osiguranja depozita (Islamic Deposit Insurance Group, 2010, str. 3). Fond osiguranja depozita se deli na fond za konvencionalne banke i fond za islamske banke, koji su međusobno nezavisni. U sistem osiguranja su uključene sve islamske banke koje posluju u Bahreinu. Osigurljivi su transakcioni i neograničeni investicioni depoziti islamskih banaka u Bahreinu bez obzira na valutu, ali ne i njihovih ogranaka u inostranstvu. Osiguranje ne pokriva depozite u vlasništvu akcionara banke sa udelom u vlasništvu većim od 10% i članova uprave, kao ni depozite čiji su vlasnici nepoznati ili su deponovani novac stekli bavljenjem nelegalnim aktivnostima.

Osigurana suma je ograničena na 20.000 bahreinskih dinara po deponentu po banci, od čega se mogu odbiti dugovanja deponenata prema banci. Ukupan godišnji iznos koji islamske banke treba da uplate Fondu iznosi 20 miliona bahreinskih dinara. Godišnji doprinos islamskih banaka Fondu se određuje proporcionalno iznosu osigurljivih depozita i može se uplaćivati u tromesečnim ratama. Islamske banke imaju obavezu da u roku od dva meseca od okončanja finansijske godine pošalju centralnoj banci izveštaj o osigurljivim depozitima kojima raspolažu. U slučaju da islamska banka u propisanom roku i iznosu ne uplati doprinos fondu, centralna banka može upotrebiti brojne kaznene mere, od novčanih kazni do oduzimanja dozvole za rad, ukoliko se pomenuti prekršaj ponavlja.

U jednom istraživanju (Onour, 2019), pomoću modela koji je kreirao Merton (1977), izvršena je procena premija osiguranja depozita koje pojedine islamske banke u odabranom uzorku zemalja treba da plaćaju. Prema tom istraživanju, Bahrein spada u zemlje u kojima je zabeležena najveća varijabilnost premija osiguranja depozita. Na osnovu toga je zaključeno da Bahrein treba da primenjuje premijske stope prilagođene riziku.

Indonezija

Indonezija[6] je 2004. godine donela zakon kojim reguliše osiguranje depozita, na osnovu kojeg je 2005. godine osnovana specijalizovana Korporacija za osiguranje depozita, pod nazivom *Lembaga Penjamin Simpanan (LPS)*. Time je napuštena praksa potpunog pokrića depozita (blanket guarantee), koja je bila na snazi sedam godina (1998-2005). U cilju jačanja stabilnosti bankarskog sistema i poverenja deponenata, LPS osigurava sve depozite banaka koje posluju na teritoriji Indonezije. S druge strane, indonežanske banke imaju obavezu plaćanja premije osiguranja.

[5] *Osiguranje depozita islamskih banaka u Bahreinu je predstavljeno prema Central Bank of Bahrain (n. d.).*
[6] *Osiguranje depozita islamskih banaka u Indoneziji je predstavljeno prema Lembaga Penjamin Simpanan (n. d.).*

Pored toga, banke-učesnice u sistemu osiguranja imaju obavezu plaćanja članarine i dostavljanja propisanih dokumenata i izveštaja, kako bi *LPS* bila adekvatno i blagovremeno informisana. Osiguranjem su, pored depozita konvencionalnih banaka, obuhvaćeni i depoziti islamskih banaka, konkretno tekući i štedni depoziti po *wadiah* modelu i štedni i oročeni depoziti po *mudarabah* modelu. Od 2008. godine, maksimalna osigurana suma depozita je 2 milijarde indonežanskih rupija po deponentu po banci, dok ulozi koji prevazilaze navedenu sumu se naplaćuju u procesu raspodele likvidacione mase. Osiguranjem su pokriveni inicijalna ulaganja i ostvarena zarada na uloge, u vidu kamata kod konvencionalnih banaka i prinosa na ulaganja kod islamskih banaka.

Obaveza *LPS* je da u roku od 90 dana od trenutka od oduzimanja dozvole za rad određenoj banci, utvrdi koji deponenti imaju pravo na isplatu osiguranih depozita i u kojem iznosu. Indonežanski sistem osiguranja depozita ima četiri izvora finansiranja: *početni kapital* u iznosu 4 biliona indonežanskih rupija koji obezbeđuje država, *članarina* koja se plaća prilikom pristupanja banaka sistemu osiguranja u iznosu 0,1% uplaćenog kapitala banke, *premija osiguranja* koja se plaća polugodišnje u iznosu 0,1% prosečnog mesečnog iznosa depozita u datom periodu i *prinos na uložena sredstva*. Ukoliko se pokaže da *LPS* nema dovoljno sredstava za efikasno funkcionisanje, vlada, uz odobrenje indonežanskog parlamenta, može povećati iznos kapitala ove institucije. Problemi sa likvidnošću koje *LPS* može iskusiti prilikom isplate osiguranih depozita, mogu se rešiti kreditom države.

Istraživanja pokazuju da islamsko bankarstvo u Indoneziji ostvaruje visoke stope rasta, ali je tržišno učešće islamskih banaka na bankarskom tržištu Indonezije još uvek nisko da bi se kreirao poseban sistem osiguranja depozita islamskih banaka (Baehaqie, Fahmi & Beik, 2017, str. 215). Uključivanje indonežanskih islamskih banaka u sistem osiguranja depozita nije dovelo do promene rizičnosti njihovog poslovanja (Syamlan & Azinuddin, 2019, str. 202). S druge strane, pozitivno je uticalo na spremnost klijenata islamskih banaka na štednju u bankama. Prema jednom istraživanju (Cahyono, Rani & Mardianto, 2021), klijenti indonežanskih islamskih banaka su svrstali osiguranje depozita među ključne faktore koji utiču na njihovu odluku o štednji u bankama.

Zaključak

Islamske banke su osnivane u ekonomskom i pravnom okruženju koje je potpuno prilagođeno karakteristikama i potrebama konvencionalnog modela bankarskog poslovanja. Izuzetak ne predstavljaju ni propisi kojima se regulišu pitanja osiguranja bankarskih depozita. Shodno principima konvencionalnog bankarstva, banke sa deponentima formiraju dužničko-poverilački odnos. Islamska banka se, pak, može naći ili u ulozi staratelja sredstava, u slučaju transakcionih depozita, ili partnera svojih deponenata, u slučaju investicionih depozita. Ukoliko se principi islamskog bankarstva ne poštuju dosledno, neće se praviti razlika između konvencionalnog i islamskog pristupa odnosu banka-deponent. To vodi obavezi islamskih banaka da osiguraju i transakcione i investicione depozite, iako Šerijat ne dozvoljava osiguranje ovih drugih zbog partnerskog statusa njihovih vlasnika.

Važeći bankarski propisi u apsolutnoj većini zemalja ne prepoznaju specifičnost odnosa islamska banka-deponent. Zemlje u kojima bankarski propisi posebno tretiraju islamsko osiguranje depozita još uvek su retke. Čak i u tim zemljama, osiguranje depozita islamskih banaka se često sprovodi na šerijatski neadekvatan način, primenom osporavanog *kafalah bi al ujr* modela ili nedoslednom primenom *takaful* modela osiguranja depozita.

Takođe, postoje i različita zakonska rešenja po pitanju osigurljivosti pojedinih vrsta islamskih depozita. Navedeni problemi su posledica nepostojanja jedinstvenih i opšteprihvaćenih propisa kojima bi se pitanje islamskog modela osiguranja depozita na valjan način uredilo, kao i nedovoljnog broja stručnjaka koji bi radili na razvoju i implementaciji pomenutih propisa. Pozitivni pomaci na ovom polju ostvareni su zahvaljujući saradnji Međunarodne asocijacije osiguravača depozita i Odbora za islamske finansijske usluge na razvoju principa za efektivne islamske sisteme osiguranja depozita.

