

PROFITABILNOST BANKARSKOG SEKTORA EKONOMIJA „OTVORENOG BALKANA” U PRED KOVID I KOVID PERIODU ZDRAVSTVENE KRIZE

Boris Siljković¹¹ Nebojša Denić¹² Edin Nikšić¹³

Originalni naučni rad

UDK: 616.98:578.834]:336.71(497)
33.054.22:336.71(497)

Apstrakt

Cilj ovog istraživanja jeste ispitivanje zdravlja finansijskog, a posebno bankarskog sistema ekonomija „Otvorenog Balkana” u uslovima pre i za vreme COVID-19 krize. Istraživanje prati uticaj tradicionalnih odrednica profitabilnosti bankarskog sistema (ROA i REA), koje predstavljaju najznačajnije makroekonomске determinante, odnosno „eksterne uslove”, koje utiču na profitabilnost bankarskog sektora, i to preko nezavisnih varijabli BDP-a, inflacije i nezaposlenosti. Primarni cilj ovog rada jeste da se dođe do rezultata koji otkrivaju korelaciju profitabilnosti bankarskog sektora između zavisnih faktora ROA – povraćaj sredstava i REA – prinos na kapital, kao i uticaja nezavisnih faktora: a. realni rast BDP-a, b. inflacije, c. nezaposlenosti, d. loši krediti-nekvalitetni krediti/ukupni krediti, odnosno makroekonomskih varijabli u kojima posluje bankarski sektor inicijative „Otvorenog Balkana”.

Ključne reči: profitabilnost ROA i REA, zdravstvena kriza, ekonomija, loši krediti, nezaposlenost.

JEL: G21

Uvod

Period pre i tokom zdravstvene krize izazvane Covid-19 pandemijom imao je za posledicu različitu profitabilnost bankarskog sektora posmatranih ekonomija „Otvorenog Balkana” – Srbije, Severne Makedonije i Albanije. Kao što će biti naglašeno u daljem istraživanju, najznačajniji faktori za profitabilnost banaka internog tipa uključuju rast kredita, rast depozita, odnos nekvalitetnih kredita prema

¹¹Profesor strukovnih studija dr Boris Siljković, Akademija strukovnih studija kosovsko metohijska-Odsek Peć u Leposaviću, Dositeja Obradovića b.b., 38218 Leposavić, Srbija, E-mail: boris.siljkovic@yahoo.com

¹²Vanredni profesor dr Nebojša Denić, Univerzitet u Prištini sa privremenim sedištem u Kosovskoj Mitrovici, Prirodno matematički fakultet, Lole Ribara 29, 38220 Kosovska Mitrovica, Srbija, E-mail: denicnebojsa@gmail.com

¹³ Student master studija Edin Nikšić, Univerzitet u Prištini sa privremenim sedištem u Kosovskoj Mitrovici, Ekonomski fakultet, Kolašinska 156, Kosovska Mitrovica, Srbija, E-mail: edinniksic@gmil.com

ukupnim kreditima, odnosno analiza nekvalitetnih (NPL) kredita i koeficijent adekvatnosti kapitala. S druge strane, najznačajnije determinante profitabilnosti banke, na koje njen rukovodstvo ne može da utiče, opisuju se kao „eksterne determinante“ i one se odnose na okruženje u kojem banka posluje. S tim u vezi, u eksterne determinante se ubrajaju: ekonomski rast izražen kroz realni rast BDP-a, nezaposlenost i inflacija. Ove determinante su u periodu Covid-19 pandemije imale različiti statistički uticaj na profitabilnost banaka, što ćemo potvrditi kroz dalje istraživanje u nastavku ovog rada.

Pregled literature

Većina akademskih istraživanja usmerena je na unutrašnje činioce i alternativne mere profitabilnosti bankarskog sektora. Dva najčešće korišćena su: kroz povrat na imovinu (ROA) i povrat na kapital (REA) (Iqbal, Molyneux, 2005). U svojoj studiji iz 1999. godine, Lejker (Laker) navodi da su makroekonomske varijable (bruto domaći proizvod, kamatne stope) u pozitivnoj korelaciji sa rastom prihoda banke. Istraživanje koje su 2009. godine sproveli Pejić et al., pokazuje da profitabilnost banaka zavisi od makroekonomskih varijabli i da ima izvesnu dozu pozitivnog učinka na profitabilnost. Na ovaj način dolazimo do tvrdnje da je profitabilnost banke zapravo preduslov za ekonomski rad (Athanasoglou et al., 2008). Takođe, u dosadašnjim istraživanjima ističe se tvrdnja prema kojoj porast temeljne inflacije ima značajan negativan uzročno-posledični učinak na profitabilnost banaka, što dalje dovodi do odloženog učinka kroz povrat na imovinu. (Tan, Floros, 2012). Isto tako, inflacija ima pozitivne učinke na obaveze i negativne učinke na strani imovine (Frisch, 1990). Jeevitha et al. (2009) iznose suprotno stanovište prema kome inflacija nema uticaja na povrat na imovinu (ROA), povrat na kapital (ROE) i neto dobit odabranih banaka javnog sektora.

Kalaš, Mitrović, Milenković i Andrašić (2021) ukazuju na značajan uticaj BDP-a i inflacije na pokazatelje profitabilnosti banaka u zemljama „Otvorenog Balkana“ i Jugoistočne Evrope. Naime, povećanje BDP-a i inflacije od 1% povećavaju ROA za 0,47% i 0,48%, pri čemu inflacija ima veći uticaj na ROA i ROE u odnosu na BDP. Rezultati modela slučajnog efekta pokazuju da povećanje BDP-a od 1% i inflacije povećavaju ROE za 0,49% i 0,42%.

Prisutna su i stanovišta prema kojima rast BDP-a i inflacije utiču na povećanje profitabilnosti finansijskog sektora, odnosno smanjuju njihovu likvidnost (Rai, Ercegovac, Milić, 2021), dok su u mnogim studijama posebno analizirani nekvalitetni zajmovi koji se izražavaju kroz povećavanje nekvalitetnih kredita, a koji ukazuju na to da izvestan broj privrednih subjekata koji imaju defekt kulture u servisiranju svog kreditnog duga, jednostavno ne otplaćuju kredite (Morttinен et al.). Tako Morttinен et al. (2005) tvrde da se ukupna vrednost banke smanjuje kao rezultat gubitaka nastalih usled otpisa dugova.

Upoređivanje naših rezultata i rezultata za bankarske sektore u zemljama Evropske Unije (EU), počev od finansijske krize iz 2007. godine, pokazuje da razmera kredita i depozita ima pozitivan uticaj na profitabilnost banaka u zemljama EU, ali negativan na srpske banke (Pasiouras, Kosmidou, 2007.). Ovaj rezultat podržava činjenica da je visoka izloženost kreditnom riziku glavni problem banaka u kojima posluje Srbija. Štaviše, upoređivanje stranih banaka u Srbiji i stranih banaka u EU zemljama ukazuje na to da se glavna razlika u faktorima koji utiču na profitabilnost banke odnosi na adekvatnost kapitalizacije.

Metodologija istraživanja

Analiza uticaja determinanti profitabilnosti bankarskog sektora zahtevala je korišćenje naučnih metoda za istraživanje, a pre svega, metod analize sadržaja teorijsko-empirijskih studija koji se odnose na praćenje profitabilnosti bankarskog sektora. Profitabilnost bankarskog sektora biće istražena kroz tradicionalne indikatore profitabilnosti ROA i REA koje su zavisne varijable na primeru ekonomija tzv. otvorenog, zapadnog Balkana. Metoda i tehnike deskriptivne analize potvrđene su i preko kategorije uticaja na profitabilnost bankarskog sektora pomenutih ekonomija, prvenstveno kroz uticaj makroekonomskih indikatora koji uključuju stopu ekonomskog rasta, inflaciju i nezaposlenost. Kod procene profitabilnosti ekonomija „Otvorenog Balkana“ prati se vremensko razdoblje koje obuhvata vreme pre početka i za vreme trajanja Covid-19 krize, a koje se odnosi na okruženje bankarskog sektora ekonomija „Otvorenog Balkana“.

Metode i tehnike deskriptivne analize profitabilnosti bankarskog sektora korišćene su za tabeliranje podataka. Grafički prikazi su korišćeni za analizu trenda, strukturnih relacija među njima, komparativnu analizu sa nekim od finansijskih indikatora koje su banke ostvarile u periodu 2018–2021. godine. Konačno, sinteze su korišćene u cilju sumiranja, kroz kvantitativno i kvalitativno iskazivanje dobijenih rezultata. Sa ovim smo izmerili učinke finansijskih indikatora, sa osrvtom i na ekonomski inikatore koji utiču na profitabilnost bankarskog sektora posmatranih ekonomija „Otvorenog Balkana“, i to iz dva perioda – pred zdravstvenu krizu Covid-19 (2018-2019) i tokom zdravstvene krize izazvane Covid-19 pandemijom (2020-2021).

