

**Izvorni naučni članak**

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## UPRAVLJANJE POREZOM NA DOBITAK U BANKAMA U REPUBLICI SRBIJI

Violeta Todorović\*, Jasmina Bogićević i Stefan Vržina

Ekonomski fakultet Univerziteta u Kragujevcu

Upravljanje porezom na dobitak podrazumeva skup aktivnosti usmerenih na legalno minimiziranje ove obaveze. Usled fleksibilnosti poreskih zakona i razlika u oporezivanju dobitka između država, banke mogu biti u poziciji da značajno umanju svoje poresko opterećenje. Cilj rada je utvrđivanje efektivnog opterećenja porezom na dobitak u bankama u Republici Srbiji i ispitivanje uticaja oporezivanja dobitka na poslovanje banaka. Istraživanje sprovedeno na uzorku banaka, u periodu 2010-2016, je pokazalo da se efektivna stopa poreza na dobitak u bankama nalazi znatno ispod statutarne stope, najviše usled korišćenja poreskih podsticaja od strane države. Takođe, 25% opservacija je, uprkos ostvarenom dobitku pre oporezivanja, imalo efektivnu poresku stopu od 0%. Poslednje povećanje statutarne poreske stope u Republici Srbiji nije imalo uticaja na zaduženost banaka, ni u kratkom ni u dugom roku. To može biti indikator da se efekti poreskog štita ne uzimaju u obzir kada je statutarna poreska stopa relativno niska. U radu je, takođe, utvrđeno da efektivna poreska stopa nije u korelaciji sa profitabilnošću banaka.

**Ključne reči:** porez na dobitak, upravljanje porezom, efektivna poreska stopa, finansijska struktura, profitabilnost, banke

JEL Classification: G21, G30, H25, H26

### UVOD

Oporezivanje banaka predstavlja važan segment oporezivanja ekonomskih aktivnosti u jednoj državi. Značaj banaka kao poreskih obveznika proističe iz uloge koju banke, kao finansijski posrednici, imaju u društvu, značajne regulative koja je nametnuta bankarskom sektoru i monopolske pozicije u kojoj se bankarski sektor može nalaziti (Caminal, 2003).

Ekomska kriza iz 2008. dovela je do toga da mnoge zemlje preispituju, a neke uveliko reformišu oporezivanje finansijskih institucija (Keen, 2011). Značajan broj evropskih država, od kojih su mnoge vodeće ekomske snage, uvele su poseban porez na banke, kao dopunu uobičajenim korporativnim poreskim oblicima (Masiukiewicz & Dec, 2012).

Oporezivanje dobitka u bankama ima veći relativni značaj u odnosu na oporezivanje dobitka privrednih društava u realnom sektoru. Ovakav stav proizlazi iz činjenice da je, za razliku od većine aktivnosti realnog sektora, većina finansijskih aktivnosti oslobođena

\* Korespondencija: V. Todorović, Ekonomski fakultet Univerziteta u Kragujevcu, Liceja Kneževine Srbije 3, 34000 Kragujevac, Republika Srbija; e-mail: v.todorovic@kg.ac.rs

poreza na dodatu vrednost, koji predstavlja jedan od najznačajnijih poreskih oblika, pa je pri oporezivanju banaka pažnja više usmerena na ostvareni dobitak banke.

Shodno navedenom, predmet istraživanja u radu jesu aktivnosti upravljanja porezom na dobitak, implementirane sa ciljem minimiziranja obaveza za porez na dobitak u bankama. Upravljanje porezom na dobitak u bankama predstavlja kompleksno problemsko područje. Potreba za interdisciplinarnim znanjima (iz oblasti bankarskog menadžmenta, računovodstva, poreskog prava i sl) i česte promene poreske regulative argumentuju takav stav.

Imajući u vidu definisan predmet istraživanja, cilj rada je utvrđivanje efektivnog opterećenja porezom na dobitak u bankama u Republici Srbiji (RS) i ispitivanje uticaja oporezivanja dobitka na poslovanje banaka. Banke koje efikasno upravljaju porezom na dobitak bi trebale imati niže efektivne poreske stope i veću profitabilnost. Takođe, banke mogu koristiti povoljan poreski tretman pozajmljenih izvora finansiranja u cilju minimiziranja poreskog opterećenja.

U skladu sa definisanim predmetom i ciljem istraživanja, u radu su testirane sledeće istraživačke hipoteze:

- H1: Efektivna stopa poreza na dobitak u bankama je statistički značajno niža od statutarne stope poreza na dobitak.
- H2: Sa povećanjem statutarne stope poreza na dobitak dolazi do statistički značajnog povećanja zaduženosti banaka.
- H3: Postoji statistički značajna jaka negativna korelacija između efektivne stope poreza na dobitak i profitabilnosti banaka.

