

DINAMIKA SISTEMSKOG ZNAČAJA BANAKA NA TRŽIŠTU REPUBLIKE SRBIJE: ANALIZA KLASTERSKE MIGRACIJE I STRUKTURNOG PRILAGOĐAVANJA

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Apstrakt: Predmet ovog rada je analiza strukturne transformacije i strateškog pozicioniranja banaka u Republici Srbiji u periodu od 2017. do 2024. godine. Osnovni cilj istraživanja je naučna analiza dinamike bankarskog sektora primenom metodologije strateških grupa, kako bi se identifikovale ključne migracije između tržišnih kvadranta i ocenio stepen strukturnog prilagođavanja sektora na makroekonomske šokove. Metodologija obuhvata deskriptivnu statistiku, komparativnu analizu i vizuelizaciju na dvodimenzionalnoj matrici, sa fokusom na uzorak od 11 banaka. Rezultati istraživanja potvrđuju da je intenzivan proces konsolidacije doveo do značajnog ukupnjavanja tržišta, pri čemu je prosečno tržišno učešće u ukupnoj aktivni vodećih banaka poraslo sa 5,49% na 8,38%. Analiza pokazuje visok stepen otpornosti sektora, koji je zadržao primarnu funkciju kreditiranja privrede i stanovništva sa udelom kredita iznad 60%. Utvrđeno je da je pad profitabilnosti (ROA) i kapitalne baze (E/A) tokom krizne 2020. godine bio privremenog karaktera, nakon čega je usledila stabilizacija performansi na zdravim osnovama.

Ključne reči: konsolidacija tržišta, bankarski sektor Srbije, finansijska stabilnost, klaster analiza, strateške grupe

JEL klasifikacija: G21, G34, G01

Uvod

Savremeni bankarski sistem Republike Srbije u periodu od 2017. do 2024. godine predstavlja primer duboke strukturne transformacije i strateškog prilagođavanja. Ovaj period obeležen je intenzivnim procesom konsolidacije, gde je tržište evoluiralo iz stanja umerene fragmentacije ka visoko koncentrisanom ambijentu. Glavni pokretači ovih promena bili su talasi akvizicija vodećih bankarskih grupacija, digitalna transformacija i neophodnost povećanja operativne efikasnosti u uslovima globalnih neizvesnosti, kao i potreba za očuvanjem stabilnosti u uslovima globalnih ekonomskih šokova.

Tokom posmatranog perioda, sektor se suočio sa heterogenim izazovima – od perioda niskih kamatnih stopa, preko globalne zdravstvene krize 2020. godine, do aktuelne restriktivne monetarne politike. Kroz analizu ključnih indikatora poput profitabilnosti ROA (engl. Return on Asset), strukture aktive kroz udeo kredita i stabilnosti kapitalne baze E/A (engl. Equity to Assets), rad nastoji da dokumentuje kako su se ovi faktori odrazili na konkurentsku poziciju banaka. Poseban značaj pridaje se činjenici da je proces ukрупnjavanja doveo do rasta prosečnog tržišnog učešća pojedinih banaka, što jasno ukazuje na formiranje snažnih tržišnih lidera. Fokus rada je na analizi promena i njihovog uticaja na performanse i strateško pozicioniranje banaka, sa posebnim osvrtom na otpornost sektora tokom pandemijske 2020. godine.

Predmet istraživanja je analiza finansijskih performansi i tržišne pozicije banaka u Srbiji. Osnovni cilj istraživanja je naučna analiza dinamike strateškog pozicioniranja banaka u Srbiji primenom metodologije strateških grupa. Rad teži da klasifikuje banke na bazi njihove tržišne snage i performansi kako bi se identifikovale ključne migracije između strateških kvadrata. Dodatni cilj je utvrđivanje stepena otpornosti sektora na bazi kretanja indikatora profitabilnosti i kvaliteta aktive u uslovima makroekonomske neizvesnosti.

Na bazi postavljenih ciljeva, definisane su sledeće hipoteze:

H1: Proces strukturne konsolidacije bankarskog tržišta u Srbiji doveo je do značajnog rasta prosečnog tržišnog učešća vodećih banaka i smanjenja ukupne fragmentacije sektora.

H2: Bankarski sektor pokazuje visok stepen rezistentnosti u domenu svoje osnovne funkcije - kreditiranja privrede i stanovništva, održavajući stabilnost tradicionalnog modela kreditiranja uprkos uticajima cikličnih eksternih šokova.

H3: Pad stope prinosa na aktivu (ROA) i učešća sopstvenog kapitala (E/A) tokom krizne 2020. godine bio je privremenog karaktera, dok dugoročni trendovi ukazuju na visoku adaptivnu sposobnost sektora da stabilizuje performanse na održivim osnovama.

Za potrebe rada korišćen je kombinovani pristup koji obuhvata:

1. Deskriptivnu statističku analizu koja je primenjena na ključne indikatore (ROA, E/A, udeo kredita) kako bi se utvrdili prosečni trendovi na nivou celog sektora;
2. Komparativna analiza kako bi se uporedila stanja iz 2017. godine i stanja iz 2024. godine, radi identifikacije dugoročnih promena;
3. Vizuelizacija banaka na dvodimenzionalnoj matrici (Tržišni udeo naspram ROA) kako bi se banke klasifikovale u grupe kao što su „Lideri”, „Specijalisti” i „Izvođači”;
4. Analiza migracija odnosi se na praćenje kretanja pojedinačnih banaka unutar strateških grupa na osnovu njihovih relativnih performansi.

Pregled literature i metodologija istraživanja

Analiza strateškog pozicioniranja banaka zahteva čvrst teorijski okvir koji omogućava transformaciju finansijskih podataka u relevantne zaključke. U tom smislu, primena koncepta strateških grupa u ovom radu opravdana je nalazima Portera (1980), koji ističe da unutar jedne industrije kompanije nisu homogeni entiteti, već se grupišu oko sličnih strateških dimenzija. U savremenim uslovima, autori poput Bikker i Bos (2008) naglašavaju da procesi konsolidacije, kojima svedočimo i na tržištu Srbije, direktno menjaju konkurentsku dinamiku, favorizujući banke koje kroz ekonomiju obima uspevaju da optimizuju svoje troškovne strukture. Prema nalazima koje navode Casu i ostali (2015); (Gegenheimer, 2007) ukupnjavanje sektora dovodi do redistribucije tržišne moći, pri čemu veći entiteti koriste prednosti diversifikacije aktive kako bi ostvarili stabilnije prihode u uslovima makroekonomske neizvesnosti.

Koncept strateških grupa, kao srednji nivo analize između celog sektora i pojedinačne banke, omogućava identifikaciju unutrašnje strukture tržišta. Prema istraživanjima koja su sprovedi Halaj i Zochowski (2009); Schildbach i Schneider, (2017) banke unutar iste strateške grupe ne dele samo slične vizuelne pozicije na matrici, već i slične profile rizika i odgovore na regulatorne promene. Ovaj koncept implicira postojanje „barijera mobilnosti” koje sprečavaju tranziciju banaka između grupa, čime se objašnjava zašto određene institucije godinama zadržavaju poziciju „specijalista” ili „lidera” uprkos promenama u tržišnom ambijentu.

U tom kontekstu, varijabla ROA u literaturi se dosledno koristi kao superiorno merilo operativne efikasnosti, jer izoluje profitnu snagu banke od efekata finansijske poluge, što je od presudnog značaja za poređenje banaka različitih veličina unutar istog sektora (Rose, Hudgins, 2015); (Wagdi i ostali, 2019); (Budhathoki i ostali, 2020). Za razliku od prinosa na sopstveni kapital (engl. Return On Equity ROE), ROA omogućava analitičarima da utvrde koliko menadžment efikasno koristi ukupne resurse za generisanje dobiti, što je ključno za objektivno mapiranje banaka na strateškoj matrici.

Poseban segment literature bavi se stabilnošću bankarskog poslovanja kroz analizu kvaliteta aktive i adekvatnosti kapitala. Autori poput Berger i Bouwman (2013) ističu da je uloga kapitala, merena kroz E/A, ključna u fazama tržišnih turbulencija, jer deluje kao „amortizer” eksternih šokova. U radovima koji analiziraju bankarska tržišta u razvoju, često se ističe dualitet između potrebe za visokom kapitalizacijom i težnje ka maksimizaciji profitabilnosti (Güngör, 2023; Casu i ostali, 2015). Ovaj teorijski konflikt direktno je primenljiv na analizu domaćeg tržišta u periodu 2017–2024, gde se kroz migraciju banaka između strateških grupa može pratiti transformacija od tradicionalno visoko kapitalizovanih institucija ka efikasnijim, ali potencijalno izloženijim modelima poslovanja. Autori poput Mishkin i Eakins (2018); Berger i Bouwman (2011) naglašavaju da adekvatno kapitalizovane banke imaju veću verovatnoću opstanka tokom sistemskih kriza, jer sopstveni kapital predstavlja prvu liniju odbrane od gubitaka u kreditnom portfoliju, što direktno utiče na dugoročno strateško pozicioniranje institucije.

Analiza promena u strukturi i tržišnog učešća predstavlja ključnu determinantu stabilnosti finansijskih sistema u ekonomijama u tranziciji. Domaća i regionalna empirijska praksa nudi dragocene uvide u ove procese. Lončar i Rajić (2012) ukazuju na rane faze restrukturiranja i uticaj makroekonomskih faktora na stabilnost plasmana, dok Bukvić (2017, 2020) detaljno dokumentuje evoluciju koncentracije i naglašava da ukupnjavanje sektora neminovno menja strateške prioritete banaka. Kaličanin i Terzić (2023) kroz analizu tržišne strukture ističu da pojačano grupisanje oko nekoliko vodećih bankarskih

grupacija stvara specifične barijere mobilnosti, primoravajući manje aktere na defanzivne strategije ili nišno pozicioniranje. Korišćenje metodologije strateških grupa, koja nalazi korene iz postavki Portera (1980) i Granta (2010), omogućava premošćavanje jaza između agregatne makroanalize i individualnog ponašanja banaka, dok Huizinga i Demirgüç-Kunt (2000) podsećaju da finansijska struktura i veličina tržišnog učešća direktno opredeljuju dugoročne raspone profitabilnosti.