Rezultati istraživanja i diskusija

Koncept profitabilnosti i efikasnosti bankarskog sektora može se posmatrati kroz stavove pojedinih autora koji su trvdili da su dva najvažnija koeficijenta profitabilnosti zavisne varijable, ROA i ROE. ROE je najbitniji pokazatelj za akcionare banke, dok ROA pokazuje efikasnost menadžmenta i zaposlenih u banci kod upravljanja ukupnom aktivom, a u kontekstu ostvarivanja neto profita nakon

oporezivanja, (Bakić, 2020). Iskustva su pokazala da se ROA smatra najboljom merom jer je preciznija mera za izračunavanje profitabilnosti. ROA priznaje činjenicu da je profitabilnost odnos između sopstvenog i pozajmljenog kapitala (Novićević, Jemović, Milenović, 2021). Za velike banke tipičan ROA je ispod 1%, dok je za srednje i male banke iznad 1%. Pri tome, banke koje obilnije koriste tuđe izvore finansiranja su uglavnom bliže gornjoj granici, dok su kapitalno intenzivnije banke bliže donjoj granici. Kada govorimo o ekonomijama članica inicijative „Otvorenog Balkana“ (Tabela 1), primetno je da su banke po koeficijentu ROE i REA za 2019–2020. godine ostale profitabilne. Banke u Srbiji su u 2020. godini kroz oba povrata na imovinu (ROA) i povrat na kapital (ROE) zabeležile pad (ROA sa 1,7 % u 2019. godini na 1,06% u 2020. godini, a ROE pad sa 9,8 % 2019. godine na 6,5% u 2020. godini). Ako sagledamo profitabilnost evropskih banaka, možemo doći do zaključka da je i pre pre početka pandemije Covid-19 virusa ona bila vrlo niska, uglavnom zbog povećanih umanjenja vrednosti finansijske imovine (U EU je ROE dostigao dno sa 1,8 % u 2020. godini, što je više od tri puta manje nego 5,8%, što je zabeleženo pred kraj 2019. godine). ROE evropskih banaka iznosio je 5,8% u 2019. godini, što predstavlja pad sa 6,1% koliko je zabeleženo u 2018. godini. I pored pada, zbog umerenijeg rasta u nekoliko zemalja u upoređivanju sa 2018. godinom, to je i dalje na sličnim nivoima kao i prethodnih godina, iako još uvek daleko od registrovanih 10,6% na početku velike finansijske krize iz 2007. godine. Evidentni oporavak banaka u EU izraženu kroz koeficijent ROE imamo u 2021. godini sa 7,4%, kao posledica smanjenja pandemijskih pritisaka u 2021. godini. Ukoliko izmerimo vrednosti koeficijenta ROA, on je u periodu pre početka poslednje finansijske krize (2005–2007. godine) iznosio 0,35%, dok je u periodu pre Covid-19 pandemije bio još niži (0,26%), a u periodu trajanja pandemije (2020–2021. godine) iznosio je oko 0,15% (Hack, Nicholls, 2021) Bolje pokazatelje profitabilnosti od Srbije, kroz veći koeficijent ROE u 2018. godini, imale su druge dve zemlje, članice inicijative „Otvorenog Balkana“. Makedonija je imala koeficijent ROE od 16,0%, a Albanija koeficijent ROE od 13,0%. Ukoliko uporedimo sva tri koeficijenta ROE u sve tri ekonomije „Otvorenog Balkana“, najbolji koeficijent u pred-Covid-19 periodu imala je Albanija. Koeficijent ROE u Makedoniji je 2020. godine smanjen sa 11,9%, koliko je iznosio u 2019. godini, na 8,5%, dok je u Albaniji opao na 12,8%. Srbija je imala manji koeficijent ROE od druge dve članice „Otvorenog Balkana“, i on je iznosio 6,5%. Ono što je danas značajno za banke članica „Otvorenog Balkana“ jeste da one više ne zaostaju značajno za bankama EU. Koeficijent ROA, u periodu pre 2014. godine, kretao se od 1% do 2%. Prosek ROA kod tradicionalnih banaka, u periodu 2011–2020. godine, u Srbiji je iznosio 0,18%, dok je ROE bio 0,99%. Između 2017. i 2019. godine, ROA u Srbiji je iznosio 0,26%, a 2020. godine nešto manje od 0,15%. U EU, prosek ROA kod tradicionalnih banaka u periodu 2011–2020. godine, iznosio je 0,63%, a ROE u istom periodu 2011–2020. godine 12,39%. Ovo je jasan pokazatelj koliko je tada profitabilnost tradicionalnih banaka ekonomija „Otvorenog Balkana“ bila daleko od banaka EU (Stefanović, Barjaktarović, & Bataev, 2021).

Tabela 1. Indikatori profitabilnosti bankarskog sektora ROA i ROE ekonomija „Otvorenog Balkana” i ekonomija EU u periodu 2018 – jul 2021.godine.

Ekonomije otvorenog Balkana i EU	Indikatori profitabilnosti bankarskog sektora							
	ROA				REA			
	2018	2019	2020	2021	2018	2019	2020	2021
Srbija	2,1	1,7	1,06	1,17	11,3	9,8	6,5	8,0
Severna Makedonija	1,73	1,2	0,98	/	16,0	11,7	8,5	/
Albanijska	1,2	1,5	1,0	1,4	13,0	13,5	12,8	/
Prosek EU	2017 - 2019. 0,26% 2020 - 2021. 0,15%				6,1	5,8	1,7	7,4

Izvor: Centralne banke ekonomija „Otvorenog Balkana” i ECB

Grafik 1. Koeficijent ROA i REA u ekonomijama „Otvorenog Balkana”



Ono što je ekomska praksa u bankama dokazala jeste da je odnos nenaplativih kredita u Srbiji prema ukupnim kreditima smanjen na 3,5 % zahvaljujući implementaciji strategije rešavanja problematičnih kredita i strategiji Narodne banke Srbije (NBS). U cilju sprečavanja nastanka novih problematičnih kredita, Vlada Republike Srbije je u decembru 2018. godine usvojila Program za rešavanje problematičnih kredita za period 2018–2020. godine (Narodna banka Srbije, 2019.) Ukoliko uporedimo kraj 2020. godine i početak 2021. godine u nadzornom području ECB problematičnih kredita banaka u EU pod direktnim nadzorom ECB-a iznosio je 2,5%, što je predstavljalo najniži nivo u poslednjih deset godina. Značajan uticaj kod NPL-nekvalitetnih zajmova u EU, u toku Covid-19 zdravstvene krize, imali su moratorijumi na otplate kredita koje su skoro sve zemlje EU uvele, kao i garantne

šeme. U periodu 2016–2017. godine, primetno je da je Srbija imala visok procenat nekvalitetnih kredita, u iznosima oko 10-20% (Dragosavac, Gačević, 2021).

Tabela 2: Prikaz NPL-nekvalitetnih zajmova ekonomija,,Otvorenog Balkana” (u %).

Zemlja	2016	2017	2018	2019	2020	2021
Albanija	18,2	18,3	5,0	8,4	8,1	7,1
Severna Makedonija	10,8	10,8	5,0	4,6	3,6	3,1
Srbija	21,6	19,5	5,6	4,6	3,7	3,5

Izvor:Podaci preuzeti sa sajtova centralnih banka posmatranih ekonomija

Grafik 2. Prikaz NPL-nekvalitetnih zajmova ekonomija,,Otvorenog Balkana” (u %)



Bankarski sektor Srbije je adekvatno kapitalizovan CAD (%) (regulatorni kapital prema riziku ponderisanoj imovini) u upoređenju sa ekonomijama,,Otvorenog Balkana”, tako da je na kraju prvog tromesečja 2021. godine stopa adekvatnosti kapitala bankarskog sektora u Srbiji bila više nego adekvatno kapitalizovana, sa srednjom vrednošću od 22,3%. Regulatorni stepen adekvatnosti kapitala na osnovu Bazelskih standarda uskladeni su sa propisima Bazelskih standarda koji su iznosili 8% (prema domaćoj regulativi ranije je to bilo 12%). Dakle, aktuelna kapitalna adekvatnost kapitala koje je NBS propisala je znatno iznad minimuma stopa adekvatnosti kapitala CAR (%), koja je bila manja u Severnoj Makedoniji (16, 7% u 2020. godini, 16,3% u 2019 godini, 16,5% u 2018 godini, i 15,7% u 2017. godini). Adekvatnost kapitala je tokom celokupnog analiziranog perioda gotovo duplo veća nego što je zakonski minimum (8%), što može da implicira da su banke rigoroznije u sagledavanju potencijalnih proizvoda. Pored toga, osnovni kapital zauzima 80–90% ukupnog kapitala, što signalizira kvalitetan kapital u bankarskom sistemu Severne Makedonije. U Albaniji je nešto viša stopa adekvatnosti kapitala od

Severne Makedonije, sa stopom koja je iznad regulatornih uslova u posmatranom periodu u bankarskom sektoru Albanije (18,3% u 2020. godini, 18,28% u 2019. godini, 18,24 u 2018. godini, i 16,60% u 2017. godini). Svakako, mere centrane banke Makedonije kroz dva moratorijuma omogućili su prvo odlaganje naplate kredita za više od polovine sektora stanovništva koje su činili rast kredita u 2020. Godini. U praksi je to značilo podizanje nenaplativog statusa upravo tih kredita od 90 do 150 dana. Konkretno, ove mere su pomogle u jačanju kreditnog rasta i obuzdavanju koeficijenta nenaplativih kredita, tako da je na kraju 2020. godine odnos problematičnih kredita pao na 3.6%, a polovinom 2021. godine na 3.1% u Republici Severnoj Makedoniji.

Republika Albanija imala je rast depozita koji ubrzava na 5.8% u 2020. godini. Od ovih depozita dominiraju devizni depoziti. Ukupni krediti beleže rast od 6,1% za razliku od negativnog rasta od -1.7% koje su obeležile 2018. godinu. Banke su počele da olakašavaju kreditne standarde u 2020. godini jer su kreditni rizici kroz nekvalitetne kredite postali niži, ali su ipak zadržali stroge uslove za preduzeća. Ipak i dalje značajan deo nasleđenih problematičnih kredita ima Albanija (8,1%). Iako su nekvalitetni krediti u ekonomijama „Otvorenog Balkana“ i dalje uvećani, u odnosu na EU standarde, njihov obuhvat pokrivenosti, u rasponu od 59% (Srbija) do 73% (Severna Makedonija), premašuje prosek Evropske Unije (45%), što odražava, relativno niži kvalitet pokrivenosti nekvalitetnih zajmova u odnosu na ekonomije EU. Zahvaljujući svim preduzetim aktivnostima Vlade Republike Srbije i Narodne banke Srbije u prethodnih 10 godina, očuvana je i ojačana stabilnost bankarskog sektora u Republici Srbiji. Najbolja potvrda navedene stabilnosti, i garant adekvatne zaštite interesa deponenata, jeste pokazatelj adekvatnosti kapitala koji je za bankarski sektor godinama unazad iznad 22%, što je daleko iznad regulatoriog minimuma od 8% i nikad niži nivo učešća problematičnih kredita od 3,5% prema poslednjim raspoloživim podacima. Smanjenje stopa prinosa u odnosu na kapital sa oko 10% na oko 6,5% u 2020. godini potvrda je da je bankarski sektor podelio teret krize sa privredom i građanima.