Istraživanje u radu je primarno empirijski orijentisano, s obzirom na to da obuhvata poslovne banke u RS u periodu 2010-2016. S tim u vezi, u radu dominiraju kvantitativne metode istraživanja, sa posebnim akcentom na savremene statističke metode.

Doprinos istraživanja ogleda se u dopuni postojećih, primarno inostranih, nalaza o upravljanju porezom na dobitak u bankama. Prema informacijama dostupnim

autorima, ovo je prvo istraživanje na teritoriji RS o upravljanju porezom na dobitak u bankama. Rezultati istraživanja mogu biti od koristi vlasnicima i menadžerima banaka u RS, kao i nacionalnim poreskim vlastima.

Izuvez uvida, zaključka i priloga, rad je strukturiran iz tri dela. U prvom delu su predstavljeni teorijski i empirijski nalazi o oporezivanju dobitka banaka. Drugi deo rada se odnosi na metodologiju istraživanja. Treći deo obuhvata rezultate empirijskog istraživanja i diskusiju rezultata.

## TEORIJSKA I EMPIRIJSKA OSNOVA

### Oporezivanje dobitka banaka

Postupak oporezivanja ostvarenog dobitka banaka se, generalno, ne razlikuje u odnosu na oporezivanje dobitka privrednih društava iz realnog sektora. Pravnu osnovu za oporezivanje dobitka banaka predstavlja Zakon o porezu na dobit pravnih lica (Službeni glasnik Republike Srbije, 2017) sa pratećim podzakonskim aktima. U RS je važeći proporcionalni sistem oporezivanja dobitka banaka po statutarnoj poreskoj stopi od 15% (do 01. januara 2013. ova stopa je iznosila 10%).

Oporeziva osnovica (oporezivi dobitak) banaka utvrđuje se u poreskom bilansu, na osnovu korekcije dobitka pre oporezivanja iskazanog u bilansu uspeha banaka. Oporezivi dobitak iz poreskog bilansa se obično razlikuje u odnosu na dobitak pre oporezivanja iz bilansa uspeha, usled različitog tretmana pojedinih prihoda i rashoda u bilansu uspeha i poreskom bilansu. Pojedine kategorije prihoda i rashoda iskazane u zvaničnom bilansu uspeha se ne priznaju u poreskom bilansu, pojedine kategorije se u poreskom bilansu priznaju samo do propisane visine, dok se pojedinice kategorije u poreskom bilansu priznaju u različitom obračunskom periodu u odnosu na bilans uspeha.

Postojanje razlike između dobitka pre oporezivanja i oporezivog dobitka, kao i postojanje različitih poreskih podsticaja, ima za posledicu da efektivno

poresko opterećenje (odnos rashoda za porez na dobitak i dobitka pre oporezivanja) bude različito od statutarnog opterećenja. Stoga se efikasno upravljanje porezom na dobitak zasniva na maksimiziranju dobitka pre oporezivanja i minimiziranju oporezivog dobitka, odnosno, efektivnog poreskog opterećenja (Manzon & Plesko, 2002). Takođe, H. Huizinga (2004) navodi da sistem posebnog izveštavanja u poslovne i poreske svrhe dovodi do mogućnosti manipulisanja poreskim obavezama, pri čemu je ta mogućnost posebno izražena u bankarskom sektoru.

Razdvojenost izveštavanja u poslovne i poreske svrhe dovodi do specifičnih situacija u bankarskoj praksi. Tako je moguće da banka, uprkos ostvarenom dobitku pre oporezivanja, nema rashode za porez na dobitak. S druge strane, moguće je da se ostvareni gubitak pre oporezivanja, nakon korekcija u poreskom bilansu, transformiše u oporezivi dobitak i da po tom osnovu banka sa iskazanim gubitkom pre oporezivanja ima rashod za porez na dobitak.

Bilans uspeha banaka u RS, sastavljen u skladu sa Međunarodnim standardima finansijskog izveštavanja, sadrži ukupan rashod za porez na dobitak sastavljen od tekućeg poreskog rashoda i odloženog poreskog rashoda. Tekući poreski rashod predstavlja iznos rashoda za porez na dobitak koji se odnosi na odnosni obračunski period, dok odloženi porez predstavlja iznos poreza na dobitak koji se odnosi na buduće obračunske periode, nastao kao posledica priznavanja prihoda i rashoda u poreskom bilansu u različitim obračunskim periodima u odnosu na bilans uspeha.

## **Efikasnost upravljanja porezom na dobitak u bankama**

Upravljanje poreskim obavezama predstavlja važnu kategoriju bankarskog menadžmenta. M. Scholes, G. Wilson i M. Wolfson (1990) zaključuju da su banke motivisane da preduzimaju aktivnosti koje umanjuju poreske obaveze ukoliko su troškovi takvih aktivnosti manji od potencijalnih poreskih benefita.