Na kraju, prilikom kreiranja i implementiranja efikasnog islamskog sistema osiguranja depozita, mora postojati svest o izazovima koje primena osiguranja depozita donosi. Na tom putu, iskustva brojnih razvijenih zemalja, kao i studije istaknutih finansijskih stručnjaka, mogu biti dragoceni za islamske finansijske i pravne stručnjake koji bi radili na stvaranju jedinstvenog okvira islamskog sistema osiguranja depozita.

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ISLAMIC DEPOSIT INSURANCE IN THEORY AND PRACTICE

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Abstract: The development and competitiveness of Islamic banking, as a relatively young segment of the global financial market, is conditioned, first of all, by the trust of current and potential investors in the ability of Islamic banks to manage entrusted funds by the contract and good business practice. Deposit insurance is one of the important instruments that can be used to strengthen depositors' confidence in the banking system's stability. This paper analyzes the model of Islamic deposit insurance. The paper's objectives are to review its theoretical basis and the features of its practice, possible deviations of business practice from theoretical postulates, and the challenges of applying Islamic deposit insurance in different legal systems. Analyzing the practice of Islamic deposit insurance, it concludes that in most countries it deviates from the Shariah-compliant model of deposit insurance. This was primarily contributed by banking regulations that generally do not recognize the specificity of an Islamic bank's relationship with its depositors and, therefore, the Islamic banks' need for an authentic approach to deposit insurance.

Keywords : Islamic banking, deposit insurance, Shariah, takaful, kafalah bi al ujr

JEL classification : G21, G22, K15, Z12

Introduction

Conventional banks guarantee their depositors payment of deposits in full (Garcia, 1999, p. 4). On the other hand, the strength of that guarantee is conditioned by the bank's business performance and prospects, about which depositors are far less informed than the bank's managers and shareholders. Insufficient information creates a sense of uncertainty among depositors, which may ultimately lead them to panic withdrawal their deposits (Calomiris, 1990, p. 284). In order to prevent this negative phenomenon and the whole set of serious consequences caused by it, an external deposit guarantee system in the form of deposit insurance was introduced (Diamond & Dybvig, 1983, pp. 401, 404). The evolution of deposit insurance began with the establishment of New York State's safety fund in the 19th century (Thies & Gerlowski, 1988, p. 678). However, this attempt to establish a state deposit insurance system, like similar attempts in the other five American states during the same period, proved unsuccessful (Calomiris & Jaremski, 2016, p. 97). However, the introduction of deposit insurance at the federal level did not have the support of federal legislators until the great economic crisis of 1929, and before that, in the first decades of the 20th century, an unsuccessful attempt by eight American states to establish viable deposit insurance systems (Ibid). Only after that, the establishment of the Federal Deposit Insurance Corporation (FDIC) was approved. The application of deposit insurance in the world experienced expansion only in the last few decades, when many countries began the process of social and economic transformation. One of the elements of that process was the establishment of a deposit insurance system, which was often the result of pressure from the World Bank, the International Monetary Fund and the European Union (Demirgüç-Kunt, Kane & Laeven, 2008, p. 435). However, the implementers of deposit insurance must be aware of its destabilizing potential (more details Demirgüç-Kunt & Detragiache, 2002; Demirgüç-Kunt & Kane, 2002; Demirgüç-Kunt, Kane & Laeven, 2008; Anginer, Demirgüç-Kunt & Zhu, 2014), which caused the former president of the Federal Deposit Insurance Corporation to compare it to a nuclear power plant .[1]

The concept of Islamic banking, on the other hand, is significantly different compared to conventional banking. Islamic banks cannot base their business on interest and risky investments, and their funding and investments are carried out according to the principle of risk sharing (Ghosh, 2017, p. 213). Since the funding of Islamic banks usually does not involve the assumption of fixed obligations, their capital requirements are lower than in the case of conventional banks (Ibid). According to the facts, the need for deposit insurance from Islamic banks can be questioned. However, without a more detailed analysis of the business practices of Islamic banks and the challenges that the business environment imposes on them, it is impossible to reach a valid conclusion on this issue. First, it should be noted that Islamic banks often leave the theoretical framework of Shariah-optimized banking (Ibid). Also, Islamic banks do not develop in a single and uniform legal space but in different legal systems. By achieving extremely high market growth rates in different countries and legal systems, the obligation of deposit insurance was imposed on Islamic banks as a condition of sustainability of growth and competitiveness (interpreted according to Hamed, 2015, p. 5). Given that conventional deposit insurance includes certain elements, such as interest (*riba*, in detail Islamic Deposit Insurance Group, 2010; Jaffer, et. al., 2010; Hussain & Pasha, 2011) and excessive uncertainty (*garar,* in detail El-Qalqili, 2017), which are unacceptable under Shariah, it was necessary to create a new concept of deposit insurance, which would be shaped according to Shariah principles and whose primary function of protecting depositors would be preserved.

[1] *„A deposit insurance system is like a nuclear power plant. If you build it without safety precautions, you know it's going to blow you off the face of the earth. And even if you do, you can't be sure it won't" (L. William Seidman, navedeno u Thies & Gerlowski, 1988, p. 677).*

This paper analyzes the model of Islamic deposit insurance. The paper's objectives are to review its theoretical basis and the features of its practice, possible deviations of business practice from theoretical postulates, and the challenges of applying Islamic deposit insurance in different legal systems. With the aim of the paper, its structure was created. The first part presents Islamic deposit insurance's theoretical concept and practical application. The second part analyzes the specifics of deposit insurance of Islamic banks in certain countries. Finally, in the conclusion, a brief overview of the theory and practice of Islamic deposit insurance and the discrepancies between them is given.

Theoretical Concept and Practical Application of Islamic Deposit Insurance

The purpose of Islamic deposit insurance is to protect the Islamic banks' depositors savings by Shariah principles, which should strengthen trust in Islamic banks, their stability, and competitiveness (Hamed, 2015, p. 5). According to the opinion of most Shariah experts, the most suitable form of Islamic deposit insurance is *takaful*, which functions according to the principle of mutual insurance, where banks pay contributions to a common fund and jointly bear any losses, while a *takaful* operator manages the fund in the capacity of an agent (more details Lahsasna, 2016; Lekpek & Ibrović, 2021). On the other hand, there is *kafalah bi al ujr* form of Islamic deposit insurance, where Islamic banks pay a fee to the insurer for providing deposit insurance services (Ibid). The prevailing view is that the Shariah validity of this Islamic insurance model is questionable due to the commercialization of the guarantee, which most Shariah experts consider impermissible (more details Islamic Deposit Insurance Group, 2010; Abubakar, et al., 2016; Hamisu & Hassan, 2017; Noor & Haron, 2018). The protection provided by Islamic deposit insurance cannot cover all deposits of Islamic banks (cited according to Abubakar, et al., 2016; Hamisu & Hassan, 2017; Fendi, 2020). The right of the transaction deposits' owners to have their savings protected through deposit insurance is not in question among Shariah experts. On the other hand, most Shariah experts believe that the owners of investment deposits, who form a partnership with the bank and share profits and losses with it, do not have such a right.

Understanding the needs of Islamic banks and their depositors can be an important first step in creating a valid environment for their operation, which can ultimately bring numerous benefits to the financial system in the form of an increase in the number of financial service providers, the variety of financial services and the number of their users. Compared to depositors of conventional banks, depositors of Islamic banks are more strongly influenced by religion, are less ready to panic withdraw their deposits, and show more frugality, especially in a period of economic expansion (Farooq & Zaheer, 2015, p. 122; Akhtar, Akhter & Shahbaz, 2017, p. 306). However, the Islamic banks' depositors should not be perceived as religious idealists who rank money earning low on the list of priorities. Research has shown the change in market interest rates really affects their expectations of returns on deposits in Islamic banks (Akhtar, Akhter & Shahbaz, 2017, p. 306; Aysan, et al., 2018, p. 13). To meet their expectations, Islamic banks allocate part of their profits to special reserves, which funds they use in the period when they cannot provide depositors with a satisfactory return from regular operations (more details Iqbal & Mirakhor, 2009, p. 224-226; Hamza, 2016, p. 34). There is an opinion that in this way, Shariah regulations are violated, and internal relations in the bank are disturbed (Ibid).