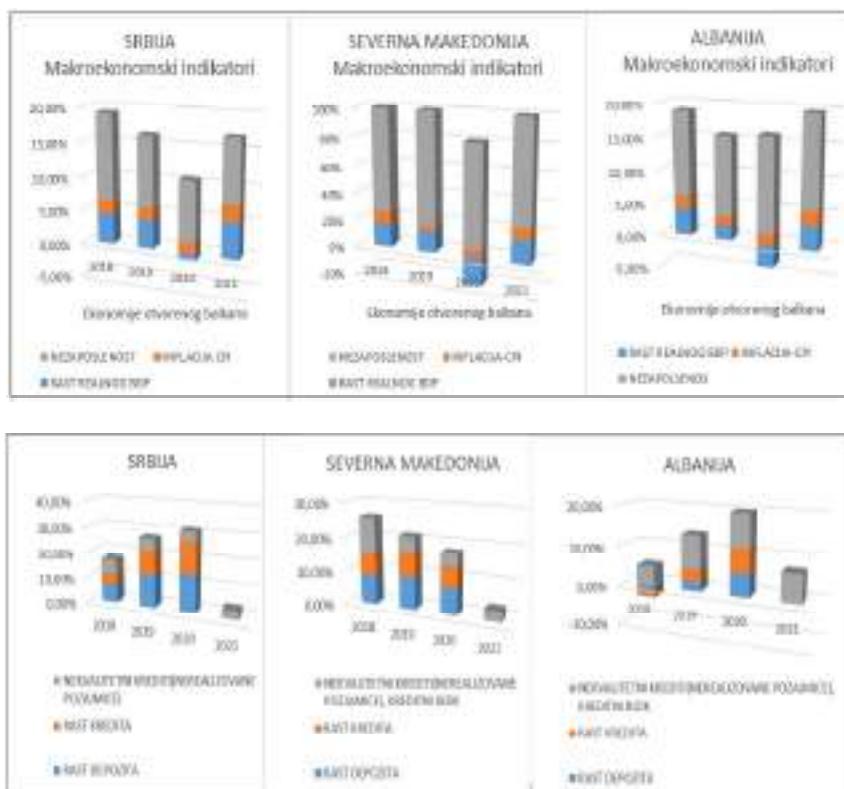
Tabela 3. Finansijski indikatori profitabilnosti bankarskog sektora ekonomija „Otvorenog Balkana“ u period 2018-2021. godine.

Ekonomija	Finansijski indikatori						Nekvalitetni krediti (nerealizovane pozajmice) t.j. kreditni rizik	2021
	Rast depozita		Rast kredita		2020	2020		
Srbija	2018	2019	2018	2019	2020	2020	2021	2021
	7.4	12.9	15.0	-	4.3	9.7	-	3.5
Severna	2018	2019	2018	2019	2020	2020	2021	2021

Makedonija	8.6	9.6	7.8	-	6.6	7.2	6.4	-	10, 8	4.6	3.6	3.1
Albanija	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
	-1.2	2.5	5.8	-	1.7	3.0	6.1	-	5,0	8.4	8.1	7.1

Izvor EU Candidate Countries, 2021. Potential candidates economic quarterly (CCEQ), Technical paper 052, https://ec.europa.eu/info/sites/default/files/economy-finance/tp052_en.pdf

Grafik 3 Finansijski indikatori profitabilnosti bankarskog sektora ekonomija tzv. otvorenog Balkana 2018-2021. godine.



Dosadašnja istraživanja su vrlo retko uzimala u obzir nezaposlenost kao važan ekonomski faktor za funkcijonisanje finansijskog sistema i profitabilnosti bankarskog sektora. Međutim, nezaposlenost je veoma važan faktor. Rast nezaposlenosti usporava ekonomski rast privrede, odnosno BDP-a i izaziva gubitak sposobnosti otplate što direktno utiče na profitabilnost ([Marjanović, Ivanović, 2021](#)). Najbolje indikatore nezaposlenost kod ekonomija „Otvorenog Balkana“ ima Srbija na istorijsko najnižoj visini od 9,0% u 2020. godini (pred početak Covid-19 pandemije, 2019. godine, iznosio je 10.4%), što će pomoći ublažavanju negativnih trendova koji bi mogli uticati na profitabilnost bankarskog sektora usled zdravstvene krize Covid-19 na kratki rok. Najslabije pokazatelje nezaposlenosti ima Makedonija (17,3% u 2019. i

16,4% u 2020. godini, sa projekcijom od 15,8% u 2021. godini). Albanija ima nešto bolji učinak u pogledu nezaposlenosti od Severne Makedonije. Kod Albanije stopa nezaposlenosti je 2019. godine je iznosila 12.0%, 14.5% u 2020. godini, dok je projekcija za 2021. godinu bila 13.9%. Stopa nezaposlenosti u EU u Covid-19 periodu, u septembru 2021. godine, iznosila je 6.7%, a u Euro zoni 7.4% (Podaci preuzeti sa sajta Evropske centralne banke).

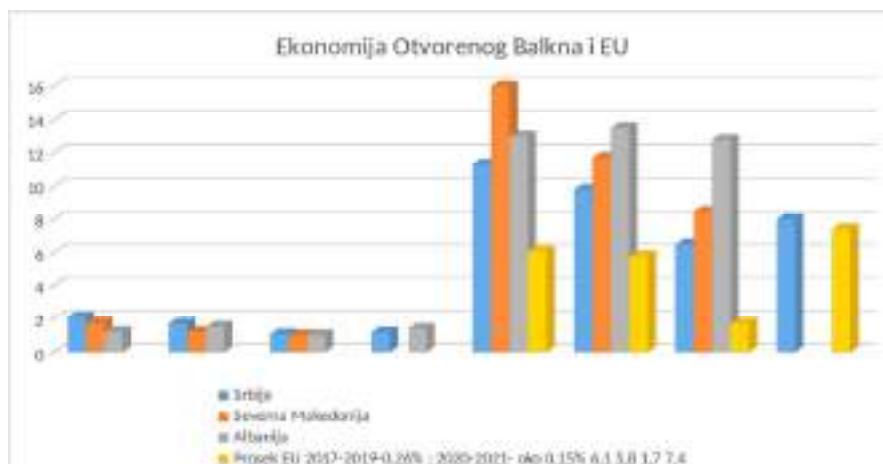
Tabela 4: Makroekonomiske determinante profitabilnosti bankarskog sektora 2018- 2021. godine

Ekonomije otvorenog Balkana	Makroekonomski i finansijski indikatori											
	Rast realnog BDP				Rast inflacije				Rast nezaposlenosti			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
Srbija	4.5	4.2	-1.0	5.3	2.0	1.8	1.6	2.4	12.7	10.4	9.0	9.3
Severna Makedonija	2.9	3.2	-4.3	3.7	1.5	0.8	1.2	1.7	12.7	17.3	16.4	15.8
Albanija	4.1	2.2	-3.3	3.7	2.0	1.4	1.6	2.1	12.8	12.0	14.5	13.9

Izvor: [European commission 2021.](#) EU Candidate Countries, Potential candidates economic quarterly (CCEQ), Technical paper 052.

Napomena: ECFIN, prognoza za 2021.godinu objavljena maja 2021.

Grafik 4 Makroekonomiske determinante profitabilnosti bankarskog sektora 2018- procena 2021. godine



U ključni pokazatelj potrebno je uvrstiti i realni rast BDP-a jer on ilustruje realnu stopu rasta privredne aktivnosti u odnosu na proizvedena dobra i usluge. Njegova pozitivna ili negativna vrednost igra važnu ulogu u procesu donošenja odluka investitora (Radević, Kurtović, Siljković, 2015.). Otuda se pri lošem ekonomskom rastu, odnosno manjem BDP, malo troši, još manje investira, a solventnost postojećih klijenata opada, što utiče i na pad profitabilnosti banaka. Obrnuta situaciju poznaje rast BDP. Takođe, većina istraživanja koja su nam bila dostupna, a koja su se odnosila na

stepen ekonomskog razvoja ekonomija slične Srbiji, pokazivala su da postoji izvestan nivo pozitivnog uticaja makroekonomskih faktora na profitabilnost banaka, dominantno BDP. Novija istraživanja su u fokus stavila makroekonomski faktore koji utiču na prenos: varijabilnost deviznog kursa, inflaciju, monopolsku konkurenčiju, itd. (Kurtović et al., 2018). Otuda je rast stope inflacije preko CPI vrlo značajna makroekonomski varijabla čiji je prenosni uticaj na profitabilnost banke važno analizirati. Povoljne okolnosti su vladale u pred-Covid-19 i Covid-19 periodu 2018–2021. godine gde smo imali nisku stopu inflacije i visoku stopu realnog rasta u ekonomijama „Otvorenog Balkana“ (European Economy, 2021).

Zaključak

Pritisci na smanjenje profitabilnosti bankarskog sektora sve tri ekonomije „Otvorenog Balkana“ trajuće čak i kada globalna ekonomija počne da se oporavlja od posledica izazvanih Covid-19 pandemijom. Ovu činjenicu dodatno opterećuje i početak energetske krize, uz rast inflacije usled špekulativnog rasta cena na globalnom tržištu. Po broju banaka na nivou jedne ekonomije u sve tri članice inicijative „Otvorenog Balkana“ prednjači Srbija, dok je najjači uticaj na povrat na aktivu ROA zabeležen kroz veličinu banke i kroz stepen adekvatnosti kapitala. Istina, sa zadrškom možemo reći da veličina utiče na profitabilnost, međutim kako vreme prolazi sve je manje značenje uticaja veličine na profitabilnost banaka. Ipak, u literaturi ne postoji jednoglasno mišljenje kako veličina banke pozitivno deluje na njenu profitabilnost. Stepen adekvatnosti kapitala predstavlja sinonim za finansijsku snagu bankarskog sektora i dobija se stavljanjem u odnos osnovnog kapitala i rizične aktive koja je u Srbiji, u odnosu na ekonomije „Otvorenog Balkana“, bolja i iznosila je u 2020. godini nešto iznad 23% (za razliku od Makedonije koja je imala nešto iznad 16% i Albanije nešto više od 18%). Prema nekim studijama, srazmerna adekvatnost kapitala ekonomija otvorenog Balkana i statistički značajna adekvatnost kapitala na nivou razvijenosti pomenutih ekonomija je na nivou od 10% i tada ima pozitivnu korelaciju sa profitabilnošću banaka. U slučaju ekonomija profitabilnost tradiocionalnih banaka ekonomija „Otvorenog Balkana“ po ovom kriterijumu radi se o dosta dobro kapitalizovanim bankarskim sektorima u sve tri ekonomije i u kovid i predkovid periodu. Stopa adekvatnosti kapitala je u nekim intervalima u sve tri ekonomije imala stopu smanjenja kao rezultat povećanog kreditnog rizika, ali i rizične aktive što se i dešavalo tokom kriznih godina u prošlosti. Uostalom, nepisano pravilo je da trajni izvori iskazani kroz osnovni kapital treba da podnesu sve rizike i gubitke u poslovanju, pa time i problematične kredite (NPL).