Multinacionalne banke, čije filijale dominiraju i srpskim bankarskim tržištem, uključene su

u međunarodno poresko planiranje, sa ciljem minimiziranja poreskih obaveza na globalnom nivou. E. Thalassinos, B. Venediktova, D. Staneva-Petkova i V. Zampeta (2013) navode da su porezi nametnuti u zemlji domaćinu važan faktor pri donošenju odluke multinacionalnih banaka o nastupu u zemlji domaćinu u formi ogranka ili filijale. E. Cerutti, G. Dell'Arccia i M. Peria (2007) su pokazali da su banke spremnije da nastupe u formi ogranka u zemljama sa visokim korporativnim porezima.

Poput privrednih društava iz realnog sektora, banke mogu upravljati poreskim obavezama kroz upravljanje nivoom zaduženosti. H. De Angelo i R. Stulz (2015) pokazuju da banke, usled prirode svoje delatnosti, imaju viši nivo zaduženosti u odnosu na privredna društva iz realnog sektora. Supstituisanje sopstvenih izvora pozajmljenim izvorima finansiranja povećava kamatne rashode koji su, za razliku od isplaćenih dividendi, priznati kao odbitna stavka u poreskom bilansu. Korišćenje pozajmljenih izvora u cilju umanjenja obaveza za porez na dobitak poznato je kao tehnika dužničkog poreskog štita (Pyles, 2014, 262).

Multinacionalne banke upravljaju stepenom zaduženosti svojih filijala kroz organizovanje intragrupnog kreditiranja. Ovakav koncept zasnovan je na kreditiranju filijale inkorporiranoj u zemlji sa visokom stopom poreza na dobitak od strane filijale iste bankarske grupe inkorporirane u zemlji sa niskim opterećenjem porezom na dobitak. Na ovaj način se iznos obračunate kamate po osnovu kredita transferiše u zemlju sa povoljnijim poreskim tretmanom, čime se iznos plaćenog poreza na dobitak na nivou bankarske grupe minimizira. A. Demirguc-Kunt i H. Huizinga (2001) zaključuju da su ovakve tehnike premeštanja profita u zemlje sa relativno niskim poreskim stopama česta praksa multinacionalnih banaka, što predstavlja značajnu komparativnu prednost ovih bankarskih grupa.

Za razliku od privrednih društava iz realnog sektora, banke karakteriše znatno veći stepen nametnute regulative, pa se zaduživanje banaka u cilju umanjenja poreskih obaveza mora sprovoditi paralelno sa naporima za održanjem regulatornog nivoa kapitala, odnosno, obezbeđenjem adekvatnosti kapitala.

J. Graham, J. Raedy i D. Shackelford (2012) naglašavaju da su banke spremne da zanemare poreske pogodnosti u slučajevima kada bi smanjenje poreskih obaveza negativno uticalo na regulatornu poziciju banaka.

Banke mogu koristiti i druge vrste rashoda za svrhe umanjenja obaveza za porez na dobitak. Na primer, banke mogu ugovarati određene usluge sa povezanim pravnim licima, kao što su usluge istraživanja tržišta ili konsultantske usluge. Ovakve transakcije uvećavaju rashode i umanjuju oporezivu osnovicu banke, što dovodi do smanjenja obaveze za porez na dobitak.

Korišćenje poreskih kredita po osnovu ostvarenih gubitaka u prethodnim godinama i po osnovu investicija su tehnike podjednako dostupne privrednim društvima iz realnog sektora i finansijskim institucijama. Međutim, za razliku od privrednih društava iz realnog sektora, banke predstavljaju značajne investitore u akcije domaćih organizacija i državne hartije od vrednosti. Prihodi od dividendi i kamata, ostvareni po tom osnovu, izuzeti su od plaćanja poreza na dobitak u RS.

Minimiziranje obaveza za porez na dobitak, realizovano u legalnim okvirima, trebalo bi imati pozitivne efekte na profitabilnost banaka. S druge strane, povećanje rashoda za porez na dobitak ne mora negativno uticati na profitabilnost banaka, ukoliko su banke u mogućnosti da poresko opterećenje transferišu na svoje klijente kroz rast cene bankarskih usluga. Ukoliko takav transfer izostane, G. Capelle-Blancard i O. Havrylchyk (2014) napominju da poresko opterećenje snose akcionari banaka ili čak zaposleni u bankama.

U kontekstu tržišne vrednosti, M. Desai (2005) ističe da tržište često ne reaguje pozitivno na efikasno upravljanje porezom na dobitak, sumnjajući u malverzacije uprave, odnosno, u legalnost sprovedenih postupaka upravljanja poreskim obavezama. Ipak, pitanje tržišne reakcije na upravljanje porezom na dobitak banaka u RS je od sekundarnog značaja, imajući u vidu da su akcije malog broja banaka kotirane na Beogradskoj berzi.