S tim u vezi, metodološki okvir ovog rada zasnovan je na kombinaciji kvantitativne analize finansijskih pokazatelja i kvalitativne interpretacije strateškog pozicioniranja. Primena modela strateških grupa omogućava prevazilaženje ograničenja koja nameće posmatranje sektora kao homogene celine, pružajući uvid u specifičnu dinamiku unutar tržišta Srbije u periodu od 2017. do 2024. godine.

Istraživanje je fokusirano na reprezentativni uzorak od 11 banaka na tržištu Srbije, koje su odabrane na osnovu dostupnosti podataka u posmatranom osmogodišnjem periodu i značaja za formiranje proseka sektora. Takođe, ove banke u kontinuitetu pokrivaju preko 90% ukupne aktive celokupnog bankarskog sektora tokom posmatranog osmogodišnjeg perioda. Uključivanje ovako širokog uzorka je neophodna za precizno izračunavanje aritmetičkih sredina koje definišu koordinatni početak (tzv. „krst“) na matricama strateških grupa. Iako je u kreiranju matrica uključeno 11 banaka, i to Aik banka, Adriatic banka, Banka Intesa, Banka Poštanska štedionica, Erste banka, Eurobank, Halk bank, Nlb Komercijalna banka, OTP banka, Raiffeisen banka i Unicredit banka, fokus dubinske analize i praćenja strateških migracija stavljen je na reprezentativni uzorak od pet sistemski značajnih banaka (Banca Intesa, OTP, Raiffeisen, NLB Komercijalna i UniCredit). Ovakav metodološki dualizam koji podrazumeva posmatranje celog tržišta uz fokus na lidere opravdan je teorijom o tržišnoj koncentraciji i ekonomiji obima koju zastupaju Bikker i Bos (2008); Hac (2021) koji naglašavaju da dominantni akteri diktiraju tempo tehnoloških i operativnih promena u sektoru. S obzirom na to da ove banke kontrolišu preko 80% aktive, one predstavljaju jezgro celokupnog sektora. Ovaj pristup omogućava da se dobijeni rezultati i uočeni trendovi sa visokim stepenom pouzdanosti generalizuju na celokupan bankarski sistem Srbije.

Centralni merni instrument u radu je matrica strateških grupa, gde su banke mapirane u koordinatnom sistemu na osnovu njihovih performansi u odnosu na prosek sektora. Centralna tačka preseka na grafikonu određena je na osnovu prosečne vrednosti sektora za svaku posmatranu godinu. Ova tehnika vizuelizacije, koju su popularizovali Hitt, Ireland i Hoskisson (2013), omogućava klasifikaciju banaka u četiri kvadranta: Lideri, Specijalisti, Izvođači i Banke u transformaciji. Primarni podaci su prikupljeni iz revidiranih godišnjih finansijskih izveštaja banaka i statističkih biltena Narodne banke Srbije. Za obradu podataka korišćeni su deskriptivna statistika i komparativna analiza, čime je omogućeno testiranje postavljenih hipoteza kroz identifikaciju strateških migracija banaka u osmogodišnjem periodu.

Za potrebe formiranja strateških grupa, definisane su dve ključne varijable koje čine ose naše matrice: 1. Tržišni udeo (engl. Market Share): Tržišno učešće u ukupnoj aktivni koristimo kao indikator tržišne snage, prateći stavove (Berger i Bouwman, 2011) da veličina aktive direktno utiče na konkurentsku prednost kroz niže troškove finansiranja. Fokus na tržišno učešće kao ključnu determinantu snage banke opravdan je nalazima Mester i ostali (2003) da veći tržišni udeo u post-kriznim periodima često korelira sa većom stabilnošću neto kamatnih margina i boljom pregovaračkom moći.

$$\text{Tržišni udeo} = \text{Ukupna aktiva_banke} / \text{Ukupna aktiva_sektora} * 100$$

2. Prinos na aktivu ROA: Kao primarni indikator profitabilnosti i efikasnosti upravljanja imovinom ROA je odabran kao mera performansi jer, prema Golin i Delhaise (2013), Parvin i ostali (2019), Wagdi i ostali (2019) ovaj indikator najbolje pokazuje sposobnost menadžmenta da generiše profit iz raspoložive imovine, bez obzira na način finansiranja.

$$ROA = \text{Neto dobit} / \text{Ukupna aktiva} * 100$$

Pored primarnih varijabli strateškog pozicioniranja, u radu su analizirani i pomoćni indikatori koji pružaju uvid u profil rizika i stabilnosti banaka. Prema navodima Hull-a (2015) i Kagecha (2014), u modernom bankarstvu performanse se ne mogu posmatrati izolovano od adekvatnosti kapitala i kvaliteta aktive. U skladu sa tim uvodimo dve pomoćne varijable:

3. Udeo kredita u ukupnoj aktivi: Ova varijabla služi kao indikator strateške usmerenosti banke ka realnom sektoru. Kako ističu Casu i ostali (2015), visok udeo kredita ukazuje na tradicionalni model posredovanja, ali nosi i veći nivo kreditnog rizika.

4. Odnos sopstvenog kapitala i ukupne aktive (E/A): Korišćen je kao mera finansijske poluge i solventnosti. Savremeni autori poput Mishkina i Eakinsa (2018) naglašavaju da nivo kapitala određuje kapacitet banke da apsorbuje gubitke. Pad ovog pokazatelja na 5,95% u 2020. godini analiziran je kroz prizmu regulatornih zahteva i upravljanja kapitalom u kriznim uslovima, što je ključno za testiranje hipoteze H3.

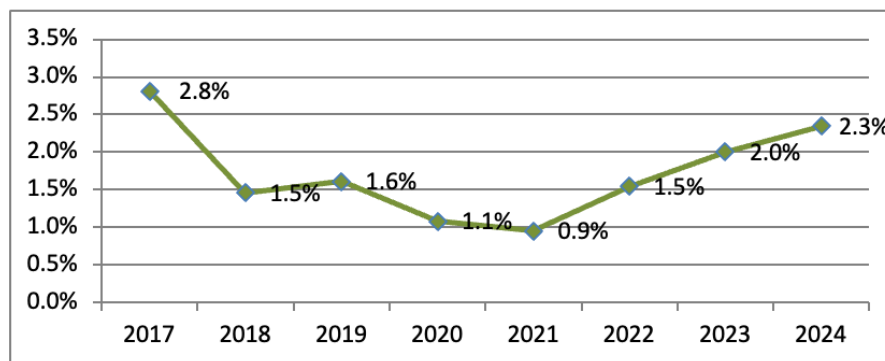
Analiza rezultata i diskusija

U ovom poglavlju interpretiramo ključne nalaze istraživanja, fokusirajući se na dinamiku profitabilnosti, stabilnost aktive i strateške migracije na primeru banaka unutar bankarskog sektora Republike Srbije u periodu 2017–2024. godine.

Analiza trendova profitabilnosti

Osnovni indikator uspešnosti svake bankarske strategije je njena sposobnost da generiše prinos iz raspoložive imovine. Prateći metodologiju Rose i Hudgins (2015), fokus stavljam na ROA pokazatelj.

Grafikon 1 - Trend kretanja prosečnog ROA analiziranih banaka za period 2017-2024. god.

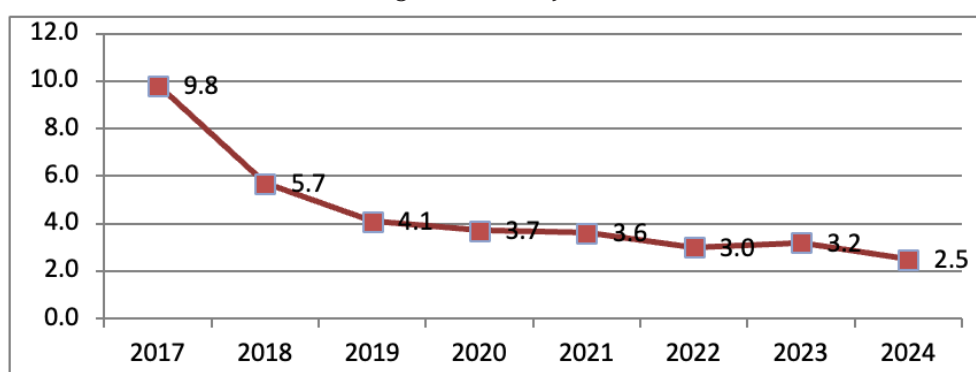


Izvor: Autor na osnovu podataka iz Bilansa uspeha odabranih banaka

Kao što se vidi na Grafikonu 1, prosečna vrednost ROA odabranih banaka u bankarskom sektoru Republike Srbije na početku posmatranog perioda iznosio je 2,81%. Međutim, uočljiv je trend erozije prinosa koji dostiže svoj minimum u 2021. godini 0,95%. Ovaj pad profitabilnosti korelira sa globalnim makroekonomskim poremećajima, ali i sa procesom čišćenja bilansa. Ipak, snažan oporavak na 2,34% u 2024. godini potvrđuje hipotezu o privremenom karakteru pada i uspešnom prilagođavanju banaka novim kamatnim ciklusima. U skladu sa nalazima Bikker i Bos (2008), ovaj oporavak se može pripisati efektima konsolidacije - veće banke su kroz optimizaciju troškova uspele da brže povrate profitabilnost u uslovima rasta kamatnih stopa.

Da bismo razumeli ovaj oporavak profitabilnosti, neophodno je istovremeno analizirati kretanje problematičnih kredita koji su godinama opterećivali bilanse. Grafikon 2 prati kretanje NPL-a (engl. Non-Performing Loans) celokupnog bankarskog sektora.