Nakon sprovedenog istraživanja, opšti zaključak je da sa povećanjem nivoa NPL-a, nivo ROA se smanjuje i obrnuto. Uspešna naplata potraživanja usled otpisa nekvalitetnih kredita i ostalih mera monitoringa i rast kreditne aktivnosti koja se dokazuje u konkretnoj situaciji kroz pad nekvalitetnih kredita u pred Covid-19, a naročito u Covid-19 periodu kod ekonomija „Otvorenog Balkana“, 2020–2021. godine, direktno utiče na profitabilnost banaka kako kroz smanjenje

rezervisanja za gubitke, kroz ostale prihode čime se poboljšava uopšte kvalitet portfolija banke.

Zbir NPL–nekvalitetnih kredita koje se posmatra do sada smanjivao se i u padu je u periodu 2018–2021.godine i u Srbiji, Severnoj Makedoniji i Albaniji. Koeficijent nekvalitetnih zajmova u Albaniji je duplo viši od nivoa NPL u odnosu na Srbiju i Makedoniju. Pokazatelji takozvanih nekvalitetnih kredita dostigli su višegodišnji najniži nivo u ekonomijama „Otvorenog Balkana” u Covid-19 periodu, 2020–2021. godine. Od posebnog značaja je i to što je vlasnički kapital banaka u ovim ekonomijama u stranom vlasništvu, a samim tim su banke manje osetljive na vanredna povećanja nekvalitetnih kredita od svojih konkurenata u zemljama koje nisu članice EU, što uključuje rezultate njihovog kvalitetnijeg osnovnog kapitala što podrazumeva bolju odbranu od nekvalitetnih zajmova (NPL).

Literatura

1. Athanasoglou, P. P., Brissimis, N., Delis, M. D. 2008. “Bank-specific, industry-specific and macroeconomic determinants of bank profitability”. *Journal of international Financial Markets, Institutions and Money*, Elsevier, vol. 18(2), p. 121-136, (dostupno na adresi linka: <https://mpra.ub.uni-muenchen.de/32026/1/Bank-specific.pdf>)
2. Alihodžić, A. 2015. “Međusobna uslovljenošć performansi bankarskog i realnog sektora Republike Srbije”, *Bankarstvo*, Udrženje banaka Srbije, Beograd, broj 2, str. 52 (dostupno na adresi linka: <https://www.ubs-asb.com/Portals/0/Casopis/2015/2/UBS-Bankarstvo-2-2015-Alihodzic.pdf>).
3. Bakić, S. 2020. „Pozicija banaka sa aspekta analize finansijskih pokaztelja“, *Oditor*, Volume 6, Broj 2, Centar za ekonomska i finansijska istraživanja, Beograd, str. 45 doi: 10.5937/Oditor2002039B (dostupno na adresi linka: <http://www.cefi.edu.rs/wp-content/uploads/2020/08/ODITOR-2-2020-1-39-61.pdf>).
4. Cocris, V., Nucu, E. 2013. “Monetary policy and financial stability empirical records from Central and Eastern European countries”, *Baltic Journal of Economics* 13 (1), ISSN: 1406-099X (Print) 2334-4385 (Online) p.p.75-98. (dostupno na adresi linka:
<https://www.tandfonline.com/doi/pdf/10.1080/1406099X.2013.10840527?needAccess=true>).
5. Central, Eastern and South-Eastern Europe –Economics regional studies, (CESEE), june 2021, Bank Lending Survey, *European investment bank*, (dostupno na adresi linka: https://www.eib.org/attachments/efs/economics_cesee_bls_2021_h1_en.pdf).
6. Dragosavac, M., Gačević, M. 2021. “Korelacija problematičnih kredita i profitabilnosti bankarskih sektora zemalja Zapadnog Balkana”, Volume 2, broj 2, str.35, *Hrčak*, Sveučilište u Zagrebu, Zagreb (dostupno na web sajtu: <https://hrcak.srce.hr/file/389189>).
7. Erina, J., Lace, N. 2013. “Commercial banks profitability indicators: empirical evidence from Latvia”. *IBIMA Business Review*, Vol. 2013., Article ID 873515, DOI: 10.5171/2013.873515 p.p. 27-36. (dostupno na adresi linka: [DOI](#):

[10.5171/2013.873515https://ibimapublishing.com/articles/IBIMABR/2013/873515/873515.pdf](https://ibimapublishing.com/articles/IBIMABR/2013/873515/873515.pdf)

8. European commission 2021. “EU Candidate Countries, Potential candidates economic quarterly” (CCEQ), *Tehnical paper 052*, (dostupno na adresi linka: https://ec.europa.eu/info/sites/default/files/economy-finance/tp052_en.pdf).
9. European Commision. “2021 Economic Reform Programmes of Albania, Montenegro, North Macedonia, Serbia, Turkey, Bosnia and Herzegovina and Kosovo: The Commision’s Overview & Country Assessments”. *Institutional Paper 158*/ July 2021. (dostupno na: <https://www.lineministries.org/file/file/download?guid=c8adc732-e80b-4562-9185-d28bff8cbd06>).
10. EU Candidate Countries, “Potential candidates economic quarterly (CCEQ)”, *Tehnical paper 052*, 3rd Quarter 2021. i (dostupno na adresi linka: https://ec.europa.eu/info/sites/default/files/economy-finance/tp052_en.pdf).
11. Frisch, H. 1990. “Inflation: definition and measurement”. In *Theories of inflation* (2nd ed). Cambridge: Cambridge Univ. Press,p.p.10-29
12. Francesco, G., Enowbi, B. Michael. 2020. *The determinants of commercial banks’ profitability in the South-Eastern Europe region: a system GMM*, University Greenwech, MPRA, Paper (dostupno na adresi linka: https://gala.gre.ac.uk/id/eprint/30231/7/30231%20GUIDI_Determinants_of_Commercial_Banks_Profitability_In_South_Eastern_Europe_%28Draft%29_2020.pdf).
13. Gunter, D. 2020. Cee banking sector report 2020, *Raiffeisen bank*, (dostupno na adresi linka: <https://www.raiffeisenresearch.com/servlet/NoAuthLibraryServlet?action=viewDocument&encrypt=b0bc1dfb-a056-4e1e-95ea-11c305f117e5&mime=HTML&id=replaceme@bluematrix.com>).
14. Hack, M. & Nicholls. (June 2021). “Low Interest Rates and Bank Profitability – The International Experience So Far”. In: *BULLETIN*. Dostupno na: <https://www.rba.gov.au/publications/bulletin/2021/jun/pdf/low-interest-rates-and-bank-profitability-the-international-experience-so-far.pdf>
15. Iqbal, M., Molyneux, P., 2005. “Development of the Islamic Banking Model”. In: *Thirty Years of Islamic Banking*. Palgrave Macmillan Studies in Banking and Financial Institutions, London, UK: Palgrave Macmillan,p.p.18-35
16. Jeevitha, R., Binoy, M., Koka, K. S., June 2019. “Impact of inflation on bank’s profitability a stdy on select banks profitability”, *Journal of Emerging Technologies and Innovative Research*,Volume6, Issue 6, p.p. 30-44. (dostupno na adresi linka: <https://www.jetir.org/papers/JETIRCK06005.pdf>).
17. Kalaš, M. B.,Mitrović, V., Milenković, N., Andrašić, J. 2020. “The impact of macroeconomic determinantns on commercial bank profitability in central and southeastern European countries”, *Teme*, Univerzitet Niš, Vol.XLIV, N0.4, p.p. 1391-1409. <https://doi.org/10.22190/TEME190515082K> (dostupno na adresi linka: <http://teme2.junis.ni.ac.rs/index.php/TEME/article/download/1178/509>).
18. Kurtović, S., Siljković, B., Denić, N., Petković, D., Mladenović, S. S.,Mladenović, I., Milovancevic, M. 2018. “Exchange rate pass-through and

- Southeast European economies," *Physica A: Statistical Mechanics and its Applications*", Elsevier, vol. 503(C), p.p. 400. (dostupno na adresi linka: <https://isiarticles.com/bundles/Article/pre/pdf/106415.pdf>).
19. Klein, N. 2013. "Non-Performing Loans in CESEE; Determinants and impact on macroeconomic performance". *IMF Working Papers*, Volume 2013: Issue 072, p.p.1-26, doi:10.5089/9781484318522.001 (dostupno na adresi linka: <https://www.elibrary.imf.org/downloadpdf/journals/001/2013/072/001.2013.issue-072-en.pdf>)
20. Laker, J., October 1999., "Monitoring Financial System Stability, Reserve Bank of Australia", *Bulletin*,p.p.1-13 (dostupno na adresi linka: <https://www.rba.gov.au/publications/bulletin/1999/oct/pdf/bu-1099-1.pdf>)
21. Mortinnen, L., Poloni, P., Sandars, P.,Vesala, J. 2005. "Analyzing banking sector conditions: How to use macro-prudential indicators. Occasional Paper Series No. 26", *European Central Bank*, Frankfurt am Main, p.p.4-60. (dostupno na adresi linka: <https://www.ecb.europa.eu/pub/pdf/scrops/ecbocp26.pdf>).
22. Marjanović, D., Ivanović, L., decembar 2021. "Analiza glavnih makroekonomskih indikatora u funkciji stabilnosti zemalja Zapadnog Balkana", *Makroekonomkska stabilnost i unapređenje konkurentnosti zemalja Zapadnog Balkana*, Institut ekonomskih nauka, Beograd, str. 12 i 18.
23. Novičević, Č. B., Jemović, M., Milenović, J. 2021. Transparency of financial statements and comparative analysis of bank liquidity, solvency and profitability indicators in the Rebuplic of Serbia as an indicator of bank performance measurement, EMAN, 2021, Conference Proceedings, The 5th Conference on Economics and Management, Online virtual, str. 85-94 (dostupno na adresi linka: https://eman-conference.org/wp-content/uploads/2021/10/EMAN_2021-Proceedings-WEB.pdf).
24. Pejić, B.Mirjana.,Posedel,P.,Stojanović,Alen.2009."Determinante profitabilnosti banaka u Hrvatskoj", *Zbornik Ekonomskog fakulteta*, Volume 7, broj 1, Zagreb, str. 81-92 (dostupno na adresi linka: <https://hrcak.srce.hr/file/63586>).
25. Pasiouras, F.,Kosmidou, K. 2007. "Factors influencing the profitability of domestic and foreigncommercial banks in the European Union", *Research in International Business and Finance*, Volume 21, Issue 2, p.p. 222–237. (dostupno na adresi linka: <https://isiarticles.com/bundles/Article/pre/pdf/80031.pdf>)
26. Račić, Ž., Ercegovac, D.,Milić, D. 2021. "The impact of macroeconomic indicators on the business performance of financial institutions in the Republic of Serbia panel data analysis", *International Journal of Economic Practice and Policy*, Volume 18, Issue 1, Škola biznisa, Visoka poslovna škola Novi Sad, DOI (dostupno na adresi linka: <https://doi.org/10.5937/skolbiz1-33232> <https://aseestant.ceon.rs/index.php/skolbiz/article/view/33232/19435>).
27. Radević, B.,Kurtović,S.,Siljković, B. 2015. "The impact of macroeconomic indicators on brownfield nvestment in Serbia", *Facta universitatis*, Niš, Series: Economics and Organization Vol. 12, No 4, 2015, pp. 253 (dostupno na adresi linka: <http://casopisi.junis.ni.ac.rs/index.php/FUEconOrg/article/download/1382/1065>