In practice, there are three models of Islamic bank deposit insurance (Islamic Deposit Insurance Group, 2010, p. 4): a) Islamic bank deposit insurance within the conventional deposit insurance system, b) the existence of a separate Islamic deposit insurance system alongside the conventional deposit insurance system, and c) the existence of exclusively Islamic deposit insurance. According to the applied model, there are different approaches to the regulation of certain issues, such as (Ibid, p. 6): mandatory membership in the deposit insurance system, separation of deposit insurance premiums of Islamic banks from deposit insurance premiums of conventional banks in the insurance fund, compliance of fund management with Shariah principles, uniformity of coverage limits and insurance premiums for deposits of Islamic and conventional banks. There are five countries that have a unique system of Islamic deposit insurance, according to the second or third model: Sudan, Bahrain, and Jordan use *takaful*, while Malaysia and Nigeria use the *kafala bi al ujr* form of deposit insurance (Mustafa & Najeeb, 2018, pp. 488-489). When it comes to insurance of certain types of deposits, transaction deposits are insurable in all systems, while the practice of insurance of investment deposits differs (Hamed, 2015, p. 12). For example, in both Jordan and Sudan, the takaful model of deposit insurance is applied; however, in Sudan, insurance is allowed for all investment deposits, while in Jordan, only unlimited investment deposits are covered by insurance (Ibid, p. 16). Their purpose is not predetermined by the agreement of the investors and banks (more details Van Greuning & Iqbal, 2008, pp. 193-196). In systems that also insure investment deposits, their insurance contributions are separated from transactional deposits' insurance contributions in the fund (Hamed, 2015, p. 16). The bases for calculating the deposit insurance premium for Islamic banks differ in different countries. In Indonesia, total deposits are taken into account, in Jordan, eligible deposits, in Sudan, the average annual amount of insured deposits, and in Turkey, Malaysia, and Yemen, total covered deposits (Ibid, p. 18). Regarding premium rates, Yemen, Indonesia, Sudan, and Jordan use a proportional premium rate, while Turkey and Malaysia use risk-adjusted premium rates (Ibid, p. 19). All deposit insurance systems that cover the deposits of Islamic banks have pre-defined sources of auxiliary financing if the deposit insurance fund does not have sufficient financial resources to fulfill its obligations. The missing funds are provided with the help of the state, the financial market, and/ or a conventional deposit insurance fund based on the issue of Sukuk bonds, interest-free, and classic loans (cited according to Ibid, p. 21).

Based on the above facts, it can be concluded that the generally accepted standards of Islamic deposit insurance, which would be applied in all countries where the practice of Islamic deposit insurance exists, have not yet taken root (Kammer, et al., 2015, p. 24). In different countries, the characteristics of Islamic banks are different, as well as Shariah interpretations of certain financial issues, but they have common problems, such as the lack of professional staff and generally accepted Shariah principles (Hamed, 2015, p. 29). Due to the inconsistency of the above regulations, numerous omissions occur in practice. Thus, in Malaysia, certain provisions of the law regulating the issue of *kafalah bi al ujr* insurance are contrary to Shariah regulations (more details Muneeza & Mustapha, 2020, p. 173). Also, there are cases of abuse of *takaful* deposit insurance, where the *takaful* form conceals the essence of the applied Islamic deposit insurance mechanism, which differs minimally from conventional deposit insurance (more details Maali & Atmeh, 2015, p. 145). The different treatment of investment deposits in different countries is also problematic because it is clear that Islamic banks in countries where investment deposits are covered by insurance are in a more favorable market position than Islamic banks in countries where this is not the case (interpreted according to Kammer, et al., 2015, p. 24). Also, the issue of the premium rate is not regulated uniquely.

The application of risk-adjusted premium rates is primarily problematic because: a) there is a position on the Shariah inadmissibility of the different premium rates application, i.e., contribution rates in takaful insurance (Hamed, 2015, p. 19), and b) it is necessary to first develop valid instruments for measuring the specific risks of Islamic banks (Kammer, et al., 2015, p. 24).

A significant step forward in overcoming the problem of disharmony of regulations governing Islamic deposit insurance was made with the creation of the "Core Principles for Effective Islamic Deposit Insurance Systems" in 2021, which were created in cooperation between the International Association of Deposit Insurers (IADI) and Islamic Financial Services Board (IFSB). The starting point for the formation of the Islamic deposit insurance basic principles were previously defined "Basic Principles for Effective Deposit Insurance Systems", which were intended for conventional deposit insurance systems (more details BCBS & IADI, 2009). The principles of Islamic deposit insurance were created by modifying the original conventional principles, applying various amendments, and incorporating a new principle concerning the Shariah governance of deposit insurance (more details IADI & IFSB, 2021).

The Practice of Islamic Deposit Insurance in Certain Countries

Islamic banking has been achieving high growth rates for decades and is becoming present in more and more countries. However, its importance is insufficiently recognized, even in countries where Islamic banks operate. This is supported by the fact that in a small number of countries, there is deposit insurance that recognizes the needs and business principles of Islamic banks, which is, among other things, a consequence of the still small share of Islamic bank deposits in total deposits and the unresolved issue of the insurability of investment deposits (Islamic Deposit Insurance Group, 2010, p. 2). The following will present the practice of Islamic deposit insurance in Malaysia, Turkey, Jordan, Bahrain, and Indonesia. Although the essence of deposit insurance of Islamic banks in all mentioned countries is the same, there are certain details in which their practice of Islamic deposit insurance differs.

Malaysia

Malaysia[2] established the deposit insurance system in 2005 and put it under the jurisdiction of *Perbadanan Insurans Deposit Malaysia* (PIDM), a specialized state institution, which, apart from deposit insurance, also takes care of the *takaful* and conventional insurance sectors. This institution closely cooperates with the Malaysian Central Bank (Bank Negara Malaysia - BNM), the key regulatory and supervisory institution in the Malaysian banking system, to achieve stability in the banking and financial sector. Participation of banks licensed to do business in Malaysia in the deposit insurance system is mandatory. This applies to both conventional and Islamic banks. Deposit insurance coverage is limited to 250,000 Malaysian ringgits per depositor per bank and applies separately for Islamic and conventional banks. Transactional deposits of Islamic banks are covered by insurance, but investment deposits aren't. The deposit insurance system is financed by the payment of a premium fee by the member banks, which may not transfer the cost of the deposit insurance premium to the burden of depositors. Accordingly, it can be concluded that the deposits of Islamic banks are insured according to the *kafalah bi al ujr* model.

[2] *Islamic bank deposit insurance in Malaysia is presented according to Perbadanan Insurans Deposit Malaysia (n.d.) and Perbadanan Insurans Deposit Malaysia (2020).*

The premium amount is determined by multiplying the total insured deposits and the prescribed premium rate. The prescribed premium rate is adjusted to the risk of the insured bank. The premium amount is determined based on quantitative criteria, which account for a maximum of 60 points the bank can achieve, and qualitative criteria, which account for the remaining 40 points. A higher number of points indicates a better financial position and a lower level of riskiness of the observed bank. The quantitative criteria take into account the bank's capitalization, on the one hand, and the indicators of profitability and profile of assets and sources of funding, whose values are scored individually with 10 or 15 points depending on the indicators, on the other hand. By comparing the level of capitalization of the bank and the sum of points achieved based on the above three indicators according to the matrix principle, the matrix category of the bank is determined, which can be from M1, which is the best category, to M7, and each category is assigned a certain number of points, a maximum of 60, a minimum of 15. Those points are then added to the points determined on the qualitative criteria basis, the structure of which is as follows: the supervisory rating carries a maximum of 35 points and "other information" the remaining 5. Based on the total number of points, the premium category is determined: for more than 85 points, the first category, while for fewer than 50 points, it is the fourth category. Based on the points and premium category, *PIDM* determines the amount of the premium rate for each bank by May 15 of the current year, based on which the premium obligation that the banks must pay by May 31 of the current year is determined.