Grafikon 2 - Trend učešća problematičnih kredita NPL-a u ukupnim kreditima bankarskog sektora Srbije (2017–2024)



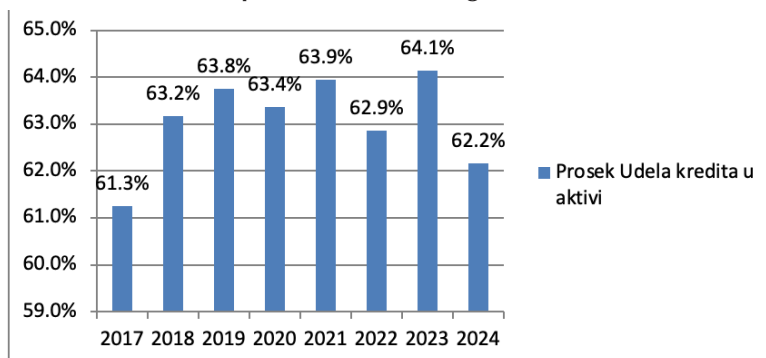
Izvor: Autor na osnovu zvaničnih podataka i izveštaja Narodne banke Srbije

Kao što možemo da vidimo, kontinuirani pad NPL-a direktno je uticao na oslobađanje rezervisanja za gubitke. Prema nalazima Hull (2018), smanjenje kreditnog rizika je primarni pokretač rasta ROA, jer omogućava bankama da efikasnije alociraju kapital u profitabilne plasmane.

Dinamika aktive i kapitalne baze

Drugi segment analize fokusira se na stabilnost kroz odnos kreditne aktivnosti i učešća sopstvenog kapitala. Nakon analize prinosa, fokus pomeramo na strukturu bilansa, gde testiramo stabilnost tradicionalnog bankarskog modela (Hipoteza H2) i otpornost kapitala.

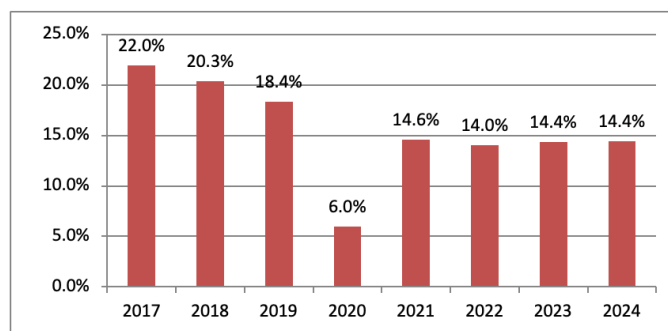
Grafikon 3 - Prosečno učešće neto kredita u ukupnoj aktivni odabranih banka (u %) po godinama za period 2017-2024. god.



Izvor: Autor na osnovu podataka iz Bilansa stanja odabranih banaka

Uprkos intenzivnoj digitalizaciji, Grafikon 3 pokazuje da udeo kredita ostaje stabilan iznad nivoa od 60%. Ovo je ključni dokaz da banke u Srbiji nisu značajno menjale svoj model poslovanja, već su ostale fokusirane na kreditiranje realnog sektora i stanovništva. Paralelno sa stabilnošću kredita, na Grafikonu 4 posmatramo kretanje sopstvenog kapitala kao glavnog apsorbera rizika.

Grafikon 4 - Prosek sopstvenog kapitala i ukupne aktive E/A odnos u % po godinama za period 2017-2024. god.



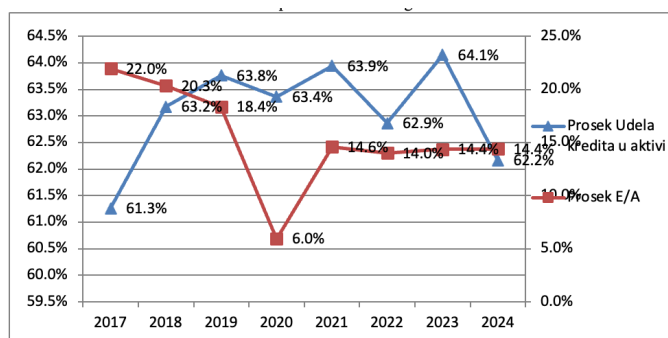
Izvor: Autor na osnovu podataka iz Bilansa stanja odabranih banaka

Ovde uočavamo najdramatičniju promenu – pad prosečnog E/A na svega 5,95% u 2020. godini. Sa stanovišta Berger i Bouwman (2013), ovo ukazuje na ekstremno visoku finansijsku polugu u kriznoj godini. Ipak, rast na 14,39% u 2024. pokazuje povratak konzervativnijoj politici kapitalizacije, što povećava stabilnost celog sistema.

Privremeni karakter pogoršanja performansi tokom 2020. godine ne može se posmatrati izolovano od pravovremene reakcije Narodne banke Srbije. Ključnu ulogu u očuvanju stabilnosti imali su propisani moratorijumi na otplatu obaveza, koji su sprečili nagli skok NPL-a u jeku pandemije, kao i regulatorna popuštanja u pogledu klasifikacije aktive. Ove mere su omogućile bankama da očuvaju likvidnost i kreditni potencijal, što je, uz kasniju stabilizaciju kamatnih stopa, rezultiralo brzim oporavkom ROA na 2,34% do 2024. godine.

Da bismo sumirali ove trendove, koristimo sledeći uporedni prikaz:

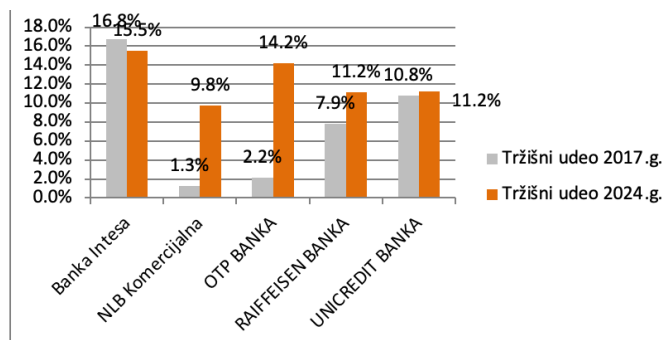
Grafikon 5 - Korelacija proseka kreditne aktivnosti i kapitalne baze posmatranih banaka za period 2017-2024. god.



Izvor: Autor na osnovu podataka iz Bilansa uspeha odabranih banaka

Podaci pokazuju izuzetnu stabilnost udela kredita u aktivima, koji se kreće oko 62%. Ovo potvrđuje Hipotezu H2 - banke u Srbiji su zadržale fokus na tradicionalnom bankarstvu uprkos digitalizaciji i krizama. Posebno je interesantan pad E/A odnosa na 5,95% u 2020. godini. Sa stanovišta diskusije, ovaj nalaz reflektuje ono što Berger i Bouwman (2013) nazivaju „upravljanjem kapitalnom efikasnošću”. Banke su iskoristile krizni momenat za povećanje finansijskog leveridža, što je kasnije 2024. godine rezultiralo stabilizacijom na 14,3%. Svi prethodno navedeni trendovi koji podrazumevaju rast profitabilnosti i stabilizacija kapitala, odvijali su se u kontekstu intenzivnog ukupnjavanja tržišta.

Nakon analize strukturnog balansa između kreditne aktivnosti i kapitalne baze, neophodno je ispitati kako su se ove interne performanse reflektovale na eksternu konkurentsku poziciju vodećih igrača. Dok su stabilnost udela kredita i rekapitalizacija sektora osigurali sistemsku otpornost, procesi merdžera i akvizicija su iz korena izmenili mapu tržišne moći. Kako bi se precizno kvantifikovao efekat konsolidacije na najznačajnije institucije, u nastavku sledi uporedni prikaz tržišnog učešća pet vodećih banaka. Ovaj uvid nam omogućava da identifikujemo „strateški nukleus” sektora koji je kroz ekonomiju obima, opisanu u radovima Bikker i Bos (2008), uspeo da apsorbira manje konkurente i značajno poveća svoj uticaj na tržištu u periodu od 2017. do 2024. godine.

Grafikon 6 - Komparativni prikaz tržišnog učešća pet sistemski najznačajnijih banaka
(2017. i 2024. godina)

Izvor: Autor na osnovu podataka iz Bilansa stanja odabranih banaka i Godišnjeg izveštaja o stabilnosti bankarskog sektora

Grafikon 6 direktno potvrđuje Hipotezu H1 o intenzivnom ukupnjavanju banaka. Posebno je indikativan rast tržišnog učešća kod banaka koje su bile nosioci integracionih procesa, gde vidimo da se jaz između lidera i ostatka tržišta produbio, čime su formirane visoke barijere mobilnosti za manje bankarske institucije. Prosečno učešće po banci poraslo je sa 5,49% na 8,38%, što je rezultat akvizicija (OTP, NLB Komercijalna). Kako navode Bikker i Bos (2008), veće učešće donosi ekonomiju obima koja je bila neophodna da bi se postigli ROA rezultati iz 2024. godine. Svi ovi podaci sumirani su u Tabeli 1 koja predstavlja osnovu za kreiranje matrica strateških grupa.

Tabela 1- Sumarni pregled proseka ključnih indikatora odabranih banaka u bankarskom sektoru
za period 2017–2024. god.