28. Siljković, B., Barjaktarović, M., Denić, N. 2016. "Osiguranje depozita i ulaganja u obnovljive izvore energije u islamskom bankarstvu", *Ecologica*, N0 82, Naučno stručno društvo za zaštitu životne sredine Srbije, ISSN 0354-3285, str.371
29. Stefanović, N., Barjaktarović & Bataev. 2021. „Digitainability and Financial Performance: Evidence from the Serbian Banking Sector“. In: *Sustainability*, Issue 13. (dostupno na: file:///C:/Users/38164/Downloads/sustainability-13-13461%20(1).pdf).
30. Svrtinov, G. V., Kacarski, M. E., Paceskoski, V. 2021. "Banking Sector Performance During theCOVID-19 Crisis in the Republic of North Macedonia", *Journal of economics*, 6, Special Issue, Third international conference on business, economy and finance,ICBEF,Goce Delcev, University of Stip, Faculty of economics, p.p. 221-230 (dostupno na adresi linka: <https://eprints.udg.edu.mk/28359/1/Banking%20sector%20performance%20during%20the%20COVID-19%20crisis%20in%20the%20Republic%20of%20North%20Macedonia.pdf>
31. Tan, Y., Floros, C. 2012. "Bank Profitability and Inflation: The Case of China". *Journal of Economics Studies*, 39(6), p.p.675-696. (dostupno na adresi linka:<https://doi.org/10.1108/01443581211274610> <http://eprints.hud.ac.uk/id/eprint/17221/3/TanBankf.pdf>).

Datum prijema (Date received): 19.05.2022.

Datum prihvatanja (Date accepted): 12.09.2022.

PROFITABILITY OF THE BANKING SECTOR OF THE "OPEN BALKANS" ECONOMY IN THE PRE-COVID AND COVID PERIOD OF THE HEALTH CRISIS

Boris Siljković¹⁴, Nebojša Denić¹⁵, Edin Nikšić¹⁶

Abstract

The aim of this research is to examine the health of the financial and especially the banking system of the economies of the "Open Balkans" in the conditions before and during the COVID-19 crisis. The research monitors the influence of traditional determinants of profitability of the banking system (ROA and REA), which represent the most significant macroeconomic determinants, i.e., "external conditions", which affect the profitability of the banking sector, through the independent variables of GDP, inflation and unemployment. The primary goal of this work is to reach results that reveal the correlation of profitability of the banking sector between the dependent factors ROA - return on assets and REA - return on capital, as well as the influence of independent factors: a. real GDP growth, b. inflation, c. unemployment, d. bad loans-non-quality loans/total loans, i.e. macroeconomic variables in which the banking sector of the "Open Balkans" initiative operates.

Keywords: ROA and REA profitability, health crisis, economy, bad loans, unemployment.

JEL: G21

Introduction

The period before and during the health crisis caused by the Covid-19 pandemic resulted in different profitability of the banking sector of the observed economies of the "Open Balkans" - Serbia, North Macedonia and Albania. As will be emphasized in further research, the most significant factors for the profitability of internal type banks include loan growth, deposit growth, the ratio of non-performing loans to total loans, i.e. analysis of non-performing loans (NPL) and the capital adequacy ratio. On the other hand, the most important determinants of the bank's profitability, which its management cannot influence, are described as "external determinants" and they refer

¹⁴Professor of Vocational Studies, PhD Boris Siljković, Academy of Vocational Studies of Kosovo Metohija-Department Peć in Leposavić, Dositeja Obradovića bb, 38218 Leposavić, Serbia, E-mail: boris.siljkovic@yahoo.com

¹⁵Associate Professor PhD Nebojša Denić, University of Prishtina with temporary headquarters in Kosovska Mitrovica, Faculty of Science and Mathematics, Lole Ribara 29, 38220 Kosovska Mitrovica, Serbia, E-mail: denicnebojsa@gmail.com

¹⁶Master's student Edin Nikšić, University of Prishtina with temporary headquarters in Kosovska Mitrovica, Faculty of Economics, Kolašinska 156, Kosovska Mitrovica, Serbia, E-mail: edinniksic@gmil.com

to the environment in which the bank operates. In this regard, external determinants include: economic growth expressed through real GDP growth, unemployment and inflation. These determinants during the period of the Covid-19 pandemic had a different statistical impact on the profitability of banks, which we will confirm through further research in the continuation of this paper.

Literature review

Most academic research is focused on internal factors and alternative measures of banking sector profitability. The two most commonly used are: through return on assets (ROA) and return on equity (REA) (Iqbal, Molyneux, 2005). In his 1999 study, Laker states that macroeconomic variables (gross domestic product, interest rates) are positively correlated with bank income growth. The research conducted in 2009 by Pejić et al. shows that the profitability of banks depends on macroeconomic variables and that it has a certain amount of positive effect on profitability. In this way, we arrive at the claim that bank profitability is actually a prerequisite for economic work (Athanasoglou et al., 2008). Also, in previous researches, the claim according to which the increase in core inflation has a significant negative causal effect on the profitability of banks is highlighted, which further leads to a delayed effect through the return on assets. (Tan, Floros, 2012). Likewise, inflation has positive effects on liabilities and negative effects on the asset side (Frisch, 1990). Jeevitha et al. (2009) present the opposite view that inflation has no effect on return on assets (ROA), return on equity (ROE) and net profit of selected public sector banks.

Kalash, Mitrović, Milenković and Andrašić (2021) point to a significant impact of GDP and inflation on profitability indicators of banks in the countries of the "Open Balkans" and Southeast Europe. Namely, a 1% increase in GDP and inflation increase ROA by 0.47% and 0.48%, respectively, with inflation having a greater impact on ROA and ROE than GDP. The random effect model results show that a 1% increase in GDP and inflation increase ROE by 0.49% and 0.42%.

There are also points of view according to which GDP growth and inflation affect the increase in the profitability of the financial sector, i.e. reduce their liquidity (Rai, Ercegovac, Milić, 2021), while in many studies, non-quality loans are specifically analyzed, which are expressed through an increase in non-quality loans, and which indicate that a certain number of business entities that have a cultural defect in servicing their credit debt simply do not repay their loans (Morttinien et al.). So Morttinien et al. (2005) argue that the total value of the bank decreases as a result of losses incurred due to debt write-offs.

Comparing our results and the results for the banking sectors in the countries of the European Union (EU), starting from the financial crisis of 2007, shows that the ratio of loans and deposits has a positive effect on the profitability of banks in EU countries, but a negative one on Serbian banks (Pasiouras,

Kosmidou, 2007). This result is supported by the fact that high exposure to credit risk is the main problem of banks in which Serbia operates. Moreover, a comparison of foreign banks in Serbia and foreign banks in EU countries indicates that the main difference in the factors affecting the bank's profitability is related to the adequacy of capitalization.

Research methodology

The analysis of the influence of the determinants of profitability of the banking sector required the use of scientific methods for research, and above all, the method of analyzing the content of theoretical-empirical studies related to monitoring the profitability of the banking sector. The profitability of the banking sector will be investigated through the traditional profitability indicators ROA and REA, which are dependent variables on the example of the so-called economy. open, western Balkans. The method and techniques of descriptive analysis were also confirmed through the category of influence on the profitability of the banking sector of the mentioned economies, primarily through the influence of macroeconomic indicators that include the rate of economic growth, inflation and unemployment. When evaluating the profitability of the economies of the "Open Balkans", the time period that includes the time before the beginning and during the duration of the Covid-19 crisis, which refers to the environment of the banking sector of the economies of the "Open Balkans", is monitored.

Methods and techniques of descriptive analysis of banking sector profitability were used for data tabulation. Graphic displays were used for trend analysis, structural relations between them, comparative analysis with some of the financial indicators achieved by banks in the period 2018-2021. years. Finally, syntheses were used in order to summarize, through quantitative and qualitative presentation of the obtained results. With this, we measured the effects of financial indicators, with a focus on the economic indicators that affect the profitability of the banking sector of the observed economies of the " Open Balkans", from two periods - before the health crisis of Covid-19 (2018-2019) and during the health crisis caused by Covid-19 pandemic (2020-2021).