U poslednjih nekoliko decenija, u literaturi su razvijena brojna merila efikasnosti upravljanja porezom na dobitak. J. Slemrod (2004) zaključuje da je efektivna poreska stopa ključno merilo efikasnosti menadžera poreskih odeljenja u velikim organizacijama. M. Hanlon i S. Heitzman (2010) navode tri najčešće korišćene vrste efektivnih stopa poreza na dobitak:

- ukupna efektivna poreska stopa (odnos ukupnog rashoda za porez na dobitak i dobitka pre oporezivanja),
- tekuća efektivna poreska stopa (odnos tekućeg poreza na dobitak i dobitka pre oporezivanja), i
- gotovinska efektivna poreska stopa (odnos odliva za porez na dobitak i dobitka pre oporezivanja).

S obzirom na to da ukupna efektivna poreska stopa pri obračunu obuhvata i odloženi poreski rashod, kao bezgotovinsku stavku bilansa uspeha, a da gotovinska efektivna poreska stopa meša realne novčane kategorije (odliv za porez na dobitak) i obračunske kategorije (dubitak pre oporezivanja), u radu će biti korišćena tekuća efektivna poreska stopa.

## Pregled empirijskih istraživanja

Interesovanje za upravljanje porezom na dobitak u cilju minimiziranja poreskih obaveza posebno je izraženo u zemljama sa visokim statutarnim stopama poreza na dobitak, neretko višim od 30%. RS, sa statutarnom stopom od 15%, spada u zemlje sa umerenim stepenom poreskog opterećenja.

G. Yin (2003) primećuje da je efektivna poreska stopa kompanija iz finansijskog sektora, članica indeksa S&P 500, konstantno niža od federalne stope poreza na dobitak u SAD. Drugo istraživanje u SAD, u kojem je praćena desetogodišnja gotovinska efektivna poreska stopa, pokazalo je da su finansijske institucije među kompanijama sa najnižim stepenom opterećenja porezom na dobitak. Dodatno, dve od tri uzorkovane kompanije sa najnižom desetogodišnjom gotovinskom stopom su finansijske institucije (Dyrenq, Hanlon & Maydew, 2008).

G. Schepens (2016) nalazi značajan uticaj poreskog tretman dividendi i kamata na stepen zaduženosti

banaka - sa smanjenjem jaza u poreskom tretmanu između ove dve kategorije, dolazi do smanjenja stepena zaduženosti banaka. T. Hemmelgarn i D. Teichmann (2014) su pronašli statistički značajan uticaj kretanja statutarne stope poreza na dobitak na stepen zaduženosti banaka. Oni nalaze da, u periodu od tri godine nakon povećanja statutarne poreske stope, dolazi do povećanja stepena zaduženosti banaka. A. Schandlbauer (2017) nalazi da povećanje opterećenja banaka porezom na dobitak dovodi do povećanja stepena zaduženosti bolje kapitalizovanih banaka, primarno kroz nedepozitne pozajmljene izvore finansiranja.

J. Merz i M. Overesch (2016) potvrđuju da oporezivanje dobitka banaka može biti značajna determinanta njihove profitabilnosti. Oni su posmatrali filijale multinacionalnih banaka u 131 zemlji i otkrili da filijale u zemljama sa višim statutarnim stopama poreza na dobitak imaju niži stepen profitabilnosti.

Više istraživanja ispitivalo je vezu efektivnog opterećenja porezom na dobitak i profitabilnosti banaka. Istraživanje sprovedeno na švajcarskim bankama je pokazalo da je uticaj efektivne poreske stope na profitabilnost banaka negativan, mada relativno mali (Dietrich & Wanzenried, 2011). Drugo istraživanje je pokazalo da efektivna poreska stopa negativno utiče na profitabilnost banaka u zemljama sa srednjim i niskim nivoom dohotka (Dietrich & Wanzenried, 2014). S druge strane, C. Gaganis, F. Pasiouras i A. Tsaklanganos (2013) nalaze pozitivnu nelinearnu povezanost efektivnog poreskog opterećenja i profitabilnosti banaka.

Značajni su i zaključci po kojima opterećenje porezom na dobitak ne utiče na profitabilnost banaka, usled mogućnosti banaka da poresko opterećenje prebacuje na svoje klijente. A. Demirguc-Kunt i H. Huizinga (1999) smatraju da su banke u mogućnosti da u potpunosti prebacuju poreski teret na svoje klijente. U. Albetrazzi i L. Gambacorta (2010) zaključuju da banke oko 90% opterećenja prebacuju na klijente. V. Chiorazzo i C. Milani (2011) zaključuju da banke mogu opterećenje porezom na dobitak i porezom na dodatu vrednost prebaciti na klijente kroz povećanje cena bankarskih usluga.