Godina	Prosek Tržišnog udela	Prosek ROA	Prosek E/A	Prosek Udela kredita u aktivi
2017	5,49%	2,81%	21,96%	61,26%
2018	5,58%	1,46%	20,35%	63,17%
2019	5,89%	1,61%	18,35%	63,76%
2020	5,95%	1,08%	5,95%	63,36%
2021	6,84%	0,95%	14,58%	63,94%
2022	8,05%	1,55%	14,01%	62,86%
2023	8,29%	2,00%	14,36%	64,15%
2024	8,38%	2,34%	14,39%	62,17%

Izvor: Autor na osnovu podataka iz Bilansa stanja i Bilansa uspeha odabranih banaka

Rast prosečnog tržišnog udela vodećih banaka sa 5,5% u 2017. godini na 8,4% u 2024. godini, posmatrano kroz prizmu ukupne bilansne aktive, pruža direktan i jasan dokaz za potvrdu Hipoteze H1. Ovi podaci nedvosmisleno ukazuju na to da je proces konsolidacije doveo do opipljivog ukрупnjavanja domaćeg tržišta u korist sistemski značajnih učesnika. Kada je reč o stabilnosti kapitalne baze (Hipoteza H3), podaci pokazuju da je odnos sopstvenog kapitala i aktive (E/A) u kriznoj 2020. godini za beležio pad na 5,95%, što reflektuje visok nivo finansijskog leveridža u jeku pandemije. Ovaj kratkotrajni pad bio je direktna posledica svesnog i kontrolisanog rasta bilansne aktive banaka radi pružanja neophodne likvidnosti privredi i stanovništvu kroz propisane moratorijume i olakšice, a ne pokazatelj ugroženosti solventnosti samog sektora. Već od 2021. godine ovaj pokazatelj se naglo stabilizuje na nivou od preko 14%, demonstrirajući izuzetno visoku adaptivnu sposobnost i sposobnost domaćeg bankarskog sektora da u kratkom roku obnovi i očuva kapitalne amortizere, što pruža pouzdan dokaz za potvrdu Hipoteze H3.

Strateško pozicioniranje i migracije

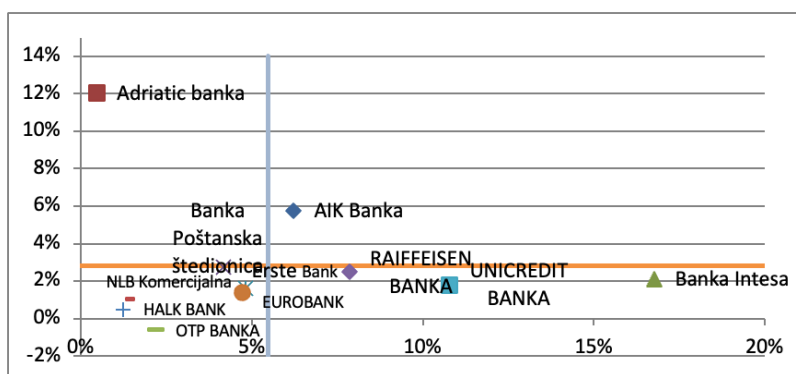
Nakon detaljne analize pojedinačnih indikatora profitabilnosti i strukture aktive, ključni korak u istraživanju predstavlja integracija ovih varijabli u jedinstveni strateški prostor. Primenom matrice strateških grupa, identifikujemo kako su se banke repozicionirale u odnosu na proseke sektora, koji su se, kako je Tabela 1 pokazala, značajno pomerili tokom posmatranih osam godina. Finalni deo analize predstavlja mapiranje banaka na matrici strateških grupa za 2017. i 2024. godinu. U cilju precizne identifikacije konkurentskih pozicija, banke su klasifikovane u četiri strateške grupe na osnovu njihove pozicije u odnosu na aritmetičku sredinu (prosek) sektora. Kao kriterijumi za podelu korišćeni su tržišno učešće kao mera tržišne snage i ROA kao mera operativne efikasnosti. Na taj način definisani su sledeći kvadranti:

- 1. Lideri tržišta** - Gornji desni kvadrant: Banke koje ostvaruju natprosečno tržišno učešće uz natprosečnu profitabilnost. Ove banke koriste ekonomiju obima i dominantnu tržišnu poziciju za maksimizaciju prinosa. To su sistemski značajne banke koje diktiraju standarde konkurentске utakmice.
- 2. Specijalisti** - Donji desni kvadrant: Banke koje imaju manje tržišno učešće od proseka, ali ostvaruju visoku profitabilnost.
- 3. Izvođači (Operativci)** - Gornji levi kvadrant: Banke sa visokim tržišnim učešćem čija je profitabilnost ispod proseka sektora. Ove institucije često žrtvuju kratkoročni profit zarad očuvanja tržišne pozicije ili se nalaze u fazi visokih troškova nakon akvizicija, gde se efekti sinergije još uvek čekaju.
- 4. Banke u fazi transformacije** - Donji levi kvadrant: Institucije koje se nalaze ispod proseka po oba kriterijuma. Ove banke obično se suočavaju sa strateškim izazovima, ili su premale da bi bile efikasne. Najčešće su mete akvizicija ili se nalaze u procesu dubokog restrukturiranja poslovanja. Dugoročni opstanak u ovom kvadrantu bez strateške promene je otežan.

U kontekstu tržišta Srbije, barijere mobilnosti koje sprečavaju prelazak manjih banaka u grupu „Lidera” postale su višestruke. Pored regulatornih zahteva za kapitalom koji su postali rigorozniji, ključnu barijeru predstavljaju visoki fiksni troškovi digitalne transformacije i neophodnost ekonomije obima za održavanje konkurentnosti. Primeri OTP banke i NLB Komercijalne banke najbolje ilustruju ove barijere; ove institucije su putem strateških akvizicija premostile jaz u tržišnom učešću, koristeći sinergiju i optimizaciju operativnih troškova kako bi se trajno pozicionirale u strateškom nukleusu sektora, što je za manje aktere bez značajnih kapitalnih injekcija gotovo neizvodljivo.

Ova metodologija omogućava praćenje kretanja banaka između kvadranta tokom posmatranog perioda (2017-2024), što direktno ukazuje na uspešnost njihovih poslovnih strategija. U nastavku su prikazane dve ključne tačke u vremenu: Grafikon 7 prikazuje početnu 2017. godinu, obeleženu fragmentacijom, dok Grafikon 8 prikazuje poslednju 2024. godinu, posmatranja i pozicioniranja analiziranih banaka u bankarskom sektoru. Cilj ovog uporednog prikaza je uočiti promene položaja i kretanje banaka iz klastera u klaster tokom perioda.

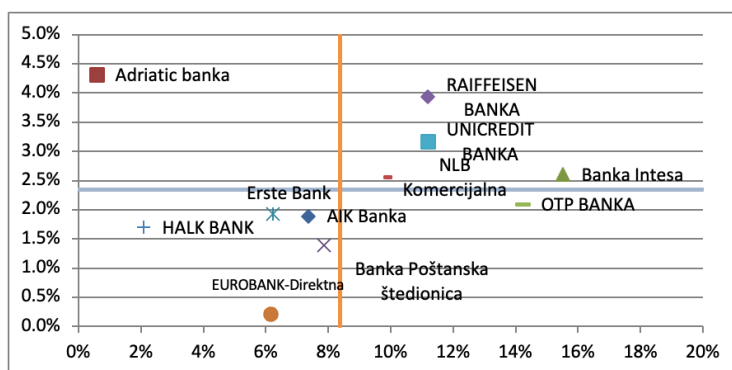
Grafikon 7 - Matrica strateških grupa bankarskog sektora Srbije za 2017. godinu



Izvor: Autor na osnovu podataka iz Bilansa stanja i Bilansa uspeha odabranih banaka

U 2017. godini uočavamo disperziju banaka, gde značajan broj aktera zauzima pozicije „Specijalista” (visok ROA, ali malo učešće) ili se nalazi u fazi transformacije. Prosečno učešće od 5,49% ostavljalo je prostor za veliki broj srednjih banaka.

Grafikon 8 - Matrica strateških grupa bankarskog sektora Srbije za 2024. godinu



Izvor: Autor na osnovu podataka iz Bilansa stanja i Bilansa uspeha odabranih banaka

Uporedni prikaz Grafikona 7 i Grafikona 8 otkriva duboku transformaciju tržišne arhitekture. Dok je 2017. godina bila obeležena umerenom disperzijom, gde su banke bile raspoređene u različitim strateškim „džepovima“, 2024. godina pokazuje jasnu stratešku polarizaciju.

Pomeranje nultog koordinatnog početka na matrici za 2024. godinu u odnosu na 2017. godinu direktna je posledica strukturnih promena u sektoru. Činjenica da je prosečno tržišno učešće poraslo sa 5,49% na 8,38% ukazuje na to da je aritmetička sredina sektora postala „pokretna meta“. Ovakav metodološki pristup omogućava identifikaciju banaka koje su uspele da nadmaše opšti trend rasta tržišta. To implicira značajno podizanje barijera mobilnosti: u uslovima visoke koncentracije, bankarske institucije moraju generisati znatno veći obim aktive i nivo operativne efikasnosti samo da bi zadržale status prosečnog tržišnog učesnika, što dodatno marginalizuje manje i neefikasne aktere.

Konsolidacija u kvadratu Lidera: Najdominantniji trend je kretanje sistemski značajnih banaka ka gornjem desnom kvadratu. Banke koje su kroz procese merđžera i akvizicija apsorbovale manje konkurente, poput OTP banke i NLB Komercijalne, nisu samo povećale svoje tržišno učešće, već su uspele da tu veličinu pretvore u operativnu efikasnost. Ovo potvrđuje stavove Bikker i Bos (2008) da ekonomija obima u bankarstvu direktno doprinosi stabilizaciji profitne pozicije.

Pomeranje proseka sektora: Primetno je da je „krst“ u 2024. godini postavljen na znatno višim nivoima u odnosu na 2017. godinu. Prosečno tržišno učešće je poraslo sa 5,49% na 8,38%, što je jasan indikator smanjenja ukupnog broja učesnika i ukupnjavanja kapitala. To implicira da su barijere mobilnosti postale znatno više - banka danas mora imati mnogo veći nivo aktive i prinosa samo da bi ostala u proseku tržišta.

Strateška otpornost: Migracija banaka iz levih kvadranta (niža profitabilnost) ka desnim u 2024. godini služi kao finalni dokaz za Hipotezu H3. Iako je krizni period 2020. godine privremeno narušio performanse, bankarski sektor je u 2024. ušao homogeniji i profitabilniji, sa jasnije definisanim liderima koji diktiraju tempo tržišne utakmice.