Research shows that introducing the deposit insurance system has affected conventional and Islamic banks in Malaysia differently (cited by Abdullah, 2020, p. 47). Conventional banks recognized deposit insurance as a form of self-protection and embarked on more lucrative and risky business ventures. On the other hand, Islamic banks following Shariah principles that encourage the acceptance of moderate risk and the creation of new value have kept their risk profile the same. The impact of the Deposit Insurance System on depositors' confidence in the Malaysian banking system and their willingness to withdraw deposits from banks depends on their awareness of this system. According to a survey conducted among Malaysian Islamic bank clients, depositors who are not adequately informed about the deposit insurance system are even a hundred times more likely to withdraw their deposits than those who are (Abduh, 2014, p. 52).

Turkey

Turkey started the practice of deposit insurance in 1933 but only established a sustainable system in 1999 when the Savings Deposit Insurance Fund of Turkey (SDIF) was established, which was entrusted to the management of the Banking Regulation and Supervision Agency (BRSA) (Cabukel & Frisch, 2012, p. 143). The stability of the Turkish banking system is maintained by the cooperation of four state financial institutions: the Central Bank of Turkey (CBT), the Treasury, the Banking Regulation and Supervision Agency, and the Savings Deposit Insurance Fund (Ibid, p. 148). The deposit insurance system includes and treats conventional and Islamic banks, called participation banks in Turkey, in the same way. The practice of deposit insurance of Islamic banks in Turkey was started in 2001, first by creating a special system under the control of Islamic banks, which was then included in the conventional system in 2005 (Islamic Deposit Insurance Group, 2010, p. 3). Including Turkish Islamic banks in the deposit insurance system was extremely important for improving their status. Since the establishment of the Islamic banking practice in the mid-80s of the 20th century, Islamic banks in Turkey have had an unequal legal, social, and media position compared to conventional banks (Yanīkkaya & Pabuçcu, 2017, p. 50).

This is supported by the fact that Islamic banks were not covered by deposit insurance until 2001. In that year, a strong economic crisis occurred in Turkey, during which the most prominent Islamic bank in Turkey collapsed (Ibid). That event prompted a bank run by depositors of other Islamic banks, after which the market share of Islamic banks in the Turkish banking market was reduced by as much as 50% (Ibid). The fact is that such a strong shock on the Islamic banking market in Turkey was primarily caused by the lack of protection of the Islamic banks depositors' savings, and this is the key reason for the inclusion of Islamic banks in the deposit insurance system already that year (Ibid). Research shows that with the inclusion of Turkish Islamic banks in the deposit insurance system, their market discipline has been strengthened (Aysan, et al., 2017, p. 257).

Deposit insurance covers all deposits of Turkish banks, regardless of whether the savings are in Turkish lira, foreign currency, or precious metals, with insurance limited to 200,000 Turkish lira per depositor per bank (Savings Deposit Insurance Fund, 2023, p. 28). Deposit insurance does not cover deposits of majority shareholders of banks and their related persons, members of the bank's management, deposited money determined to have been obtained through crime, and other deposits not covered by insurance according to current law (Ibid, p. 29). The insurance premium is determined according to the estimated riskiness of the specific bank (cited according to Ibid, pp. 29-30). When determining the premium rate, capital adequacy, asset quality, profitability, liquidity, and other bank risk factors are taken into account. For the first four criteria of the bank's riskiness, several indicators are determined, and according to the achieved value of those indicators, the banks are awarded points, for the first criterion a maximum of 25, the second 20, and the remaining 10 points each. Based on the fifth criterion, a maximum of 35 points can be obtained based on the supervisory rating and "other information". Based on the total number of points, the premium category is determined, whereby banks with more than 80 points are classified in category A and are subject to a premium rate of 15 basis points, while banks with less than 50 points belong to the weakest category D, whose premium rate is 23 basis points. Banks are obliged to enter the values of financial indicators into the specialized information system established by the Banking Regulation and Supervision Agency and fill in the risk premium table, which is forwarded to the Savings Deposit Insurance Fund. Based on that table and the supervisor's rating, the Fund determines premium rates and premium amounts for each bank, which then 15 days later must pay the determined amount to the Fund (Ibid, pp. 30-31).

Jordan

Jordan[3] established the Jordan Deposit Insurance Corporation in 2000, within which a special deposit insurance fund for Islamic banks was created in 2019. In this way, the needs of Islamic banks and their depositors were recognized and provided with adequate legal protection. Islamic deposit insurance in Jordan operates on the *takaful* principle. The insurance covers all Islamic banks operating in Jordan. The insured amount is limited to 50,000 Jordanian dinars per depositor per bank. The insurance covers transactional and unrestricted investment deposits of Islamic banks denominated in Jordanian dinars and only exceptional foreign means of payment, while government, interbank, and restricted investment deposits of Islamic banks are exempt from insurance.

[3] *The deposit insurance of Islamic banks in Jordan is presented according to the Jordan Deposit Insurance Corporation (n. d.).*

The Fund has several sources of funding. In the first place, there are annual membership fees that member banks pay to the Fund in the amount of 2.5‰ on the amount of insured deposits, then returns on investments in Shariah-valid financial instruments, interest-free loans, and grants. In the Fund, membership fees paid for transaction deposits and membership fees paid for unlimited investment deposits are separated. In case of liquidation of the Fund, all its assets, after covering the obligations, are transferred to the ownership of the state fund that collects and manages the religious tax, *zakat*.

Research shows that Islamic banks' business in Jordan is less risky than conventional banks (Matar, 2017). However, it cannot be seen from them whether the existence of the deposit insurance system affected such a state of affairs.

Bahrain

In 1993, Bahrain[4] became the first country to establish an Islamic deposit insurance system in addition to the existing conventional deposit insurance system (Islamic Deposit Insurance Group, 2010, p. 3). The deposit insurance fund is divided into a fund for conventional banks and a fund for Islamic banks, which are mutually independent. All Islamic banks operating in Bahrain are included in the insurance system. Transactional and unlimited investment deposits of Islamic banks in Bahrain, regardless of currency, are insurable but not of their branches abroad. The insurance does not cover deposits owned by shareholders of the bank with a share in ownership greater than 10% and members of the management, as well as deposits whose owners are unknown or whose deposited money was acquired by engaging in illegal activities.

The insured amount is limited to 20,000 Bahraini dinars per depositor per bank, from which the depositor's debts to the bank can be deducted. The total annual amount that Islamic banks should pay to the Fund is 20 million Bahraini dinars. The annual contribution of Islamic banks to the Fund is determined proportionally to the amount of insurable deposits and can be paid in quarterly installments. Islamic banks are obliged to send a report about their insurable deposits to the central bank within two months of the end of the financial year. If the Islamic bank does not pay the contribution to the Fund within the prescribed period and amount, the central bank can use several punitive measures, from fines to the revocation of the work permit, if the offense above is repeated.

In one study (Onour, 2019), an assessment of deposit insurance premiums that individual Islamic banks in a selected sample of countries should pay was made using the model created by Merton (1977). According to that research, Bahrain is among the countries with the highest variability in deposit insurance premiums. Based on this, it was concluded that Bahrain should apply risk-adjusted premium rates.

[4] *Deposit insurance of Islamic banks in Bahrain is presented according to the Central Bank of Bahrain (n. d.).*

Indonesia

In 2004, Indonesia [5] passed a law regulating deposit insurance, based on which a specialized Deposit Insurance Corporation, *Lembaga Penjamin Simpanan (LPS),* was established in 2005. This abandoned the practice of complete coverage of deposits (blanket guarantee), which was in force for seven years (1998-2005). To strengthen the stability of the banking system and the trust of depositors, LPS insures all deposits of banks operating in the territory of Indonesia. On the other hand, Indonesian banks must pay an insurance premium. In addition, participating banks in the insurance system must pay membership fees and submit prescribed documents and reports so that LPS is adequately and timely informed. In addition to deposits from conventional banks, the insurance includes deposits from Islamic banks, specifically current and savings deposits according to the Wadiah model and savings and time deposits according to the *Mudarabah* model. Since 2008, the maximum insured deposit amount has been 2 billion Indonesian rupiah per depositor per bank, while deposits exceeding the specified amount are paid out in the liquidation assets' distribution process. The insurance covers initial investments and realized earnings on deposits in the form of interest at conventional banks and returns on investments at Islamic banks.