## METODOLOGIJA ISTRAŽIVANJA

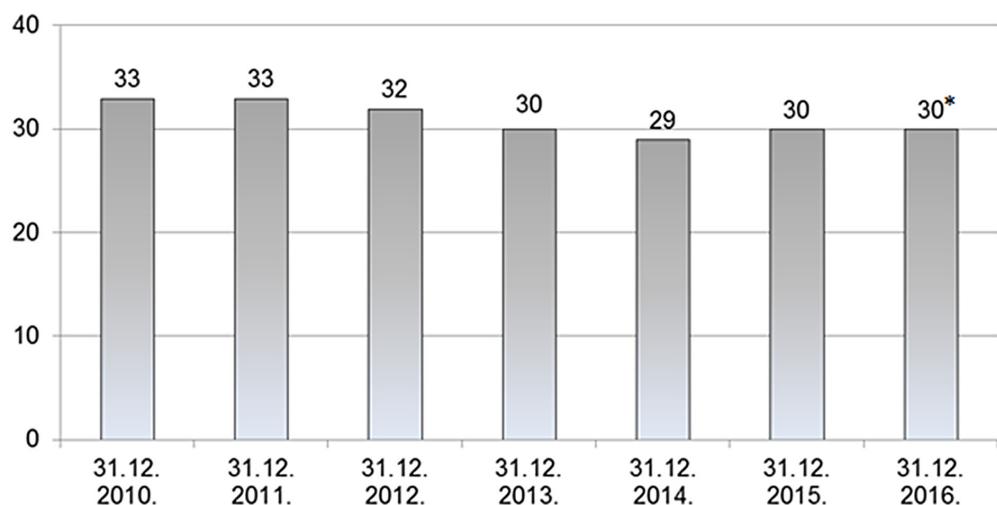
Istraživanje o upravljanju porezom na dobitak je empirijski orijentisano. Apstrahujući ostale mikroekonomiske i makroekonomiske varijable, u istraživanju će biti ispitano kako upravljanje porezom na dobitak utiče na efektivnu poresku stopu, stepen zaduženosti i profitabilnost banaka.

Za potrebe istraživanja je formiran uzorak, sačinjen od svih poslovnih banaka koje su na teritoriji RS bile aktivne u periodu 2010-2016, na krajevima posmatranih godina. Na taj način, formiran je nebalansirani panel podataka koji je inicijalno sačinjen od 217 opservacija, od čega je u slučaju 131 opservacije zabeležen dobitak pre oporezivanja. Kako bi se izbeglo postojanje negativnih (i neupotrebljivih) efektivnih poreskih stopa, ove stope su računate samo za opservacije sa dobitkom pre oporezivanja. Broj aktivnih banaka po godinama je prikazan na Slici 1. Spisak svih banaka obuhvaćenih istraživanjem, po godinama, dat je u Prilogu.

Postoji nekoliko argumenata za uzorkovanje banaka koje su povremeno tokom posmatranog perioda ostvarivale gubitak pre oporezivanja. Prvo, sve banke u RS, nezavisno od njihove profitabilnosti, podnose poreski bilans i poresku prijavu za porez na dobitak. Drugo, moguće je da banke sa računovodstvenim gubitkom pre oporezivanja imaju oporezivi dobitak i obavezu za porez na dobitak. Treće, moguće je da su banke koje su bile profitabilne u svakoj od sedam posmatranih godina ostvarile gubitke u nekoj od prethodnih godina, pa umanjuju poreske obaveze po osnovu prenetih poreskih gubitaka.

Istraživanje je sprovedeno korišćenjem javno dostupnih podataka. Podaci o bankarskom sektoru preuzeti su sa zvanične internet prezentacije Narodne banke Srbije, dok su finansijski podaci (iz pojedinačnih finansijskih izveštaja) o bankama preuzeti sa zvanične internet prezentacije Agencije za privredne registre RS. Za određivanje statističke značajnosti su korišćeni nivoi poverenja  $\alpha = 0,10$ ,  $\alpha = 0,05$  i  $\alpha = 0,01$ .

Pored korišćenja deskriptivne statistike i testova normalnosti rasporeda, testiranje postavljenih



\* Na dan 31. decembar 2016, dozvolu za rad je imala 31 banka - ipak, jedna od njih (Bank of China Srbija) nije aktivno poslovala u 2016. (osnovana 22. decembra 2016), pa stoga nije uključena u uzorak.

**Slika 1** Broj aktivnih banaka u RS, u periodu 2010-2016.

Izvor: Autori

istraživačkih hipoteza je sprovedeno na sledeći način:

- prva hipoteza je testirana kroz poređenje efektivnih i statutarnih stopa poreza na dobitak, korišćenjem odgovarajućih testova za poređenje dve zavisne grupe (upareni t-test ili Vilkoksonov test ranga);
- druga hipoteza je testirana kroz poređenje stepena zaduženosti banaka u momentu povećanja statutarne stope poreza na dobitak (31. decembar 2012) sa stepenom zaduženosti banaka u momentu od jedne godine (31. decembar 2013), dve godine (31. decembar 2014) i tri godine (31. decembar 2015), nakon povećanja statutarne stope poreza na dobitak, korišćenjem testova za poređenje dve nezavisne grupe (t-test za nezavisne uzorce ili Man-Vitni test) - kao aproksimacija stepena zaduženosti je korišćen racio zaduženosti, tj. odnos ukupnih obaveza i ukupne aktive banke; i
- treća hipoteza je testirana korišćenjem Pirsonovog i Spirmanovog koeficijenta korelacije, pri čemu je kao aproksimacija profitabilnosti korišćen ROA, tj. odnos neto dobitka i ukupne aktive banke.