Nalazi ovog istraživanja otvaraju pitanje korelacije između veličine banke i njene suštinske rezilijentnosti. Iako rezultati potvrđuju da 'Lideri' pokazuju viši stepen stabilnosti performansi nakon krize, ostaje otvoreno pitanje da li je to posledica njihove unutrašnje otpornosti na rizike ili isključivo sposobnosti da kroz ekonomiju obima i dominantnu tržišnu poziciju lakše amortizuju eksterne šokove. Kontinuirano visok udeo kredita iznad 60% kod sistemski značajnih banaka sugerise da njihova stabilnost direktno determiniše stabilnost celokupnog finansijskog sistema, što potvrđuje važnost bankarske strukture kao ključnog faktora rezilijentnosti u Republici Srbiji.

Zaključak

Istraživanje sprovedeno u ovom radu pružilo je sveobuhvatan uvid u dinamiku bankarskog sektora Republike Srbije u periodu od 2017. do 2024. godine. Korišćenjem metodologije strateških grupa, analizirane su ključne promene u profitabilnosti, tržišnoj snazi i kapitalnoj strukturi, čime su testirane i potvrđene postavljene istraživačke hipoteze. Na osnovu sprovedene analize, mogu se izvući sledeći ključni zaključci:

Potvrda Hipoteze H1: Procesi konsolidacije i akvizicija su fundamentalno izmenili arhitekturu tržišta. Rast prosečnog tržišnog učešća vodećih banaka sa 5,49% na 8,38% i njihova migracija u kvadrant „Lidera” nedvosmisleno potvrđuju da je ukupnjavanje kapitala postalo primarna strategija za opstanak i rast. Formiranje snažnog nukleusa oko „Top 5” banaka podiglo je barijere mobilnosti, otežavajući poziciju manjim igračima.

Potvrda Hipoteze H2: Uprkos digitalnoj transformaciji i eksternim šokovima, bankarski sektor u Srbiji je zadržao visok stepen vernosti tradicionalnom modelu posredovanja. Stabilno učešće neto kredita u aktivi iznad 60% ukazuje na to da kreditiranje realnog sektora i stanovništva ostaje glavni generator prihoda i osnova biznis modela većine banaka.

Potvrda Hipoteze H3: Analiza je pokazala da je pad performansi u 2020. i 2021. godini bio privremenog i cikličnog karaktera. Dramatičan pad E/A odnosa na 5,95% bio je trenutak ekstremne finansijske poluge, ali je sektor do 2024. godine uspeo da povрати stabilnost ROA na nivo od 2,34% uz zdravu dokapitalizaciju. Ovo ukazuje na visoku adaptivnu sposobnost i stratešku rezistentnost sektora.

Nalazi ovog istraživanja otvaraju pitanje korelacije između veličine banke i njene suštinske rezilijentnosti. Iako rezultati potvrđuju da „Lideri” pokazuju viši stepen stabilnosti performansi nakon krize, ostaje otvoreno pitanje da li je to posledica njihove unutrašnje otpornosti na rizike ili isključivo sposobnosti da kroz ekonomiju obima i dominantnu tržišnu poziciju lakše amortizuju eksterne šokove. Kontinuirano visok udeo kredita iznad 60% kod sistemski značajnih banaka sugerše da njihova stabilnost direktno determiniše stabilnost celokupnog finansijskog sistema, što potvrđuje važnost bankarske strukture kao ključnog faktora rezilijentnosti u Republici Srbiji.

Na osnovu identifikovanih trendova koncentracije i strateških migracija, istraživanje nudi konkretne preporuke za nosioce makroprudencijalne politike i menadžment bankarskih institucija.

- Za kreatore politika (NBS): Neophodno je nastaviti sa pažljivim monitoringom sistemski značajnih banaka koje čine „strateški nukleus” tržišta, budući da njihova visoka korelisanost i slični profili rizika mogu biti izvor sistemske ranjivosti u uslovima ekstremnih šokova. Fokus regulatora treba da ostane na očuvanju kapitalnog „amortizera” (E/A), koji se pokazao kao ključan faktor rezilijentnosti tokom 2020. godine.
- Za menadžment banaka: Rezultati ukazuju na to da puko povećanje tržišnog učešća više nije garancija uspeha ukoliko ga ne prati operativna efikasnost (ROA). Preporuka za manje banke jeste fokus na tržišne niše ili ubrzanu digitalizaciju, kako bi se prevazišle visoke barijere mobilnosti koje su formirane procesom ukupnjavanja sektora.

Finalni uvid u matrice strateških grupa pokazuje da se sektor kreće ka stanju stabilne oligopolne konkurencije. Banke koje su uspešno prebrodile period transformacije sada fokus prebacuju sa puke veličine aktive na operativnu efikasnost i upravljanje rizicima.

Dobijeni rezultati postavljaju čvrstu osnovu, ali istovremeno ukazuju na smernice za buduća naučna istraživanja. Budući istraživački napor bi trebali biti usmereni ka primeni naprednijih kvantitativnih ekonometrijskih metoda, poput dinamičkih panel modela, kako bi se statistički testirala uzročno-posledična veza između nivoa tržišne koncentracije i pokazatelja stabilnosti banaka u dugom roku. Takođe, s obzirom na ubranu digitalizaciju, u naredne analize bi bilo korisno uvrstiti „stepen digitalne zrelosti” kao novu, nefinansijsku varijablu za formiranje strateških grupa na domaćem bankarskom tržištu.

U godinama koje dolaze, može se očekivati dalja tehnološka transformacija, gde će digitalna zrelost postati nova varijabla koja će razdvajati lidere od pratilaca. Ipak, rezultati ovog rada sugerisu da će stabilna kapitalna baza i čvrsta povezanost sa realnim sektorom ostati neprikosnoveni stubovi uspeha na bankarskom tržištu Srbije.

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DYNAMICS OF THE SYSTEMIC IMPORTANCE OF BANKS IN THE MARKET OF THE REPUBLIC OF SERBIA: ANALYSIS OF CLUSTER MIGRATION AND STRUCTURAL ADJUSTMENT

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Abstract: *The subject of this work is the analysis of the structural transformation and strategic positioning of banks in the Republic of Serbia in the period from 2017 to 2024. The main goal of the research is a scientific analysis of the dynamics of the banking sector using the methodology of strategic groups, in order to identify key migrations between market quadrants and assess the degree of structural adjustment of the sector to macroeconomic shocks. The methodology includes descriptive statistics, comparative analysis and visualization on a two-dimensional matrix, with a focus on a sample of 11 banks. The results of the research confirm that the intensive consolidation process led to a significant consolidation of the market, whereby the average market share in the total assets of the leading banks increased from 5.49% to 8.38%. The analysis shows a high degree of resilience of the sector, which retained the primary function of lending to the economy and the population with a share of loans above 60%. It was found that the decline in profitability (ROA) and capital base (E/A) during the crisis year 2020 was of a temporary nature, which was followed by a stabilization of performance on a healthy basis.*

Keywords: market consolidation, banking sector of Serbia, financial stability, cluster analysis, strategic groups

JEL classification: G21, G34, G01

Introduction

The modern banking system of the Republic of Serbia in the period from 2017 to 2024 represents an example of deep structural transformation and strategic adjustment. This period was marked by an intense process of consolidation, where the market evolved from a state of moderate fragmentation to a highly concentrated environment. The main drivers of these changes were the waves of acquisitions of leading banking groups, digital transformation and the necessity of increasing operational efficiency in conditions of global uncertainties, as well as the need to preserve stability in conditions of global economic shocks.

During the observed period, the sector faced heterogeneous challenges - from the period of low interest rates, through the global health crisis in 2020, to the current restrictive monetary policy. Through the analysis of key indicators such as profitability ROA, structure of assets through the share of loans and stability of the capital base E/A, the work tries to document how these factors were reflected on the competitive position of banks. Particular importance is attached to the fact that the consolidation process led to an increase in the average market share of individual banks, which clearly indicates the formation of strong market leaders. The focus of the work is on the analysis of changes and their impact on the performance and strategic positioning of banks, with special reference to the resilience of the sector during the pandemic year 2020.

The subject of the research is the analysis of financial performance and market position of banks in Serbia. The main goal of the research is a scientific analysis of the dynamics of the strategic positioning of banks in Serbia using the methodology of strategic groups. The paper seeks to classify banks based on their market strength and performance in order to identify key migrations between strategic squares. An additional goal is to determine the degree of resilience of the sector based on the movement of indicators of profitability and asset quality in conditions of macroeconomic uncertainty.

Based on the set goals, the following hypotheses were defined:

H1: The process of structural consolidation of the banking market in Serbia led to a significant increase in the average market share of the leading banks and a decrease in the overall fragmentation of the sector.

H2: The banking sector shows a high degree of resistance in the domain of its basic function - lending to the economy and the population, maintaining the stability of the traditional lending model despite the effects of cyclical external shocks.

H3: The decline in return on assets (ROA) and equity participation (E/A) during the crisis year 2020 was of a temporary nature, while long-term trends indicate a high adaptive capacity of the sector to stabilize performance on a sustainable basis.

For the purposes of this paper, a combined approach was used, which includes: 1. Descriptive statistical analysis applied to key indicators (ROA, E/A, loan share) in order to determine average trends at the level of the entire sector; 2. Comparative analysis to compare the situation in 2017 and the situation in 2024, in order to identify long-term changes; 3. Visualization of banks on a two-dimensional matrix (Market Share vs. ROA) to classify banks into groups such as "Leaders", "Specialists" and "Performers"; 4. Migration analysis refers to monitoring the movement of individual banks within strategic groups based on their relative performance.

Literature Review and Research Methodology

Analysis of the strategic positioning of banks requires a solid theoretical framework that enables the transformation of financial data into relevant conclusions. In this sense, the application of the concept of strategic groups in this paper is justified by the findings of Porter (1980), who points out that within an industry, companies are not homogeneous entities, but are grouped around similar strategic dimensions. In modern conditions, authors such as Bikker and Bos (2008) emphasize that consolidation processes, which we witness in the Serbian market, directly change competitive dynamics, favoring banks that manage to optimize their cost structures through economies of scale. According to the findings cited by Casu et al. (2015); (Gegenheimer, 2007) sector consolidation leads to a redistribution of market power, with larger entities taking advantage of asset diversification to achieve more stable revenues in conditions of macroeconomic uncertainty.