LPS must determine which depositors are entitled to insured deposits and in what amount within 90 days from the moment of revocation of the operating license of a certain bank. The Indonesian deposit insurance system has four sources of funding: initial capital in the amount of 4 trillion Indonesian rupiah provided by the government, membership fee paid when banks join the insurance system in the amount of 0.1% of the bank's paid-up capital, insurance premium paid semi-annually in the amount of 0.1% of the average monthly deposit amount in the given period and return on invested funds. If LPS does not have enough funds for efficient functioning, the government, with the approval of the Indonesian parliament, can increase this institution's capital. *LPS* may experience liquidity problems when disbursing insured deposits, which can be solved with a government loan.

Research shows that Islamic banking in Indonesia has achieved high growth rates, but the market share of Islamic banks in Indonesia's banking market is still low to create a special deposit insurance system for Islamic banks (Baehaqie, Fahmi & Beik, 2017, p. 215). Including Indonesian Islamic banks in the deposit insurance system did not change the riskiness of their operations (Syamlan & Azinuddin, 2019, p. 202). On the other hand, it positively affected the willingness of Islamic bank clients to save in banks. According to a study (Cahyono, Rani & Mardianto, 2021), customers of Indonesian Islamic banks ranked deposit insurance among the key factors influencing their decision to save in banks.

[5] *Deposit insurance of Islamic banks in Indonesia is presented according to the Lembaga Penjamin Simpanan (n. d.).*

Conclusion

Islamic banks were established in an economic and legal environment fully adapted to the characteristics and needs of the conventional banking business model. Nor are the regulations governing bank deposit insurance issues an exception. According to conventional banking principles, banks form a debtor-creditor relationship with depositors. On the other hand, an Islamic bank can be found either in the role of custodian of funds in the case of transactional deposits or partner of its depositors in the case of investment deposits. If the principles of Islamic banking are not followed consistently, no distinction will be made between the conventional and the Islamic approach to the bank-depositor relationship. This leads to the obligation of Islamic banks to insure both transactional and investment deposits, although the Shariah does not permit the latter's insurance due to the partnership status of their owners.

Current banking regulations in most countries do not recognize the specificity of the Islamic bank-depositor relationship. Countries where banking regulations specifically treat Islamic deposit insurance are still rare. Even in those countries, Islamic bank deposit insurance is often implemented in a Shariah-inadequate manner, by applying the disputed *kafalah bi al ujr* model or by inconsistently applying the *takaful* deposit insurance model. Also, there are different legal solutions regarding the insurability of certain types of Islamic deposits. The problems above are a consequence of the lack of uniform and generally accepted regulations that would properly regulate the issue of the Islamic deposit insurance model, as well as an insufficient number of experts who would work on developing and implementing the regulations above. Thanks to the cooperation between the International Association of Deposit Insurers and the Islamic Financial Services Board, positive developments in this field have been achieved in developing principles for effective Islamic deposit insurance systems.

Finally, when creating and implementing an efficient Islamic deposit insurance system, there must be an awareness of the challenges that the application of deposit insurance brings. Along the way, the experiences of numerous developed countries and the studies of prominent financial experts can be valuable for Islamic financial and legal experts who would work to create a unique framework for the Islamic deposit insurance system.

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BAROMETAR/BAROMETER

FEBRUAR 2023 – JANUAR 2024. / FEBRUARY 2023 - JANUARY

1.PROMET / TURNOVER

Mesec/ Month	Listing	Open Market	Regulisano Tržište/Regulated market	MTP/MTF	Ukupno/ Total	Broj transakcija/ Number of transactions
Februar 2023	496.636.480	140.492.064	637.128.544	83.060	637.211.604	2.255
Mart 2023	465.898.851	121.447.122	587.345.973	202.110	587.548.083	2.267
April 2023	2.580.251.503	302.197.746	2.882.449.249	114.300	2.882.563.549	1.418
Maj 2023	1.202.781.172	195.935.742	1.398.716.914	3.926.590	1.402.643.504	1.889
Jun 2023	629.295.060	379.176.200	1.008.471.260	104.700	1.008.575.960	1.623
Jul 2023	4.268.947.620	185.905.520	4.454.853.140	0	4.454.853.140	1.424
Avgust 2023	906.735.202	101.209.647	1.007.944.849	120.754	1.008.065.603	1.735
Septembar 2023	2.442.847.169	76.015.742	2.518.862.911	388.200	2.519.251.111	1.478
Oktobar 2023	2.847.815.557	67.737.344	2.915.552.901	0	2.915.552.901	1.417
Novembar 2023	696.782.292	66.841.648	763.623.940	8.217	763.632.157	1.347
Decembar 2023	679.753.693	109.929.484	789.683.177	39.828	789.723.005	1.140
Januar 2024	2.254.244.591	147.271.467	2.401.516.058	19.200	2.401.535.258	1.260
	19.471.989.190	1.894.159.726	21.366.148.916	5.006.959	21.371.155.875	19.253

*RSD

2. INDEKSI / INDICES

Nov 2022. Okt 2023		BELEX15	BELEXline
	Poslednja vrednost / Last value	877,28	1927,7
	Promena (abs) / Change (abs)	1,62	13,66
	Promena (%) / Change (%)	0,19%	0,71%
	Najviša vrednost / Maximum value	927,7	1934,97
	Najniža vrednost / Minimum value	844,06	1748,52
	Istorijski max / History maximum value	3335,2	5007,34
	Istorijski min / History minimum value	347,46	841,99
	Vrednost prometa / Value of turnover	196.014.224,00	234.038.420,00

3. TRŽIŠNA KAPITALIZACIJA / MARKET CAPITALISATION

	November	December	January
Ukupna tržišna kapitalizacija/ Total market capitalisation	424.181.853	424.958.052	425.662.921
Regulisano tržište/Regulated Market	415.568.185	416.488.746	417.193.615
Listing			
Prime Listing – akcije/ Prime Listing – shares	214.061.877	215.239.477	215.514.506
Standard Listing – akcije/ Standard Listing - shares	201.506.307	201.249.268	201.679.109
Open Market			
MTP/MTF	8.613.669	8.469.306	8.469.306
BELEX15	254.237.096	254.963.783	255.873.243
BELEXline	268.388.912	269.935.222	271.239.436

*u hiljadama RSD / in RSD thousands

4. UČEŠĆE STRANIH INVESTITORA / FOREIGN INVESTORS PARTICIPATION

Feb 2023 – Jan 2024	Učešće stranih investitora / Foreign Investors Participation		
	FIS	total	14,28%
		b-FIS	6,36%
		s-FIS	22,21%
	FIB		0,98%
	FIT		3,08%

Indeks_Belex15	Indeks_BELEXLine	Datum	BELEX15	BELEXLine
BELEX15	BELEXLine	1.2.2023	857,36	1.762,79
BELEX15	BELEXLine	2.2.2023	861,61	1.755,78
BELEX15	BELEXLine	3.2.2023	865,76	1.761,33
BELEX15	BELEXLine	6.2.2023	865,18	1.748,55
BELEX15	BELEXLine	7.2.2023	864,04	1.748,52
BELEX15	BELEXLine	8.2.2023	868,66	1.753,42
BELEX15	BELEXLine	9.2.2023	872,16	1.768,84
BELEX15	BELEXLine	10.2.2023	878,54	1.775,49
BELEX15	BELEXLine	13.2.2023	872,23	1.763,70
BELEX15	BELEXLine	14.2.2023	869,08	1.752,40
BELEX15	BELEXLine	17.2.2023	875,94	1.762,03
BELEX15	BELEXLine	20.2.2023	876,33	1.768,56
BELEX15	BELEXLine	21.2.2023	877,61	1.770,12
BELEX15	BELEXLine	22.2.2023	877,73	1.765,34
BELEX15	BELEXLine	23.2.2023	882,70	1.773,90
BELEX15	BELEXLine	24.2.2023	874,54	1.767,25
BELEX15	BELEXLine	27.2.2023	878,85	1.775,83
BELEX15	BELEXLine	28.2.2023	876,22	1.776,33
BELEX15	BELEXLine	1.3.2023	878,79	1.784,55
BELEX15	BELEXLine	2.3.2023	880,08	1.785,46
BELEX15	BELEXLine	3.3.2023	891,48	1.815,11
BELEX15	BELEXLine	6.3.2023	890,58	1.798,22
BELEX15	BELEXLine	7.3.2023	889,95	1.795,77
BELEX15	BELEXLine	8.3.2023	889,17	1.791,22
BELEX15	BELEXLine	9.3.2023	892,16	1.795,70
BELEX15	BELEXLine	10.3.2023	894,40	1.799,18
BELEX15	BELEXLine	13.3.2023	894,45	1.795,53
BELEX15	BELEXLine	14.3.2023	894,51	1.796,74
BELEX15	BELEXLine	15.3.2023	892,05	1.792,73
BELEX15	BELEXLine	16.3.2023	897,31	1.799,69