Research results and discussions

The concept of profitability and efficiency of the banking sector can be viewed through the views of certain authors who argued that the two most important coefficients of profitability are dependent variables, ROA and ROE. ROE is the most important indicator for the bank's shareholders, while ROA shows the efficiency of management and bank employees in management total assets, and in the context of achieving net profit after taxation, (Bakić, 2020). Experience has shown that ROA is considered the best measure because it is a more accurate measure for calculating profitability. ROA recognizes the fact that profitability is the ratio between own and borrowed capital (Novićević, Jemović, Milenović, 2021). For large banks, the typical

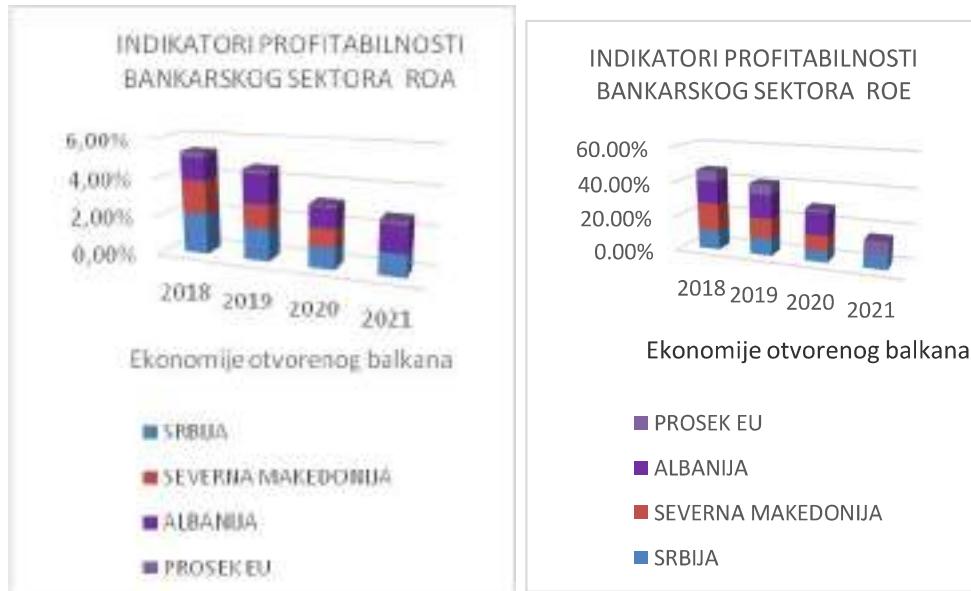
ROA is below 1%, while for medium and small banks it is above 1%. At the same time, banks that more abundantly use other sources of financing are generally closer to the upper limit, while more capital-intensive banks are closer to the lower limit. When we talk about the member economies of the "Open Balkans" initiative (Table 1), it is noticeable that the banks according to the coefficient of ROE and REA for 2019-2020. years remained profitable. In 2020, banks in Serbia recorded a decline in both return on assets (ROA) and return on equity (ROE) (ROA from 1.7% in 2019 to 1.06% in 2020, and ROE decreased from 9.8% in 2019 to 6.5% in 2020). If we look at the profitability of European banks, we can come to the conclusion that even before the start of the Covid-19 virus pandemic, it was very low, mainly due to increased impairments of financial assets (In the EU, ROE bottomed out at 1.8% in 2020, which is more than three times lower than the 5.8% recorded towards the end of 2019). The ROE of European banks was 5.8% in 2019, which represents a decrease from 6.1% recorded in 2018. Despite the decline, due to more moderate growth in several countries compared to 2018, it is still at similar levels to previous years, although still far from the 10.6% registered at the beginning of the great financial crisis of 2007. We have an evident recovery of banks in the EU expressed through the ROE coefficient in 2021 with 7.4%, as a result of the reduction of pandemic pressures in 2021. If we measure the values of the ROA coefficient, it was 0.35% in the period before the beginning of the last financial crisis (2005-2007), while in the period before the Covid-19 pandemic it was even lower (0.26%), and in the period of the pandemic (2020-2021) was about 0.15% (Hack, Nicholls, 2021) The other two countries, members of the "Open Balkans" initiative, had better profitability indicators than Serbia, through a higher ROE coefficient in 2018. Macedonia had an ROE coefficient of 16.0%, and Albania had an ROE coefficient of 13.0%. If we compare all three coefficients of ROE in all three economies of the "Open Balkans", Albania had the best coefficient in the pre-Covid-19 period. The ROE coefficient in Macedonia decreased from 11.9% in 2019 to 8.5% in 2020, while in Albania it decreased to 12.8%. Serbia had a lower ROE coefficient than the other two members of the "Open Balkans", and it amounted to 6.5%. What is important today for the member banks of the "Open Balkans" is that they are no longer significantly behind the EU banks. The ROA coefficient, in the period before 2014, ranged from 1% to 2%. The average ROA of traditional banks in Serbia in the period 2011-2020 was 0.18%, while ROE was 0.99%. Between 2017 and 2019, the ROA in Serbia was 0.26%, and in 2020 it was slightly less than 0.15%. In the EU, the average ROA of traditional banks in the period 2011–2020. year, was 0.63%, and ROE in the same period 2011-2020. year 12.39%. This is a clear indicator of how far the profitability of the traditional banks of the "Open Balkan" economy was compared to EU banks (Stefanović, Barjaktarović, & Bataev, 2021).

Table 1. Banking sector profitability indicators ROA and ROE economy of the "Open Balkans" and the economy of the EU in the period 2018 - July 2021.

Economy open the Balkans and the EU	Indicators of profitability of the banking sector							
	ROA				REA			
	in 2018	in 2019	in 2020	in 2021	in 2018	in 2019	in 2020	in 2021
Serbia	2.1	1.7	1.06	1.17	11.3	9.8	6.5	8.0
North Macedonia	1.73	1.2	0.98	/	16.0	11.7	8.5	/
Albania	1.2	1.5	1.0	1.4	13.0	13.5	12.8	/
EU average	2017 - 2019 0.26% 2020 - 2021 0.15%				6.1	5.8	1.7	7.4

Source: Central banks of the economies of the "Open Balkans" and the ECB

Graph 1. ROA and REA coefficient in the economies of the "Open Balkans"



What economic practice in banks has proven is that the ratio of non-performing loans in Serbia to total loans decreased to 3.5% thanks to the implementation of the strategy for solving problem loans and the strategy of the National Bank of Serbia (NBS). In order to prevent the emergence of new problem loans, in December 2018, the Government of the Republic of Serbia adopted the Program for solving problem loans for the period 2018-2020. (National Bank of Serbia, 2019) If we compare the end of 2020 and the beginning of 2021 in the supervisory area of the ECB, problem loans of banks in the EU under the direct supervision of the ECB amounted to 2.5%, which was the lowest level in the last ten years. During the Covid-19 health crisis, loan repayment moratoriums introduced by almost all EU countries, as well as guarantee schemes, had a significant impact on NPL-non-performing loans in the EU. In the

period 2016–2017. year, it is noticeable that Serbia had a high percentage of poor quality loans, in amounts of around 10-20% (Dragosavac, Gačević, 2021).

Table 2: Presentation of NPL-non-performing loans of the economies of the "Open Balkans" (in %).

Country	in 2016	in 2017	in 2018	in 2019	in 2020	in 2021
Albania	18.2	18.3	5.0	8.4	8.1	7.1
North Macedonia	10.8	10.8	5.0	4.6	3.6	3.1
Serbia	21.6	19.5	5.6	4.6	3.7	3.5

Source: Data taken from the websites of the central banks of the observed economies

Graph 2. Presentation of NPL-non-performing loans of the economies of the "Open Balkans" (in %)



The banking sector of Serbia is adequately capitalized CAD (%) (regulatory capital according to risk-weighted assets) in comparison with the economies of the "Open Balkans", so that at the end of the first quarter of 2021, the capital adequacy rate of the banking sector in Serbia was more than adequately capitalized, with a mean value of 22.3%. The regulatory level of capital adequacy based on the Basel standards was harmonized with the regulations of the Basel standards, which amounted to 8% (according to domestic regulations, it was previously 12%). Therefore, the current capital adequacy ratio prescribed by the NBS is significantly above the minimum CAR capital adequacy rate (%), which was lower in North Macedonia (16.7% in 2020, 16.3% in 2019, 16.5 % in 2018, and 15.7% in 2017). Capital adequacy is almost twice as high during the entire analyzed period than the legal minimum (8%), which may imply that banks are more rigorous in looking at potential products. In addition, fixed capital occupies 80–90% of the total of capital, which signals quality capital in the

banking system of North Macedonia. In Albania, the capital adequacy rate is slightly higher than in North Macedonia, with a rate that is above the regulatory conditions in the observed period in the banking sector of Albania (18.3% in 2020, 18.28% in 2019, 18.24 in 2018, and 16.60% in 2017). Certainly, the measures of the central bank of Macedonia through two moratoriums enabled the first postponement of loan collection for more than half of the population sectors that accounted for the growth of loans in 2020. In practice, this meant raising the non-collectible status of those loans from 90 to 150 days. Specifically, these measures helped to strengthen credit growth and curb the ratio of non-performing loans, so that at the end of 2020, the ratio of problem loans fell to 3.6%, and in the middle of 2021 to 3.1% in the Republic of North Macedonia.

The Republic of Albania had deposit growth accelerating to 5.8% in 2020. Of these deposits, foreign currency deposits dominate. Total loans recorded a growth of 6.1%, in contrast to the negative growth of -1.7% that marked 2018. Banks began to ease credit standards in 2020 as credit risks through non-performing loans became lower, but they still maintained strict conditions for businesses. Nevertheless, Albania still has a significant part of inherited problematic loans (8.1%). Although non-quality loans in the economies of the "Open Balkans" are still increased, compared to EU standards, their coverage, ranging from 59% (Serbia) to 73% (North Macedonia), exceeds the average of the European Union (45%), which reflects the relatively lower quality of coverage of non-performing loans compared to EU economies. Thanks to all the activities undertaken by the Government of the Republic of Serbia and the National Bank of Serbia in the previous 10 years, the stability of the banking sector in the Republic of Serbia has been preserved and strengthened. The best confirmation of the aforementioned stability, and the guarantor of adequate protection of depositors' interests, is the indicator capital adequacy, which has been above 22% for the banking sector for years, which is far above the regulatory minimum of 8% and the never-lower level of the share of problem loans of 3.5% according to the last available data. Decreasing rates of return on equity from around 10% to around 6.5% in 2020 is confirmation that the banking sector shared the burden of the crisis with the economy and citizens.