## REZULTATI ISTRAŽIVANJA I DISKUSIJA

Rezultati dobijeni istraživanjem su interpretirani u skladu sa postavljenim istraživačkim hipotezama. Za potrebe ispitivanja validnosti prve istraživačke hipoteze, formirana je Tabela 1 sa deskriptivnom statistikom tekućih efektivnih poreskih stopa i rezultatima testa značajnosti razlika između statutarne i efektivne poreske stope.

S obzirom na to da posmatrana varijabla, efektivna poreska stopa, nema normalnu raspodelu, rezultate je pogodnije komentarisati sa aspekta medijane nego aritmetičke sredine. Primetno je da se efektivna poreska stopa prosečne banke u RS kontinuirano nalazi ispod statutarne poreske stope. Rezultati Vilkoksonovog testa pokazuju da je razlika između statutarne i efektivne poreske stope statistički značajna u skoro svim posmatranim godinama. Posmatrano na nivou celog uzorka, razlika je statistički značajna na nivou od 1%.

Rezultati se bitnije ne menjaju ukoliko se iz analize isključe 33 opservacije u kojima je efektivna poreska stopa bila 0%, odnosno, opservacije u kojima, uprkos ostvarenom dobitku pre oporezivanja, nije obračunat

**Tabela 1** Testiranje statističke značajnosti razlike između statutarne poreske stope i tekuće efektivne poreske stope

Godina	Statutarna poreska stopa	n	Tekuća efektivna poreska stopa - deskriptivna statistika	Medijana	Minimum	Maksimum	Vilkoksonovo Z
<b>Panel A. Opservacije sa pozitivnim rezultatom (dubitkom) pre oporezivanja</b>							
2010	10%	21	8,552%	6,130%	0,000%	65,833%	***-2,834
2011	10%	21	6,827%	5,612%	0,000%	27,167%	**-2,104
2012	10%	21	9,243%	6,948%	0,000%	49,778%	-1,582
2013	15%	15	3,163%	0,130%	0,000%	12,655%	***-3,447
2014	15%	17	7,820%	1,330%	0,000%	70,130%	***-2,726
2015	15%	17	12,490%	1,114%	0,000%	112,084%	**-2,018
2016	15%	19	3,588%	0,194%	0,000%	15,435%	***-3,804
<b>Ukupno</b>	<b>131</b>	<b>7,465%</b>	<b>4,821%</b>	<b>0,000%</b>	<b>112,084%</b>	<b>***-7,281</b>	
<b>Panel B. Opservacije sa pozitivnim rezultatom (dubitkom) pre oporezivanja i tekućom efektivnom poreskom stopom većom od 0%</b>							
2010	10%	18	9,978%	7,648%	0,131%	65,833%	**-2,373
2011	10%	17	8,434%	7,571%	0,032%	27,167%	-1,207
2012	10%	18	10,783%	8,526%	0,219%	49,778%	-0,936
2013	15%	8	5,931%	5,793%	0,130%	12,655%	**-2,521
2014	15%	13	10,226%	4,311%	0,011%	70,130%	**-2,132
2015	15%	12	17,694%	8,936%	0,014%	112,084%	-1,177
2016	15%	12	5,681%	4,075%	0,102%	15,435%	***-2,981
<b>Ukupno</b>	<b>98</b>	<b>9,979%</b>	<b>6,857%</b>	<b>0,011%</b>	<b>112,084%</b>	<b>***-5,236</b>	

Napomena: Oznaka n odnosi se na broj opservacija; \*, \*\*, \*\*\* se odnosi na statistički značajne rezultate na nivou 10%, 5% i 1%, respektivno.

Izvor: Autori

ni dinar tekućeg poreskog rashoda (Panel B). Interesantno je primetiti da se dve najveće efektivne poreske stope iz Tabele 1. (112,048% iz 2015. i 70,130% iz 2014) odnose na istu banku - Jugobanku Jugbanku.

Veći broj razloga može objasniti značajne razlike između statutarne i efektivne poreske stope u bankama. Banke koje ulože u osnovna sredstva više od milijardu dinara i zaposle dodatnih stotinu radnika imaju pravo na umanjenje obaveze za porez na dobitak po osnovu poreskog podsticaja. Najvećim bankama u RS ove investicione kvote su relativno lako dostižne.