BELEX15	BELEXLine	17.3.2023	897,50	1.799,08
BELEX15	BELEXLine	20.3.2023	895,28	1.799,81
BELEX15	BELEXLine	21.3.2023	896,98	1.802,34
BELEX15	BELEXLine	22.3.2023	894,64	1.798,01
BELEX15	BELEXLine	23.3.2023	898,95	1.799,75
BELEX15	BELEXLine	24.3.2023	891,15	1.790,20
BELEX15	BELEXLine	27.3.2023	894,17	1.794,92
BELEX15	BELEXLine	28.3.2023	891,87	1.792,56
BELEX15	BELEXLine	29.3.2023	889,26	1.789,62
BELEX15	BELEXLine	30.3.2023	888,41	1.789,03
BELEX15	BELEXLine	31.3.2023	891,29	1.798,01
BELEX15	BELEXLine	3.4.2023	888,04	1.791,65
BELEX15	BELEXLine	4.4.2023	885,72	1.789,55
BELEX15	BELEXLine	5.4.2023	883,79	1.780,31
BELEX15	BELEXLine	6.4.2023	885,58	1.783,31
BELEX15	BELEXLine	7.4.2023	883,38	1.781,00
BELEX15	BELEXLine	10.4.2023	878,48	1.780,13
BELEX15	BELEXLine	11.4.2023	868,31	1.767,80
BELEX15	BELEXLine	12.4.2023	870,24	1.770,23
BELEX15	BELEXLine	13.4.2023	878,88	1.781,13
BELEX15	BELEXLine	18.4.2023	886,66	1.792,94
BELEX15	BELEXLine	19.4.2023	888,05	1.794,36
BELEX15	BELEXLine	20.4.2023	889,28	1.794,39
BELEX15	BELEXLine	21.4.2023	893,45	1.796,99
BELEX15	BELEXLine	24.4.2023	903,11	1.802,13
BELEX15	BELEXLine	25.4.2023	895,82	1.792,35
BELEX15	BELEXLine	26.4.2023	903,82	1.798,06
BELEX15	BELEXLine	27.4.2023	910,59	1.813,13
BELEX15	BELEXLine	28.4.2023	904,49	1.806,97
BELEX15	BELEXLine	3.5.2023	905,38	1.809,53
BELEX15	BELEXLine	4.5.2023	904,89	1.809,50

BELEX15	BELEXLine	5.5.2023	905,82	1.809,70
BELEX15	BELEXLine	8.5.2023	911,54	1.815,54
BELEX15	BELEXLine	9.5.2023	914,49	1.813,02
BELEX15	BELEXLine	10.5.2023	913,91	1.811,81
BELEX15	BELEXLine	11.5.2023	915,58	1.812,71
BELEX15	BELEXLine	12.5.2023	913,04	1.808,62
BELEX15	BELEXLine	15.5.2023	919,80	1.818,11
BELEX15	BELEXLine	16.5.2023	920,64	1.821,41
BELEX15	BELEXLine	17.5.2023	922,80	1.825,18
BELEX15	BELEXLine	18.5.2023	923,33	1.828,64
BELEX15	BELEXLine	19.5.2023	920,45	1.821,64
BELEX15	BELEXLine	22.5.2023	913,41	1.814,14
BELEX15	BELEXLine	23.5.2023	907,42	1.807,08
BELEX15	BELEXLine	24.5.2023	908,35	1.807,93
BELEX15	BELEXLine	25.5.2023	907,47	1.807,47
BELEX15	BELEXLine	26.5.2023	914,33	1.815,02
BELEX15	BELEXLine	29.5.2023	914,45	1.813,66
BELEX15	BELEXLine	30.5.2023	911,05	1.810,26
BELEX15	BELEXLine	31.5.2023	910,39	1.813,48
BELEX15	BELEXLine	1.6.2023	909,06	1.812,06
BELEX15	BELEXLine	2.6.2023	904,84	1.807,48
BELEX15	BELEXLine	5.6.2023	904,14	1.807,41
BELEX15	BELEXLine	6.6.2023	901,43	1.807,12
BELEX15	BELEXLine	7.6.2023	892,02	1.795,85
BELEX15	BELEXLine	8.6.2023	885,51	1.789,32
BELEX15	BELEXLine	9.6.2023	888,74	1.791,81
BELEX15	BELEXLine	12.6.2023	902,48	1.796,82
BELEX15	BELEXLine	13.6.2023	888,36	1.781,02
BELEX15	BELEXLine	14.6.2023	887,80	1.780,37
BELEX15	BELEXLine	15.6.2023	887,51	1.778,91
BELEX15	BELEXLine	16.6.2023	861,38	1.758,15

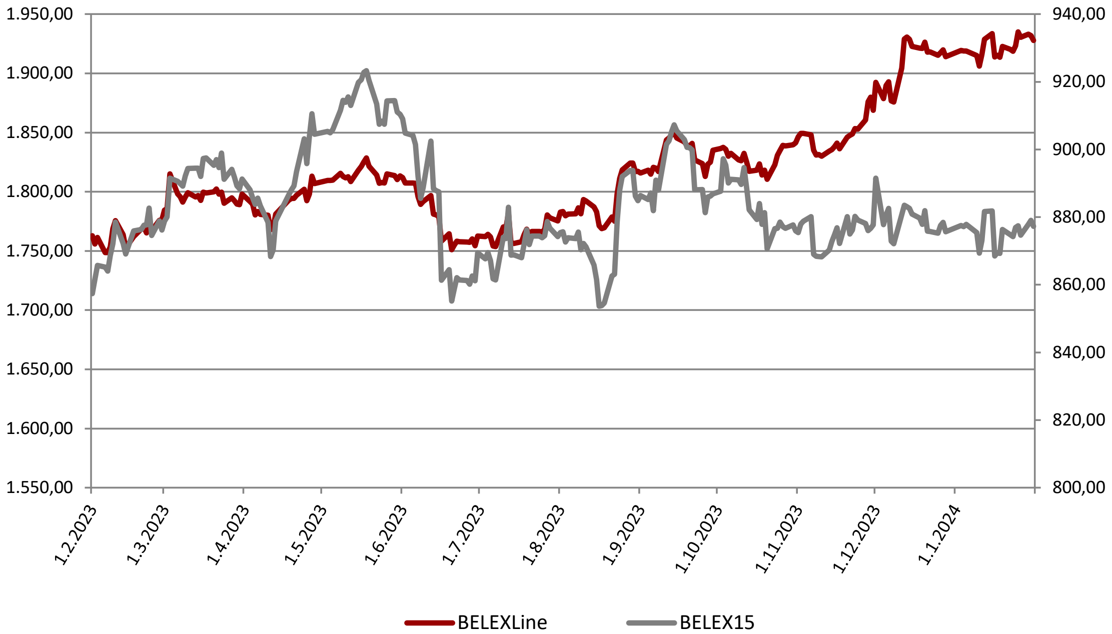
BELEX15	BELEXLine	19.6.2023	864,48	1.764,64
BELEX15	BELEXLine	20.6.2023	855,15	1.751,12
BELEX15	BELEXLine	21.6.2023	858,77	1.754,82
BELEX15	BELEXLine	22.6.2023	862,10	1.758,25
BELEX15	BELEXLine	23.6.2023	861,46	1.757,67
BELEX15	BELEXLine	26.6.2023	861,22	1.757,43
BELEX15	BELEXLine	27.6.2023	860,13	1.757,36
BELEX15	BELEXLine	28.6.2023	862,61	1.760,08
BELEX15	BELEXLine	29.6.2023	861,18	1.754,33
BELEX15	BELEXLine	30.6.2023	869,40	1.762,55
BELEX15	BELEXLine	3.7.2023	867,65	1.762,06
BELEX15	BELEXLine	4.7.2023	869,51	1.764,08
BELEX15	BELEXLine	5.7.2023	867,12	1.761,90
BELEX15	BELEXLine	6.7.2023	861,79	1.754,18
BELEX15	BELEXLine	7.7.2023	861,40	1.753,79
BELEX15	BELEXLine	10.7.2023	874,04	1.770,25
BELEX15	BELEXLine	11.7.2023	873,61	1.769,29
BELEX15	BELEXLine	12.7.2023	882,94	1.782,03
BELEX15	BELEXLine	13.7.2023	868,78	1.756,44
BELEX15	BELEXLine	14.7.2023	868,88	1.756,30
BELEX15	BELEXLine	17.7.2023	868,01	1.757,68
BELEX15	BELEXLine	18.7.2023	872,03	1.763,74
BELEX15	BELEXLine	19.7.2023	876,28	1.768,26
BELEX15	BELEXLine	20.7.2023	871,86	1.763,33
BELEX15	BELEXLine	21.7.2023	874,42	1.766,36
BELEX15	BELEXLine	24.7.2023	874,42	1.766,36
BELEX15	BELEXLine	25.7.2023	873,94	1.765,96
BELEX15	BELEXLine	26.7.2023	874,48	1.768,23
BELEX15	BELEXLine	27.7.2023	878,74	1.780,36
BELEX15	BELEXLine	28.7.2023	876,78	1.778,03
BELEX15	BELEXLine	31.7.2023	874,25	1.775,43