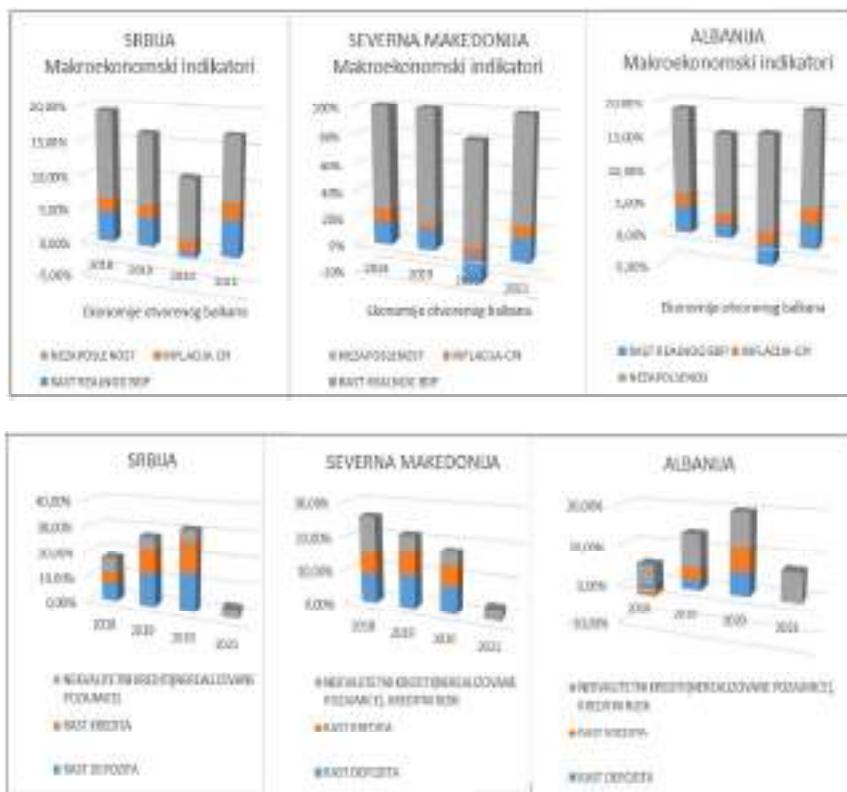
Table 3. Financial indicators of profitability of the banking sector of the economies of the "Open Balkans" in the period 2018-2021. years.

Economy	Financial indicators											
	Growth deposit				Growth credit				Poor quality loans (unrealized loans), ie credit risk			
Serbia	2018 in.	2019 in.	2020 in.	2021 in.	2018 in.	2019 in.	2020 in.	2021 in.	2018 in.	2019 in.	2020 in.	2021 in.
	7.4	12.9	15.0	-	4.3	9.7	12.5	-	5.6	4.6	3.7	3.5

	in	2021	in	2021	in	2021	in	2021	in	2021	in	2021
Northern Macedonia	8.6	9.6	7.8	-	6.6	7.2	6.4	-	10.8	4.6	3.6	3.1
Albania	-1.2	2.5	5.8	-	-1.7	3.0	6.1	-	5.0	8.4	8.1	7.1

Source EU Candidate Countries, 2021. Potential candidates economic quarterly (CCEQ), Technical paper 052, https://ec.europa.eu/info/sites/default/files/economy-finance/tp052_en.pdf

Graph 3 Financial indicators of profitability of the banking sector of the economies of the so-called open Balkans 2018-2021. years.



Until now, researches have rarely considered unemployment as an important economic factor for the functioning of the financial system and the profitability of the banking sector. However, unemployment is a very important factor. The growth of unemployment slows down the economic growth of the economy, that is GDP, and causes a loss of ability to repay, which directly affects profitability ([Marjanović, Ivanović, 2021](#)). Serbia has the best indicators of unemployment among the economies of the "Open Balkans" at the historically lowest level of 9.0% in 2020 (before the beginning of the Covid-19 pandemic, in 2019, it was 10.4%), which will help mitigate the negative trends that could affect the profitability of the banking

sector due to the Covid-19 health crisis in the short term. Macedonia has the weakest unemployment indicators (17.3% in 2019 and 16.4% in 2020, with a projection of 15.8% in 2021). Albania has a slightly better performance in terms of unemployment than North Macedonia. In Albania, the unemployment rate was 12.0% in 2019, 14.5% in 2020, while the projection for 2021 was 13.9%. The unemployment rate in the EU in the Covid-19 period, in September 2021, was 6.7 %, and in the Eurozone 7.4% (Data taken from the website of the European Central Bank).

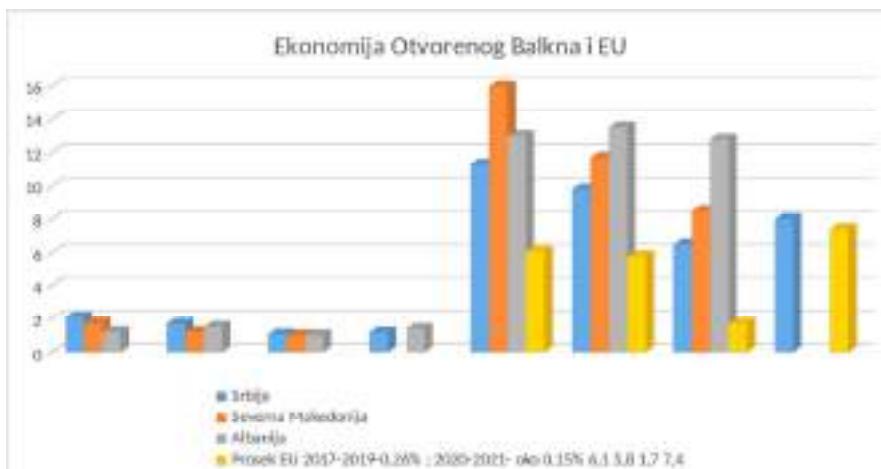
Table 4: Macroeconomic determinants of profitability of the banking sector in 2018-2021

Economy open Balkans	Macroeconomic and financial indicators											
	Real GDP growth				Inflation growth				Unemployment growth			
	in 2018	in 2019	in 2020	in 2021	in 2018	in 2019	in 2020	in 2021	in 2018	in 2019	in 2020	in 2021
Serbia	4.5	4.2	-1.0	5.3	2.0	1.8	1.6	2.4	12.7	10.4	9.0	9.3
North Macedonia	2.9	3.2	-4.3	3.7	1.5	0.8	1.2	1.7	12.7	17.3	16.4	15.8
Albania	4.1	2.2	-3.3	3.7	2.0	1.4	1.6	2.1	12.8	12.0	14.5	13.9

Source: [European commission 2021](#). EU Candidate Countries, Potential candidates economic quarterly (CCEQ), Technical paper 052.

Note: ECFIN, forecast for 2021 published in May 2021.

Graph 4 Macroeconomic determinants of the profitability of the banking sector in 2018 - estimate in 2021



Real GDP growth should be included in the key indicator because it illustrates the real growth rate of economic activity in relation to produced goods and services. Its positive or negative value plays an important role in the investor's decision-making process (Radević, Kurtović, Siljković, 2015). Hence, with poor economic growth, i.e. lower GDP, less is spent, even less is invested, and the solvency of existing clients

decreases, which also affects the decline in banks' profitability. The opposite situation is experienced by GDP growth. Also, most of the research that was available to us, which related to the level of economic development of economies similar to Serbia, showed that there is a certain level of positive influence of macroeconomic factors on the profitability of banks, predominantly GDP. More recent research has focused on macroeconomic factors that affect transmission: exchange rate variability, inflation, monopolistic competition, etc. (Kurtović et al., 2018). Hence, the growth of the inflation rate through the CPI is a very significant macroeconomic variable whose transferable impact on the bank's profitability is important to analyze. Favorable circumstances prevailed in the pre-Covid-19 and Covid-19 period 2018-2021. where we had a low rate of inflation and a high rate of real growth in the economies of the "Open Balkans" (European Economy, 2021).

Conclusion

Pressures to reduce profitability and the banking sector of all three economies of the "Open Balkans" will continue even when the global economy begins to recover from the consequences caused by the Covid-19 pandemic. This fact is additionally burdened by the beginning of the energy crisis, along with the rise in inflation due to the speculative rise in prices on the global market. In terms of the number of banks at the level of one economy in all three members of the "Open Balkans" initiative, Serbia leads the way, while the strongest influence on return on assets ROA was recorded through the size of the bank and through the degree of capital adequacy. True, we can tentatively say that size influences profitability, however, as time goes by, the influence of size on banks' profitability becomes less and less important. However, there is no unanimous opinion in the literature on how the size of the bank has a positive effect on its profitability. The degree of capital adequacy is a synonym for the financial strength of the banking sector and is obtained by putting the ratio of core capital to risk assets, which in Serbia, compared to the economies of the "Open Balkans", is better and in 2020 was slightly above 23% (for in contrast to Macedonia, which had slightly above 16% and Albania slightly above 18%). According to some studies, the proportional capital adequacy of the economies of the open Balkans and statistically significant capital adequacy at the level of development of the mentioned economies is at the level of 10% and then has a positive correlation with the profitability of banks. In the case of economies, the profitability of traditional banks of the economies of the "Open Balkans" according to this criterion, it is about fairly well capitalized banking sectors in all three economies and in the covid and pre-covid period. The capital adequacy rate in some intervals in all three economies had a decreasing rate as a result of increased credit risk, but also risky assets, which happened during the crisis years in the past. After all, the unwritten rule is that permanent resources expressed through the basic capital should bear all the risks and losses in the business, including non-performing loans (NPLs).

After the conducted research, the general conclusion is that as the level of NPL increases, the level of ROA decreases and vice versa. Successful

collection of receivables due to the write-off of non-performing loans and other monitoring measures and the growth of credit activity, which is proven in the concrete situation through the decline of non-performing loans in the pre-Covid-19 period, and especially in the Covid-19 period in the economies of the "Open Balkans", 2020-2021. year, it directly affects the profitability of banks, both through the reduction of provisions for losses, through other incomes, which improves the quality of the bank's portfolio in general.

The sum of NPL-non-performing loans observed so far has been decreasing and is in decline in the period 2018-2021 in Serbia, North Macedonia and Albania. The ratio of non-performing loans in Albania is twice as high as the level of NPLs compared to Serbia and Macedonia. Indicators of so-called non-performing loans reached multi-year lows in the economies of the "Open Balkans" in the Covid-19 period, 2020-2021. years. Of particular importance is the fact that the equity capital of banks in these economies is foreign-owned, and therefore banks are less sensitive to extraordinary increases in non-performing loans than their competitors in non-EU countries, which includes the results of their higher-quality core capital, which implies better defense against non-performing loans (NPL).