Značajno umanjenje obaveza za porez na dobitak u bankama posledica je umanjenja tekućeg poreskog rashoda po osnovu ostvarenih gubitaka u prethodnim godinama. Poreske pogodnosti po osnovu ostvarenih gubitaka banke imaju pravo da koriste u periodu od

pet godina nakon godine u kojoj je gubitak iskazan. O značaju ostvarenih gubitaka govori podatak da je od 29 banaka koje su u periodu 2010-2016, kontinuirano poslovale, samo šest banaka (AIK banka, Banca Intesa, Erste Bank, ProCredit Bank, Raiffeisen banka i Unicredit bank Srbija) u svakoj godini ostvarilo dobitak pre oporezivanja.

Analizom napomena uz finansijske izveštaje banaka (dela o usklađivanju rezultata pre oporezivanja i oporezive osnovice) primetno je da, posebno kod velikih banaka, frekventnu i značajnu stavku predstavlja korekcija prihoda. Iako se u napomenama obično ne navodi eksplicitan razlog takve korekcije, racionalno je prepostaviti da je reč o prihodima po osnovu kamata na državne finansijske instrumente i dividendi isplaćenih od strane pravnih lica rezidenata RS.

S druge strane, u slučaju 27 opservacija je gubitak pre oporezivanja iz bilansa uspeha transformisan u oporezivi dobitak u poreskom bilansu, pa je iskazan tekući poreski rashod (veći od nula) uprkos ostvarenom gubitku pre oporezivanja. Iako je moguće identifikovati više razloga, ključni razlog ovakve okolnosti nalazi se u oporezivanju kapitalnih dobitaka banaka, koji se oporezuju u momentu oporezivanja rezultata, ali nezavisno od ostvarenog rezultata (dubitka ili gubitka) iz ostalih aktivnosti banaka.

Iz navedenog je moguće zaključiti da banke u RS relativno efikasno upravljaju porezom na dobitak, odnosno, da u značajnoj meri koriste legalne mogućnosti umanjenja obaveza za porez na dobitak. Stoga se prva istraživačka hipoteza potvrđuje.

Za potrebe testiranja validnosti druge istraživačke hipoteze, potrebno je ispitati stepen zaduženosti banaka u RS na krajevima posmatranih godina. Deskriptivna statistika racija zaduženosti banaka i rezultati neparametarskog Man-Vitni testa (korišćenog usled nepostojanja normalne raspodele varijable racio zaduženosti) prikazani su u Tabelama 2. i 3.

Prema podacima iz Tabele 2, primetno je da su banke u RS visoko zadužene, u skladu sa specifičnostima delatnosti. U svim posmatranim godinama, medijana racija zaduženosti bila je veća od 80%. Ipak, prisutne su i značajne ekstremne vrednosti, primarno u manjim bankama. Minimalne vrednosti racija zaduženosti u periodu 2010-2011, odnose se na JUBMES banku, a u periodu 2012-2016, na Jugobanku Jugbanku. Jedina opservacija sa racijom zaduženosti 1,000 odnosi se na Agrobanku, koja je na kraju 2011. iskazala gubitak iznad visine kapitala, a u 2012, oduzeta joj je dozvola za rad.

Rezultati Man-Vitni testova, prikazani u Tabeli 3, pokazuju da ni u jednom od posmatranih perioda nije došlo do statistički značajnog povećanja zaduženosti banaka u RS. U nastavku istraživanja su izvršena dva dodatna testiranja - jedno je obuhvatilo samo banke koje su kontinuirano poslovale u periodu 2012-2015. (Panel B), dok je drugo obuhvatilo isključivo banke sa najmanjim racijom zaduženosti, odnosno, najvećim kapacitetom dodatnog zaduživanja (Panel C).

Rezultati ovih istraživanja ne razlikuju se značajnije od prvobitnih rezultata.

**Tabela 2** Deskriptivna statistika za racio zaduženosti banaka u RS u periodu 2010-2016.

Godina	n	Aritmetička sredina	Medijana	Minimum	Maksimum
2010	33	0,788	0,806	0,443	0,927
2011	33	0,793	0,807	0,447	1,000
2012	32	0,782	0,813	0,167	0,982
2013	30	0,774	0,820	0,146	0,925
2014	29	0,768	0,820	0,172	0,874
2015	30	0,762	0,803	0,182	0,880
2016	30	0,780	0,812	0,298	0,912
Ukupno	217	0,779	0,807	0,146	1,000

Napomena: Oznaka n odnosi se na broj opservacija.