BELEX15	BELEXLine	1.8.2023	875,43	1.782,92
BELEX15	BELEXLine	2.8.2023	875,71	1.783,35
BELEX15	BELEXLine	3.8.2023	872,65	1.779,61
BELEX15	BELEXLine	4.8.2023	873,91	1.781,18
BELEX15	BELEXLine	7.8.2023	873,68	1.781,36
BELEX15	BELEXLine	8.8.2023	875,56	1.786,33
BELEX15	BELEXLine	9.8.2023	870,39	1.781,41
BELEX15	BELEXLine	10.8.2023	872,19	1.793,45
BELEX15	BELEXLine	11.8.2023	871,20	1.792,32
BELEX15	BELEXLine	14.8.2023	865,85	1.787,15
BELEX15	BELEXLine	15.8.2023	861,51	1.783,03
BELEX15	BELEXLine	16.8.2023	853,69	1.771,35
BELEX15	BELEXLine	17.8.2023	853,85	1.768,96
BELEX15	BELEXLine	18.8.2023	854,57	1.769,68
BELEX15	BELEXLine	21.8.2023	862,64	1.778,67
BELEX15	BELEXLine	22.8.2023	863,12	1.775,08
BELEX15	BELEXLine	23.8.2023	878,45	1.798,13
BELEX15	BELEXLine	24.8.2023	888,01	1.811,17
BELEX15	BELEXLine	25.8.2023	892,01	1.818,47
BELEX15	BELEXLine	28.8.2023	893,82	1.824,18
BELEX15	BELEXLine	29.8.2023	893,82	1.824,22
BELEX15	BELEXLine	30.8.2023	886,25	1.816,99
BELEX15	BELEXLine	31.8.2023	884,90	1.817,29
BELEX15	BELEXLine	1.9.2023	886,38	1.815,71
BELEX15	BELEXLine	4.9.2023	885,16	1.818,25
BELEX15	BELEXLine	5.9.2023	887,11	1.814,74
BELEX15	BELEXLine	6.9.2023	881,93	1.820,57
BELEX15	BELEXLine	7.9.2023	890,94	1.819,81
BELEX15	BELEXLine	8.9.2023	887,94	1.817,13
BELEX15	BELEXLine	11.9.2023	901,53	1.843,75
BELEX15	BELEXLine	12.9.2023	902,55	1.845,36

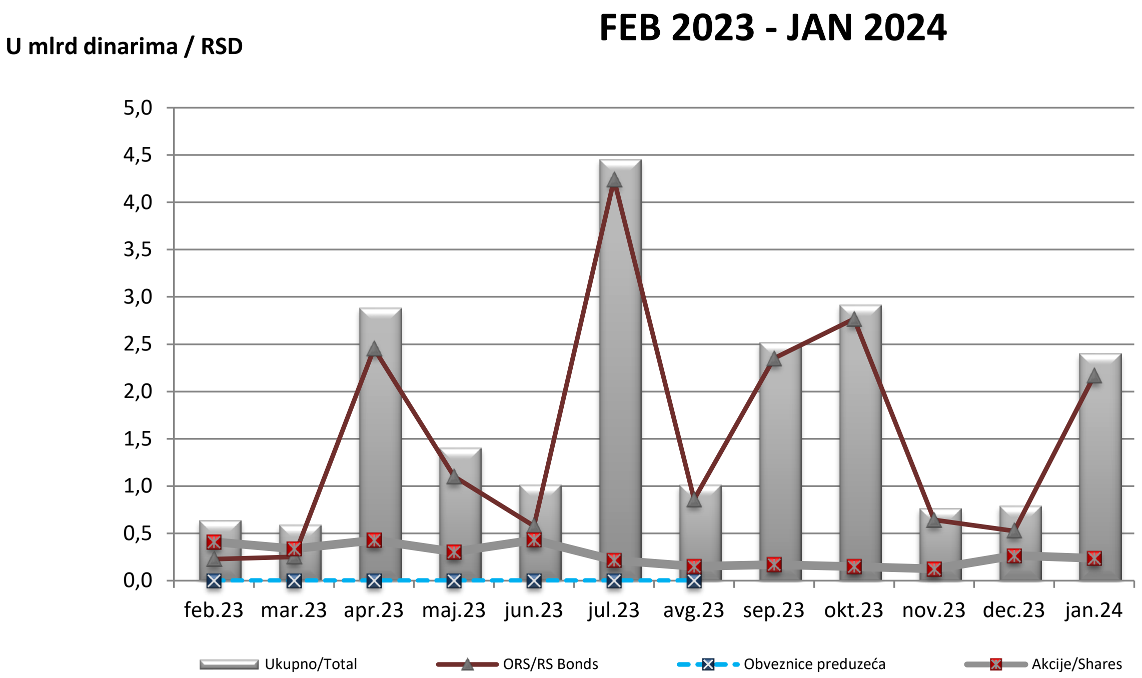
BELEX15	BELEXLine	13.9.2023	905,29	1.847,97
BELEX15	BELEXLine	14.9.2023	907,25	1.850,14
BELEX15	BELEXLine	15.9.2023	905,55	1.845,51
BELEX15	BELEXLine	18.9.2023	902,88	1.842,02
BELEX15	BELEXLine	19.9.2023	900,60	1.838,99
BELEX15	BELEXLine	20.9.2023	900,56	1.838,77
BELEX15	BELEXLine	21.9.2023	899,87	1.840,81
BELEX15	BELEXLine	22.9.2023	888,04	1.826,87
BELEX15	BELEXLine	25.9.2023	888,17	1.823,86
BELEX15	BELEXLine	26.9.2023	881,28	1.812,96
BELEX15	BELEXLine	27.9.2023	885,92	1.823,37
BELEX15	BELEXLine	28.9.2023	886,17	1.824,88
BELEX15	BELEXLine	29.9.2023	886,89	1.835,02
BELEX15	BELEXLine	2.10.2023	887,66	1.836,49
BELEX15	BELEXLine	3.10.2023	897,24	1.837,61
BELEX15	BELEXLine	4.10.2023	895,43	1.835,74
BELEX15	BELEXLine	5.10.2023	890,06	1.830,12
BELEX15	BELEXLine	6.10.2023	891,16	1.832,47
BELEX15	BELEXLine	9.10.2023	891,05	1.826,95
BELEX15	BELEXLine	10.10.2023	889,68	1.826,21
BELEX15	BELEXLine	11.10.2023	894,61	1.832,40
BELEX15	BELEXLine	12.10.2023	888,72	1.825,24
BELEX15	BELEXLine	13.10.2023	882,14	1.817,15
BELEX15	BELEXLine	16.10.2023	879,27	1.818,19
BELEX15	BELEXLine	17.10.2023	883,99	1.823,41
BELEX15	BELEXLine	18.10.2023	877,89	1.814,16
BELEX15	BELEXLine	19.10.2023	881,36	1.818,14
BELEX15	BELEXLine	20.10.2023	870,61	1.810,45
BELEX15	BELEXLine	23.10.2023	876,59	1.822,84
BELEX15	BELEXLine	24.10.2023	876,66	1.830,72
BELEX15	BELEXLine	25.10.2023	878,57	1.834,78