The concept of strategic groups, as an intermediate level of analysis between the entire sector and an individual bank, enables the identification of the internal structure of the market. According to research conducted by Halaj and Zochowski (2009); Schildbach and Schneider, (2017) banks within the same strategic group not only share similar visual positions on the matrix, but also similar risk profiles and responses to regulatory changes. This concept implies the existence of “mobility barriers” that prevent the transition of banks between groups, which explains why certain institutions retain the position of “specialists” or “leaders” for years despite changes in the market environment.

In this context, the ROA variable is consistently used in the literature as a superior measure of operational efficiency, because it isolates the bank’s profitability from the effects of financial leverage, which is of crucial importance for comparing banks of different sizes within the same sector (Rose, Hudgins, 2015); (Wagdi et al., 2019); (Budhathoki et al., 2020). Unlike the return on equity (ROE), ROA allows analysts to determine how efficiently management is using total resources to generate profits, which is key to objectively mapping banks on the strategic matrix.

A special segment of the literature deals with the stability of banking operations through the analysis of asset quality and capital adequacy. Authors such as Berger and Bouwman (2013) point out that the role of capital, measured through E/A, is crucial in phases of market turbulence, because it acts as an “absorber” of external shocks. In works that analyze emerging banking markets, the duality between the need for high capitalization and the pursuit of profitability maximization is often highlighted (Güngör, 2023; Casu et al., 2015). This theoretical conflict is directly applicable to the analysis of the domestic market in the period 2017-2024, where through the migration of banks between strategic groups, the transformation from traditionally highly capitalized institutions to more efficient, but potentially more exposed business models can be followed. Authors like Mishkin and Eakins (2018); Berger and Bouwman (2011) emphasize that adequately capitalized banks are more likely to survive during systemic crises, because own capital represents the first line of defense against losses in the loan portfolio, which directly affects the long-term strategic positioning of the institution.

Analysis of changes in structure and market participation is a key determinant of the stability of financial systems in economies in transition. Domestic and regional empirical practice offers valuable insights into these processes. Lončar and Rajić (2012) point to the early stages of restructuring and the impact of macroeconomic factors on placement stability, while Bukvić (2017, 2020) documents the evolution of concentration in detail and emphasizes that consolidation of the sector inevitably

changes the strategic priorities of banks. Through an analysis of the market structure, Kaličanin and Terzić (2023) point out that increased grouping around several leading banking groups creates specific barriers to mobility, forcing smaller actors to adopt defensive strategies or niche positioning. Using the methodology of strategic groups, which finds its roots in the statements of Porter (1980) and Grant (2010), enables bridging the gap between aggregate macroanalysis and individual behavior of banks, while Huizinga and Demirgüç-Kunt (2000) remind that the financial structure and the size of the market share directly determine long-term profitability ranges.

In this regard, the methodological framework of this paper is based on a combination of quantitative analysis of financial indicators and qualitative interpretation of strategic positioning. The application of the model of strategic groups makes it possible to overcome the limitations imposed by observing the sector as a homogeneous whole, providing an insight into the specific dynamics within the Serbian market in the period from 2017 to 2024.

The research is focused on a representative sample of 11 banks on the Serbian market, which were selected based on the availability of data in the observed eight-year period and importance for the formation of the sector average. Also, these banks continuously cover over 90% of the total assets of the entire banking sector during the observed eight-year period. The inclusion of such a wide sample is necessary for the precise calculation of the arithmetic means that define the coordinate origin (the so-called “cross”) on the matrices of strategic groups. Although 11 banks were included in the creation of the matrices, namely Aik banka, Adriatic banka, Banka Intesa, Postal Savings Bank, Erste banka, Eurobank, Halk banka, NLB Komercijalna banka, OTP banka, Raiffeisen banka and Unicredit banka, the focus of in-depth analysis and monitoring of strategic migrations was placed on a representative sample of five systemically significant banks (Banca Intesa, OTP, Raiffeisen, NLB Komercijalna and UniCredit). Such methodological dualism, which implies observing the entire market with a focus on leaders, is justified by the theory of market concentration and economies of scale advocated by Bikker and Bos (2008); Hatz (2021) who emphasize that dominant actors dictate the pace of technological and operational changes in the sector. Given that these banks control over 80% of assets, they represent the core of the entire sector. This approach makes it possible to generalize the obtained results and observed trends with a high degree of reliability to the entire banking system of Serbia.

The central measuring instrument in the work is the matrix of strategic groups, where banks are mapped in the coordinate system based on their performance in relation to the sector average. The central point of intersection on the graph is determined based on the average value of the sector for each observed year. This visualization technique, popularized by Hitt, Ireland and Hoskisson (2013), allows banks to be classified into four quadrants: Leaders, Specialists, Performers and Banks in Transformation. Primary data were collected from audited annual financial reports of banks and statistical bulletins of the National Bank of Serbia. Descriptive statistics and comparative analysis were used for data processing, which made it possible to test the set hypotheses through the identification of strategic bank migrations in the eight-year period.

For the purpose of mapping strategic groups, two key variables were defined as the axes of the matrix:

1. **Market Share:** Used as an indicator of market power, following the views of Berger & Bouwman (2011) that asset size directly impacts competitive advantage through lower financing costs. The focus on market share is further justified by Mester & Berger (2003), who found that larger market shares in

post-crisis periods often correlate with greater stability in net interest margins and better bargaining power.

$$\text{Market Share} = \text{Total Asset}_{\text{bank}} / \text{Total Asset}_{\text{sector}} * 100$$

2. **Return on Assets (ROA):** Selected as the primary indicator of profitability and asset management efficiency. According to Golin & Delhaise (2013), Parvin et al. (2019), and Wagdi et al. (2019), this indicator best demonstrates management's ability to generate profit from available assets, regardless of the financing method.

$$\text{ROA} = (\text{Net Income}) / (\text{Total Asset}) * 100$$

In addition to the primary variables, auxiliary indicators were analyzed to provide insight into risk profiles and stability. According to Hull (2015) and Kagecha (2014), performance in modern banking cannot be viewed in isolation from capital adequacy and asset quality. Consequently, two auxiliary variables were introduced:

3. **Share of Loans in Total Assets:** Acts as an indicator of a bank's strategic focus on the real sector. As noted by Casu et al. (2015), a high share of loans indicates a traditional mediation model but also carries a higher level of credit risk.

4. **Equity-to-Assets Ratio (E/A):** Used as a measure of financial leverage and solvency. Modern authors like Mishkin and Eakins (2018) emphasize that capital levels determine a bank's capacity to absorb losses. The decline of this indicator to 5.95% in 2020 is analyzed through the prism of regulatory requirements and capital management in crisis conditions, which is crucial for testing Hypothesis H3.

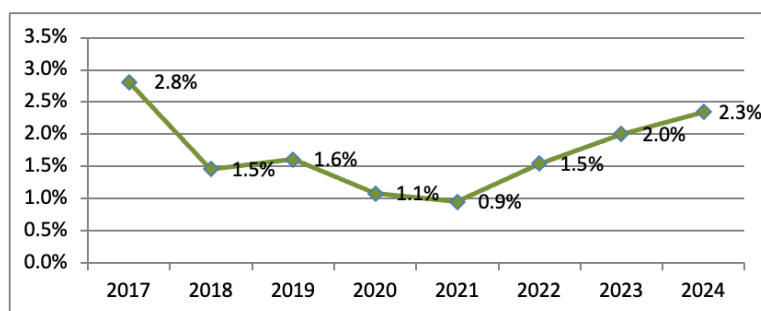
Analysis of Results and Discussion

In this chapter, we interpret the key findings of the research, focusing on profitability dynamics, asset stability and strategic migration on the example of banks within the banking sector of the Republic of Serbia in the period 2017-2024.

Analysis of Profitability Trends

The basic indicator of the success of any banking strategy is its ability to generate returns from available assets. Following the methodology of Rose and Hudgins (2015), we focus on the ROA indicator. Graph 1 shows the trend of the average value of ROA of the analyzed banks in the period from 2017 to 2024.

Figure 1 - Trend of Average ROA for the Analyzed Banks for the Period 2017–2024.

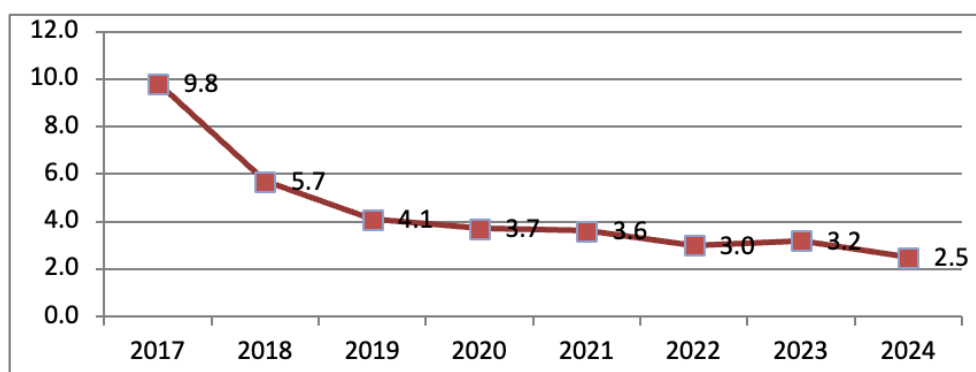


Source: Author's calculation based on the Income Statement data of the selected banks

As can be seen in Chart 1, the average value of ROA of selected banks in the banking sector of the Republic of Serbia at the beginning of the observed period was 2.81%. However, the yield erosion trend is noticeable, reaching its minimum in 2021 at 0.95%. This drop in profitability correlates with global macroeconomic disturbances, but also with the process of cleaning up the balance sheet. Nevertheless, the strong recovery to 2.34% in 2024 confirms the hypothesis about the temporary nature of the decline and the successful adaptation of banks to new interest cycles. In accordance with the findings of Bikker and Bos (2008), this recovery can be attributed to the effects of consolidation - larger banks, through cost optimization, managed to recover profitability faster in conditions of rising interest rates.