Literature

1. Athanasoglou, PP, Brissimis, N., Delis, MD 2008. "Bank-specific, industry-specific and macroeconomic determinants of bank profitability". *Journal of international Financial Markets, Institutions and Money*, Elsevier, vol. 18(2), p. 121-136, (available at the link address: <https://mpra.ub.uni-muenchen.de/32026/1/Bank-specific.pdf>)
2. Alihodžić, A. 2015. "Interdependence of the performance of the banking and real sector of the Republic of Serbia", *Banking*, Association of Serbian Banks, Belgrade, number 2, p. 52 (available at the link address: <https://www.ubs-asb.com/Portals/0/Casopis/2015/2/UBS-Bankarstvo-2-2015-Alihodzic.pdf>).
3. Bakić, S. 2020. "Position of banks from the aspect of analysis of financial indicators", *Auditor*, Volume 6, Number 2, Center for Economic and Financial Research, Belgrade, p. 45 doi: 10.5937/Oditor2002039B (available at the link address: <http://www.cefi.edu.rs/wp-content/uploads/2020/08/ODITOR-2-2020-1-39-61.pdf>).
4. Cocris, V., Nucu, E. 2013. "Monetary policy and financial stability empirical records from Central and Eastern European countries", *Baltic Journal of Economics* 13 (1). ISSN: 1406-099X (Print) 2334-4385 (Online) pp75-98. (available at the link address: <https://www.tandfonline.com/doi/pdf/10.1080/1406099X.2013.10840527?needAccess=true>).
5. Central, Eastern and South-Eastern Europe -Economics regional studies, (CESEE), June 2021, Bank Lending Survey, *European investment bank*, (available at the link address: https://www.eib.org/attachments/efs/economics_cesee_bls_2021_h1_en.pdf).

6. Dragosavac, M., Gačević, M. 2021. "Correlation of problem loans and profitability of the banking sectors of the Western Balkan countries", Volume 2, number 2, p.35, *Hrčak*, University of Zagreb, Zagreb (available on the website: <https://hrcak.srce.hr/file/389189>).
7. Erina, J., Lace, N. 2013. "Commercial banks profitability indicators: empirical evidence from Latvia". *IBIMA Business Review*, Vol. 2013, Article ID 873515, DOI: 10.5171/2013.873515 pp. 27-36. (available at the link address: [DOI: 10.5171/2013.873515](#) <https://ibimapublishing.com/articles/IBIMABR/2013/873515/873515.pdf>
8. European commission 2021. "EU Candidate Countries, Potential candidates economic quarterly" (CCEQ), *Technical paper 052*, (available at the link address: https://ec.europa.eu/info/sites/default/files/economy-finance/tp052_en.pdf).
9. European Commission. " 2021 Economic Reform Programs of Albania, Montenegro, North Macedonia, Serbia, Turkey, Bosnia and Herzegovina and Kosovo: The Commission's Overview & Country Assessments". *Institutional Paper 158/ July 2021* (available at: <https://www.lineministries.org/file/file/download?guid=c8adc732-e80b-4562-9185-d28bff8cbd06>).
10. EU Candidate Countries, "Potential candidates economic quarterly (CCEQ)", *Technical paper 052*, 3rd Quarter 2021 and (available at the link address: https://ec.europa.eu/info/sites/default/files/economy-finance/tp052_en.pdf).
11. Frisch, H. 1990. "Inflation: definition and measurement". In *Theories of inflation* (2nd ed). Cambridge: Cambridge Univ. Press, pp10-29
12. Francesco, G., Enowbi, B. Michael. 2020. *The determinants of commercial banks' profitability in the South-Eastern Europe region: a system GMM*, University Greenwech, MPRA, Paper (available at the link address: https://gala.gre.ac.uk/id/eprint/30231/7/30231%20GUIDI_Determinants_of_Commercial_Banks_Profitability_In_South_Eastern_Europe_%28Draft%29_2020.pdf).
13. Gunter, D. 2020. Cee banking sector report 2020, *Raiffeisen bank*, (available at the link address: <https://www.raiffeisenresearch.com/servlet/NoAuthLibraryServlet?action=viewDocument&encrypt=b0bc1dfb-a056-4e1e-95ea-11c305f117e5&mime=HTML&id=replaceme@bluematrix.com>).
14. Hack, M. & Nicholls. (June 2021). "Low Interest Rates and Bank Profitability - The International Experience So Far". In: *BULLETIN*. Available at: <https://www.rba.gov.au/publications/bulletin/2021/jun/pdf/low-interest-rates-and-bank-profitability-the-international-experience-so-far.pdf>
15. Iqbal, M., Molyneux, P., 2005. "Development of the Islamic Banking Model". In: *Thirty Years of Islamic Banking*. Palgrave Macmillan Studies in Banking and Financial Institutions, London, UK: Palgrave Macmillan, pp18-35
16. Jeevitha, R., Binoy, M., Koka, KS, June 2019. "Impact of inflation on bank's profitability a steady on select banks profitability", *Journal of Emerging Technologies and Innovative Research*, Volume 6, Issue 6, pp 30- 44. (available at the link address: <https://www.jetir.org/papers/JETIRCK06005.pdf>).

17. Kalaš, MB, Mitrović, V., Milenković, N., Andrašić, J. 2020. "The impact of macroeconomic determinants on commercial bank profitability in central and southeastern European countries", *Topics*, University of Niš, Vol.XLIV, N0.4, pp. 1391-1409. <https://doi.org/10.22190/TEME190515082K> (available at the link address: <http://teme2.junis.ni.ac.rs/index.php/TEME/article/download/1178/509>).
18. Kurtović, S., Siljković, B., Denić, N., Petković, D., Mladenović, SS, Mladenović, I., Milovancevic, M. 2018. "Exchange rate pass-through and Southeast European economies , " *Physica A: Statistical Mechanics and its Applications* ", Elsevier, vol. 503(C), pp 400. (available at the link address: <https://isiarticles.com/bundles/Article/pre/pdf/106415.pdf>).
19. Klein, N. 2013. "Non-Performing Loans in CESEE; Determinants and impact on macroeconomic performance". *IMF Working Papers*, Volume 2013: Issue 072 , pp1-26, doi:10.5089/9781484318522.001 (available at the link address: <https://www.elibrary.imf.org/downloadpdf/journals/001/2013/072/001.2013.issue-072-en.pdf>)
20. Laker, J., October 1999., "Monitoring Financial System Stability, Reserve Bank of Australia", *Bulletin*, pp1-13 (available at the link address: <https://www.rba.gov.au/publications/bulletin/1999/oct/pdf/bu-1099-1.pdf>)
21. Morttinen, L., Poloni, P., Sandars, P., Vesala, J. 2005. "Analyzing banking sector conditions: How to use macro-prudential indicators. Occasional Paper Series No. 26", *European Central Bank*, Frankfurt am Main, pp4-60. (available at the link address: <https://www.ecb.europa.eu/pub/pdf/scrops/ecbocp26.pdf>).
22. Marjanović, D., Ivanović, L., December 2021. "Analysis of the main macroeconomic indicators in the function of the stability of the countries of the Western Balkans", *Macroeconomic stability and improvement of the competitiveness of the countries of the Western Balkans*, Institute of Economic Sciences, Belgrade, p. 12 and 18.
23. Novičević, Č. B., Jemović, M., Milenović, J. 2021. Transparency of financial statements and comparative analysis of bank liquidity, solvency and profitability indicators in the Republic of Serbia as an indicator of bank performance measurement, EMAN, 2021, Conference Proceedings, The 5th Conference on Economics and Management, Online virtual, p. 85-94 (available at the link address: https://eman-conference.org/wp-content/uploads/2021/10/EMAN_2021-Proceedings-WEB.pdf).
24. Pejić, B. Mirjana., Posedel, P., Stojanović, Alen. 2009. "Determinants of bank profitability in Croatia", *Proceedings of the Faculty of Economics*, Volume 7, number 1, Zagreb, p. 81-92 (available at the link address: <https://hrcak.srce.hr/file/63586>).
25. Pasiouras, F., Kosmidou, K. 2007. "Factors influencing the profitability of domestic and foreign commercial banks in the European Union", *Research in International Business and Finance* , Volume 21, Issue 2 , pp 222–237. (available at the link address: <https://isiarticles.com/bundles/Article/pre/pdf/80031.pdf>)
26. Račić, Ž., Ercegovac, D., Milić, D. 2021. "The impact of macroeconomic indicators on the business performance of financial institutions in the Republic of Serbia panel data analysis", *International Journal of Economic Practice and Policy*,

- Volume 18, Issue 1, School of Business, College of Business Novi Sad, DOI (available at the link address: <https://doi.org/10.5937/skolbiz1-33232> <https://aseestant.ceon.rs/index.php/skolbiz/article/view/33232/19435>).
27. Radević, B., Kurtović, S., Siljković, B. 2015. "The impact of macroeconomic indicators on brownfield investment in Serbia", *Facta universitatis*, Niš, Series: Economics and Organization Vol. 12, No. 4, 2015, pp. 253 (available at the link address: <http://casopisi.junis.ni.ac.rs/index.php/FUEconOrg/article/download/1382/1065>
28. Siljković, B., Barjaktarović, M., Denić, N. 2016. "Deposit insurance and investments in renewable energy sources in Islamic banking", *Ecologica*, N0 82, Scientific professional society for environmental protection of Serbia, ISSN 0354-3285, p.371
29. Stefanović, N., Barjaktarović & Bataev. 2021. "Digitainability and Financial Performance: Evidence from the Serbian Banking Sector". In: *Sustainability*, Issue 13. (available at: file:///C:/Users/38164/Downloads/sustainability-13-13461%20(1).pdf).
30. Svrtinov, GV, Kacarski, ME, Paceskoski, V. 2021. "Banking Sector Performance During the COVID-19 Crisis in the Republic of North Macedonia", *Journal of economics*, 6, Special Issue, Third international conference on business, economy and finance,ICBEF,Goce Delcev, University of Stip, Faculty of economics, pp 221-230 (available at the link address: <https://eprints.ugd.edu.mk/28359/1/Banking%20sector%20performance%20during%20the%20COVID-19%20crisis%20in%20the%20Republic%20of%20North%20Macedonia.pdf>
31. Tan, Y., Floros, C. 2012. "Bank Profitability and Inflation: The Case of China". *Journal of Economics Studies*, 39(6), pp675-696. (available at the link address: <https://doi.org/10.1108/01443581211274610> <http://eprints.hud.ac.uk/id/eprint/17221/3/TanBankf.pdf>).

Datum prijema (Date received): 19.05.2022.

Datum prihvatanja (Date accepted): 12.09.2022.