BELEX15	BELEXLine	26.10.2023	877,18	1.839,18
BELEX15	BELEXLine	27.10.2023	876,67	1.838,72
BELEX15	BELEXLine	30.10.2023	877,73	1.839,63
BELEX15	BELEXLine	31.10.2023	875,94	1.841,45
BELEX15	BELEXLine	1.11.2023	875,42	1.846,44
BELEX15	BELEXLine	2.11.2023	877,92	1.849,38
BELEX15	BELEXLine	3.11.2023	878,79	1.849,23
BELEX15	BELEXLine	6.11.2023	880,12	1.848,02
BELEX15	BELEXLine	7.11.2023	869,04	1.835,06
BELEX15	BELEXLine	8.11.2023	868,44	1.830,96
BELEX15	BELEXLine	9.11.2023	868,37	1.831,46
BELEX15	BELEXLine	10.11.2023	868,29	1.830,01
BELEX15	BELEXLine	13.11.2023	870,26	1.834,39
BELEX15	BELEXLine	14.11.2023	872,78	1.835,67
BELEX15	BELEXLine	15.11.2023	874,75	1.837,89
BELEX15	BELEXLine	16.11.2023	876,84	1.841,03
BELEX15	BELEXLine	17.11.2023	872,24	1.836,22
BELEX15	BELEXLine	20.11.2023	880,17	1.846,08
BELEX15	BELEXLine	21.11.2023	874,98	1.847,60
BELEX15	BELEXLine	22.11.2023	876,15	1.848,87
BELEX15	BELEXLine	23.11.2023	880,24	1.853,42
BELEX15	BELEXLine	24.11.2023	879,14	1.852,90
BELEX15	BELEXLine	27.11.2023	878,11	1.860,67
BELEX15	BELEXLine	28.11.2023	875,98	1.876,07
BELEX15	BELEXLine	29.11.2023	876,68	1.879,80
BELEX15	BELEXLine	30.11.2023	877,71	1.868,72
BELEX15	BELEXLine	1.12.2023	891,55	1.892,39
BELEX15	BELEXLine	4.12.2023	877,77	1.878,70
BELEX15	BELEXLine	5.12.2023	880,63	1.889,77
BELEX15	BELEXLine	6.12.2023	882,58	1.892,95
BELEX15	BELEXLine	7.12.2023	872,91	1.876,71
BELEX15	BELEXLine	8.12.2023	872,15	1.875,68
BELEX15	BELEXLine	11.12.2023	880,71	1.904,55

BELEX15	BELEXLine	12.12.2023	883,52	1.928,96
BELEX15	BELEXLine	13.12.2023	883,11	1.930,68
BELEX15	BELEXLine	14.12.2023	882,62	1.928,71
BELEX15	BELEXLine	15.12.2023	880,93	1.922,74
BELEX15	BELEXLine	18.12.2023	879,71	1.921,38
BELEX15	BELEXLine	19.12.2023	877,90	1.921,14
BELEX15	BELEXLine	20.12.2023	881,91	1.926,25
BELEX15	BELEXLine	21.12.2023	875,82	1.918,02
BELEX15	BELEXLine	22.12.2023	875,79	1.918,11
BELEX15	BELEXLine	25.12.2023	875,21	1.915,28
BELEX15	BELEXLine	26.12.2023	877,52	1.917,36
BELEX15	BELEXLine	27.12.2023	878,48	1.919,82
BELEX15	BELEXLine	28.12.2023	875,66	1.914,04
BELEX15	BELEXLine	3.1.2024	877,56	1.919,44
BELEX15	BELEXLine	4.1.2024	877,15	1.918,79
BELEX15	BELEXLine	5.1.2024	877,86	1.918,78
BELEX15	BELEXLine	9.1.2024	875,45	1.915,16
BELEX15	BELEXLine	10.1.2024	869,38	1.906,17
BELEX15	BELEXLine	11.1.2024	873,07	1.915,93
BELEX15	BELEXLine	12.1.2024	881,63	1.928,73
BELEX15	BELEXLine	15.1.2024	881,81	1.933,56
BELEX15	BELEXLine	16.1.2024	868,55	1.913,89
BELEX15	BELEXLine	17.1.2024	869,50	1.915,25
BELEX15	BELEXLine	18.1.2024	869,29	1.913,49
BELEX15	BELEXLine	19.1.2024	876,36	1.922,82
BELEX15	BELEXLine	22.1.2024	874,84	1.920,32
BELEX15	BELEXLine	23.1.2024	874,26	1.918,72
BELEX15	BELEXLine	24.1.2024	876,92	1.923,16
BELEX15	BELEXLine	25.1.2024	877,44	1.934,97
BELEX16	BELEXLine	26.1.2024	874,68	1.930,57
BELEX17	BELEXLine	29.1.2024	877,89	1.933,13
BELEX18	BELEXLine	30.1.2024	879,07	1.931,82
BELEX19	BELEXLine	31.1.2024	877,28	1.927,70



	Ukupno/Total	ORS/RS Bonds	Obveznice preduzeća	Akcije/Shares
feb.23	637.211.598	227.809.312	0	409.402.286
mar.23	587.548.068	251.378.033	0	336.170.035
apr.23	2.882.563.543	2.453.909.769	0	428.653.774
maj.23	1.402.643.492	1.099.709.511	0	302.933.981
jun.23	1.008.575.957	577.146.764	0	431.429.193
jul.23	4.454.853.140	4.240.041.370	0	214.811.770
avg.23	1.008.065.602	857.956.730	0	150.108.872
sep.23	2.519.251.108	2.349.508.572		169.742.536
okt.23	2.915.552.901	2.766.562.093		148.990.808
nov.23	763.632.155	640.467.738		123.164.417
dec.23	789.723.001	524.997.384		264.725.617
jan.24	2.401.535.257	2.166.104.531		235.430.726


U mlrd dinarima / RSD
FEB 2023 - JAN 2024
5,0
4,5
4,0
3,5
3,0
2,5
2,0
1,5
1,0
0,5
0,0
feb.23
mar.23
apr.23
maj.23
jun.23
jul.23
avg.23
sep.23
okt.23
nov.23
dec.23
jan.24
Ukupno/Total
ORS/RS Bonds
Obveznice preduzeća
Akcije/Shares

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• Posle rezimea dati do 10 ključnih reči, pogodnih za indeksiranje i pretraživanje.

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• The author should also designate where in the paper photographs should be placed, submitting each of them as a separate file in the .eps or .tiff format, resolution 300 dpi.

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• Text boxes are not to be used either in the text or in the tables.

• Websites are to be typed as a text, not as a hyperlink.

• Please, correct all grammatical or typing errors.

• When mentioned for the first time, the names of institutions are translated and the original name and abbreviation are given in brackets.

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