In order to understand this recovery of profitability, it is necessary to simultaneously analyze the movement of problem loans that have burdened balance sheets for years. Chart 2 follows the movement of NPL (Non-Performing Loans) of the entire banking sector.

Figure 2 - Trend of the Share of Non-Performing Loans (NPLs) in the Total Loans of the Serbian Banking Sector (2017–2024)



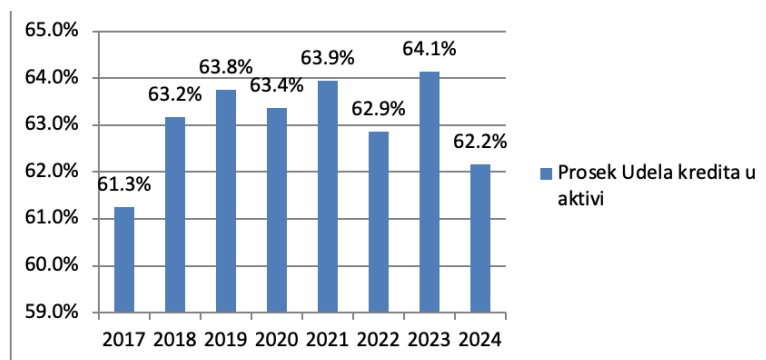
Source: Author's calculation based on the Income Statement data of the selected banks

As we can see, the continuous decline in NPLs has directly affected the release of loss provisions. According to the findings of Hull (2018), the reduction of credit risk is the primary driver of ROA growth, as it allows banks to more efficiently allocate capital to profitable placements.

Dynamics of Assets and Capital Base

The second segment of the analysis focuses on stability through the relationship between credit activity and the participation of own capital. After analyzing the returns, we shift the focus to the balance sheet structure, where we test the stability of the traditional banking model (Hypothesis H2) and the resilience of capital. Graph 3 follows the trend of the average share of loans in the total assets of selected banks in the sector.

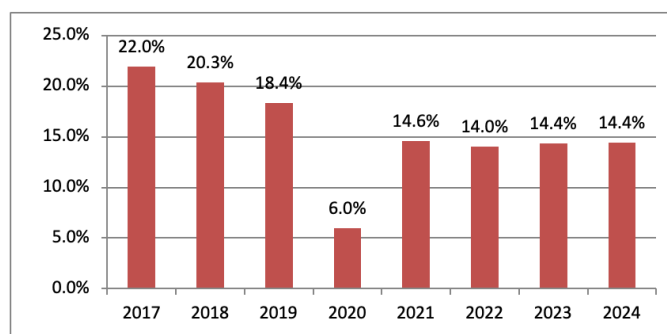
Figure 3 - Average Share of Net Loans in Total Assets of Selected Banks (in %) by Year for the Period 2017–2024



Source - Author's calculation based on the Balance Sheet data of the selected banks

Despite intensive digitization, Graph 3 shows that the share of loans remains stable above the level of 60%. This is the key evidence that banks in Serbia have not significantly changed their business model, but have remained focused on lending to the real sector and the population. In parallel with the stability of loans, in Graph 4 we observe the movement of own capital as the main risk absorber.

Figure 4 - Average Equity-to-Assets (E/A) Ratio in % by Year for the Period 2017–2024

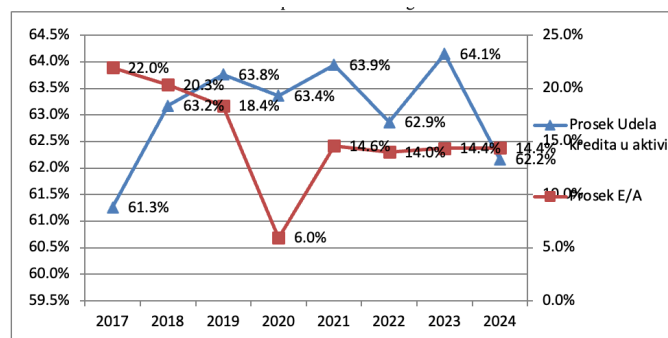


Source: Author's calculation based on the Balance Sheet data of the selected banks

Here we see the most dramatic change – the drop in average E/A to just 5.95% in 2020. From the point of view of Berger and Bouwman (2013), this indicates extremely high financial leverage in the crisis year. Nevertheless, growth to 14.39% in 2024 shows a return to a more conservative capitalization policy, which increases the stability of the entire system.

The temporary nature of the performance deterioration during 2020 cannot be viewed in isolation from the timely reaction of the National Bank of Serbia. A key role in preserving stability was played by the prescribed moratoriums on the repayment of obligations, which prevented a sudden jump in NPLs in the midst of the pandemic, as well as regulatory concessions regarding the classification of assets. These measures enabled banks to preserve liquidity and credit potential, which, with the subsequent stabilization of interest rates, resulted in a rapid recovery of ROA to 2.34% by 2024. To summarize these trends, we use the following comparative view:

Figure 5 - Correlation Between the Average Lending Activity and the Capital Base of the Observed Banks for the Period 2017–2024

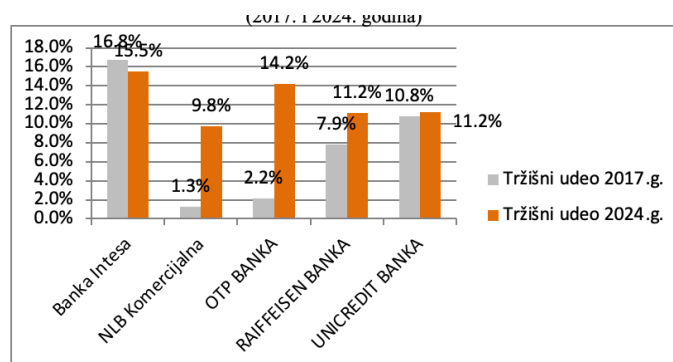


Source: Author's calculation based on the Income Statement data of the selected banks

The data show an exceptional stability of the share of loans in assets, which is around 62%. This confirms Hypothesis H2 - banks in Serbia have maintained their focus on traditional banking despite digitization and crises. Particularly interesting is the drop in the E/A ratio to 5.95% in 2020. From a discussion point of view, this finding reflects what Berger and Bouwman (2013) call “capital efficiency management”. Banks used the crisis moment to increase financial leverage, which later in 2024 resulted in stabilization at 14.3%. All the previously mentioned trends, which imply growth of profitability and the stabilization of capital, took place in the context of intense consolidation of the market.

After analyzing the structural balance between credit activity and the capital base, it is necessary to examine how these internal performances were reflected on the external competitive position of the leading players. While the stability of the loan share and the recapitalization of the sector ensured systemic resilience, the processes of mergers and acquisitions fundamentally changed the map of market power. In order to precisely quantify the effect of consolidation on the most important institutions, below is a comparative presentation of the market share of the five leading banks. This insight allows us to identify the ‘strategic nucleus’ of the sector which, through economies of scale, described in the works of Bikker and Bos (2008), managed to absorb smaller competitors and significantly increase its influence on the market in the period from 2017 to 2024.

Figure 6 - Comparative Overview of the Market Share of the Five Most Systemically Important Banks (2017 and 2024)



Source: Author's calculation based on the Balance Sheet data of the selected banks and the Annual Financial Stability Report

Graph 6 directly confirms Hypothesis H1 about the intensive consolidation of banks. The growth of the market share of banks that were the bearers of the integration process is particularly indicative, where we see that the gap between the leaders and the rest of the market has deepened, thus creating high mobility barriers for smaller banking institutions. The average participation per bank increased from 5.49% to 8.38%, which is the result of acquisitions (OTP, NLB Komercijalna). As Bikker and Bos (2008) state, greater participation brings economies of scale that were necessary to achieve the 2024 ROA results. All these data are summarized in Table 1, which represents the basis for creating matrices of strategic groups.

Table 1 - Summary of the Average Key Indicators for Selected Banks in the Banking Sector for the Period 2017–2024

Year	Average Market Share	Average ROA	Average E/A ratio	Average Loan-to-Asset ratio
2017	5.49%	2.81%	21.96%	61.26%
2018	5.58%	1.46%	20.35%	63.17%
2019	5.89%	1.61%	18.35%	63.76%
2020	5.95%	1.08%	5.95%	63.36%
2021	6.84%	0.95%	14.58%	63.94%
2022	8.05%	1.55%	14.01%	62.86%
2023	8.29%	2.00%	14.36%	64.5%
2024	8.38%	2.34%	14.39%	62.17%

Source: Author's calculation based on the Balance Sheet and Income Statement data of the selected banks

The growth of the average market share of leading banks from 5.5% in 2017 to 8.4% in 2024, viewed through the prism of total balance sheet assets, provides direct and clear evidence to confirm Hypothesis H1. These data unequivocally indicate that the consolidation process led to a tangible consolidation of the domestic market in favor of systemically important participants. When it comes to the stability of the capital base (Hypothesis H3), the data show that the ratio of own capital and assets (E/A) in the crisis year 2020 recorded a drop to 5.95%, which reflects the high level of financial leverage in the midst of the pandemic. This short-term decline was a direct consequence of the conscious and controlled growth of banks' balance sheet assets in order to provide the necessary liquidity to the economy and the population through prescribed moratoriums and reliefs, and not an indicator of the threat to the solvency of the sector itself. Already from 2021, this indicator stabilizes sharply at the level of over 14%, demonstrating an extremely high adaptive capacity and the ability of the domestic banking sector to restore and preserve capital buffers in the short term, which provides reliable evidence to confirm Hypothesis H3.

Strategic Positioning and Migrations

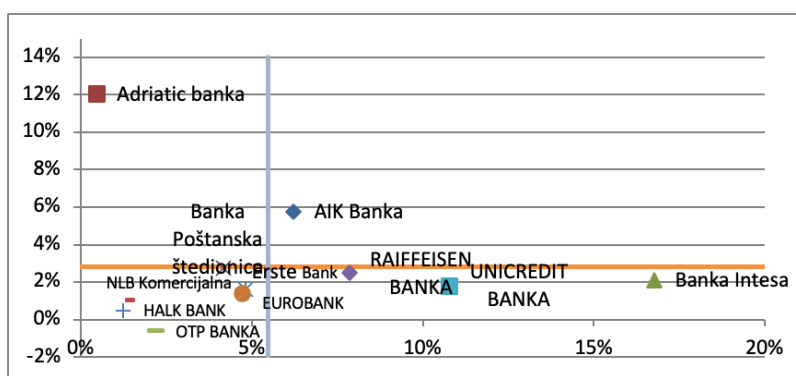
After a detailed analysis of individual indicators of profitability and asset structure, the key step in the research is the integration of these variables into a unique strategic space. By applying the matrix of strategic groups, we identify how the banks repositioned themselves in relation to the averages of the sector, which, as Table 1 showed, moved significantly during the observed eight years. The final part of the analysis presents the mapping of banks on the matrix of strategic groups for 2017 and 2024. In order to accurately identify competitive positions, banks are classified into four strategic groups based on their position in relation to the arithmetic mean (average) of the sector. Market share as a measure of market power and ROA as a measure of operational efficiency were used as criteria for division. In this way, the following quadrants were defined:

- 1. Market Leaders - Upper Right Quadrant:** Banks achieving above-average market share with above-average profitability. These banks use economies of scale and dominant market position to maximize returns. These are systemically significant banks that dictate the standards of the competitive game.
- 2. Specialists - Lower Right Quadrant:** Banks that have a smaller than average market share but achieve high profitability.
- 3. Performers (Operatives) - Upper left quadrant:** Banks with a high market share whose profitability is below the sector average. These institutions often sacrifice short-term profits for the sake of preserving market position or are in a high-cost phase after acquisitions, where synergy effects are still pending.
- 4. Banks in the transformation phase - Lower left quadrant:** Institutions that are below the average in both criteria. These banks usually face strategic challenges, or are too small to be efficient. Most often, they are the targets of acquisitions or are in the process of deep business restructuring. Long-term survival in this quadrant without strategic change is difficult.

In the context of the Serbian market, the barriers to mobility that prevent the transition of smaller banks to the "Leader" group have become multiple. In addition to regulatory capital requirements that have become more rigorous, a key barrier is the high fixed costs of digital transformation and the necessity of economies of scale to maintain competitiveness. The examples of OTP banka and NLB Komercijalna banka best illustrate these barriers; these institutions bridged the gap in market share through strategic acquisitions, using synergy and optimization of operating costs in order to permanently position themselves in the strategic nucleus of the sector, which is almost impossible for smaller actors without significant capital injections.

This methodology allows monitoring the movement of banks between quadrants during the observed period (2017-2024), which directly indicates the success of their business strategies. Two key points in time are shown below: Graph 7 shows the initial year 2017, marked by fragmentation, while Graph 8 shows the last year 2024, of observation and positioning of the analyzed banks in the banking sector. The aim of this comparative presentation is to observe changes in the position and movement of banks from cluster to cluster during the period.

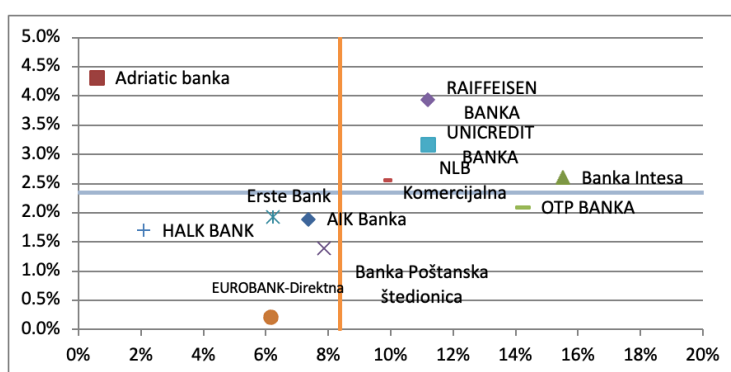
Figure 7 - Strategic Group Matrix of the Serbian Banking Sector for 2017



Source: Author's calculation based on the Balance Sheet and Income Statement data of the selected banks

In 2017, we observe the dispersion of banks, where a significant number of actors occupy "Specialist" positions (high ROA, but low participation) or are in the transformation phase. The average share of 5.49% left room for a large number of medium-sized banks.

Figure 8 - Strategic Group Matrix of the Serbian Banking Sector for 2024



Source: Author's calculation based on the Balance Sheet and Income Statement data of the selected banks

A comparative view of Chart 7 and Chart 8 reveals a profound transformation of the market architecture. While the year 2017 was marked by moderate dispersion, where banks were distributed in different strategic “pockets”, the year 2024 shows a clear strategic polarization.

The shift of the zero-coordinate beginning on the matrix for 2024 compared to 2017 is a direct consequence of structural changes in the sector. The fact that the average market share increased from 5.49% to 8.38% indicates that the arithmetic means of the sector has become a ‘moving target’. This methodological approach enables the identification of banks that managed to surpass the general trend of market growth. This implies a significant increase in mobility barriers: in conditions of high concentration, banking institutions must generate a significantly higher volume of assets and a level of operational efficiency just to maintain the status of an average market participant, which further marginalizes smaller and inefficient actors.

Consolidation in the Leader square: The most dominant trend is the movement of systemically important banks towards the upper right square. Banks that absorbed smaller competitors through mergers and acquisitions, such as OTP banka and NLB Komercijalna, not only increased their market share, but also managed to turn that size into operational efficiency. This confirms the views of Bikker and Bos (2008) that economies of scale in banking directly contribute to the stabilization of the profit position.

Strategic resilience: The migration of banks from the left quadrants (lower profitability) to the right in 2024 serves as the final evidence for Hypothesis H3. Although the crisis period of 2020 temporarily impaired performance, the banking sector entered 2024 more homogeneous and profitable, with more clearly defined leaders dictating the pace of the market game.

The findings of this research raise the question of the correlation between the size of a bank and its essential resilience. Although the results confirm that the “Leaders” show a higher degree of performance stability after the crisis, it remains an open question whether this is a consequence of their internal resistance to risks or solely the ability to more easily amortize external shocks through economies of scale and a dominant market position. The continuously high share of loans above 60% at systemically important banks suggests that their stability directly determines the stability of the entire financial system, which confirms the importance of the banking structure as a key factor of resilience in the Republic of Serbia.

Conclusion

The research conducted in this paper provided a comprehensive insight into the dynamics of the banking sector of the Republic of Serbia in the period from 2017 to 2024. Using the methodology of strategic groups, key changes in profitability, market power and capital structure were analyzed, which tested and confirmed the set research hypotheses. Based on the analysis, the following key conclusions can be drawn:

Confirmation of Hypothesis H1: Consolidation and acquisition processes have fundamentally changed the architecture of the market. The growth of the average market share of the leading banks from 5.49% to 8.38% and their migration to the "Leader" quadrant unequivocally confirm that capital accumulation has become the primary strategy for survival and growth. The formation of a strong nucleus around the "Top 5" banks has raised mobility barriers, making the position of smaller players more difficult.

Confirmation of Hypothesis H2: Despite the digital transformation and external shocks, the banking sector in Serbia has maintained a high degree of fidelity to the traditional mediation model. The stable participation of net loans in assets above 60% indicates that lending to the real sector and the population remains the main generator of income and the basis of the business model of most banks.

Confirmation of Hypothesis H3: The analysis showed that the decline in performance in 2020 and 2021 was temporary and cyclical in nature. The dramatic drop in the E/A ratio to 5.95% was a moment of extreme financial leverage, but the sector managed to regain ROA stability at 2.34% by 2024 with healthy recapitalization. This indicates a high adaptive capacity and strategic resilience of the sector.

The findings of this research raise the question of the correlation between the size of a bank and its essential resilience. Although the results confirm that the "Leaders" show a higher degree of performance stability after the crisis, it remains an open question whether this is a consequence of their internal resistance to risks or solely the ability to more easily amortize external shocks through economies of scale and a dominant market position. The continuously high share of loans above 60% at systemically important banks suggests that their stability directly determines the stability of the entire financial system, which confirms the importance of the banking structure as a key factor of resilience in the Republic of Serbia.

Based on the identified trends of concentration and strategic migrations, the research offers specific recommendations for macroprudential policy holders and management of banking institutions.

- For policymakers (NBS): It is necessary to continue careful monitoring of systemically important banks that form the 'strategic nucleus' of the market, since their high correlation and similar risk profiles can be a source of systemic vulnerability in conditions of extreme shocks. The regulator's focus should remain on preserving the capital 'shock absorber' (E/A), which has proven to be a key factor in resilience during 2020.
- For bank management: The results indicate that a mere increase in market share is no longer a guarantee of success if it is not accompanied by operational efficiency (ROA). The recommendation for smaller banks is to focus on market niches or accelerated digitization, in order to overcome the high mobility barriers that were formed by the consolidation of the sector.

A final insight into the matrices of strategic groups shows that the sector is moving towards a state of stable oligopolistic competition. Banks that have successfully weathered the transformation period are now shifting their focus from mere asset size to operational efficiency and risk management.

The obtained results lay a solid foundation, but at the same time indicate guidelines for future scientific research. Future research efforts should be directed towards the application of more advanced quantitative econometric methods, such as dynamic panel models, in order to statistically test the causal relationship between the level of market concentration and indicators of bank stability in the long run. Also, considering the accelerated digitization, it would be useful to include the “degree of digital maturity” as a new, non-financial variable for the formation of strategic groups on the domestic banking market in the following analyses.

In the coming years, further technological transformation can be expected, where digital maturity will become the new variable that will separate the leaders from the followers. Nevertheless, the results of this paper suggest that a stable capital base and a solid connection with the real sector will remain undisputed pillars of success in the banking market of Serbia.

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