Izvor: Autori

Očigledno je da menadžeri banaka u RS u svoje finansijske odluke nisu inkorporirali efekte povećanja statutarne stope poreza na dobitak izražene kroz povećanje benefita po osnovu poreskog štita. Jedan od razloga zašto menadžeri banaka nisu dali finansijski značaj povećanju statutarne stope nalazi se u činjenici da bankarskim sistemom RS dominiraju filijale stranih banaka, koje potiču iz zemljama sa znatno višim statutarnim poreskim stopama. U vreme povećanja statutarne poreske stope (1. januar 2013) najveći broj banaka u RS predstavljale su filijale grčkih, austrijskih, francuskih i italijanskih multinacionalnih bankarskih grupa. Prema podacima računovodstvene kompanije Ernst & Young (2013), u 2013, dobitak kompanija u ovim zemljama je trpeo sledeća poreska opterećenja:

- u Grčkoj je statutarna poreska stopa iznosila 26%,
- u Austriji je statutarna poreska stopa iznosila 25%,
- u Francuskoj je statutarna poreska stopa iznosila 33,33%, koja se uvećava za varijabilni dopunski porez, i
- u Italiji je statutarna poreska stopa iznosila 27,5%, koja se uvećava za dopunski regionalni porez na dobitak.

**Tabela 3** Testiranje statističke značajnosti razlike u stepenu zaduženosti banaka u RS u različitim godinama

Godina 1	n	Godina 2	n	Man-Vitnijev U	Z
<b>Panel A. Sve banke koje su poslovale u posmatranim godinama</b>					
2012	32	2013	30	472,000	-0,113
2012	32	2014	29	449,000	-0,217
2012	32	2015	30	437,000	-0,606
<b>Panel B. Banke koje su poslovale u periodu 2012-2015. godina</b>					
2012	29	2013	29	408,000	-0,194
2012	29	2014	29	418,000	-0,039
2012	29	2015	29	411,000	-0,148
<b>Panel C. Deset banaka sa najmanjim racijom zaduženosti na dan 31.12.2012.</b>					
2012	10	2013	10	46,000	-0,302
2012	10	2014	10	50,000	0,000
2012	10	2015	10	50,000	0,000

Napomena: Oznaka n odnosi se na broj opservacija; \*, \*\*, \*\*\* se odnosi na statistički značajne rezultate na nivou 10%, 5% i 1%, respektivno.

Izvor: Autori

U upravnim i izvršnim odborima filijala pomenutih multinacionalnih banaka u RS nalazi se značajan broj menadžera iz pomenutih zemalja. S obzirom na to da je u tim zemljama poresko opterećenje dobitka značajno veće, povećanje statutarne stope poreza na dobitak u RS sa 10% na 15% očigledno nije ozbiljnije razmatrano od strane menadžera banaka.

Zaduživanje banaka podrazumeva postojanje fiksnih rokova dospeća obaveza i, generalno, prioritet u naplati u odnosu na sopstvene izvore finansiranja. Takvi negativni efekti su očigledno od strane menadžera banaka u RS više valorizovani nego pozitivni poreski efekti dodatnog zaduživanja. S obzirom na to da nije došlo do statistički značajnog povećanja zaduženosti banaka nakon povećanja statutarne poreske stope, druga istraživačka hipoteza nije potvrđena.

Za potrebe testiranja validnosti treće istraživačke hipoteze, u Tabeli 4 je prikazana deskriptivna statistika za ROA banaka u analiziranom periodu. Za razliku od umerenih pozitivnih prinosa, u skoro svakoj posmatranoj godini je postojala opservacija sa ekstremno negativnom stopom neto prinosa na ukupnu imovinu.

Interesantno je da se minimalna vrednost ROA (-142,145%) odnosi na Srpsku banku u 2014, dok se maksimalna vrednost (5,222%) odnosi na istu banku u 2015. Takođe, i Telenor banka, koja je imala najniže ROA u 2013, nakon gubitaka u naredne dve godine i promene vlasnika, imala je najniže ROA i u 2016.

U Tabeli 5 prikazani su rezultati korelace analize između tekuće efektivne poreske stope i ROA banaka u RS. Prikazani su Pirsonovi koeficijenti  $r$  i Spirmanovi koeficijenti  $\rho$ , a prema testovima normalnosti (koji su pokazali odsustvo normalne distribucije kod većine posmatranih varijabli, i po godinama i ukupno), pouzdano je osloniti se na Spirmanov koeficijent  $\rho$ . Za interpretiranje dobijenih koeficijenata će biti korišćeni Koenovi kriterijumi (Hemphill, 2003), po kojima koeficijent korelacione:

- između 0,10 i 0,29 ukazuje na slabu korelacionu vezu,
- između 0,30 i 0,50 ukazuje na umerenu korelacionu vezu, i
- veći od 0,50 ukazuje na jaku korelacionu vezu.

**Tabela 4** Deskriptivna statistika za ROA banaka u RS u periodu 2010-2016.

Godina	n	Aritmetička sredina	Medijana	Minimum	Maksimum
<b>Panel A. Sve opservacije u posmatranim godinama</b>					
2010	33	-0,447%	0,325%	-8,539%	3,949%
2011	33	-1,314%	0,375%	-47,833%	3,062%
2012	32	-2,130%	0,144%	-55,737%	2,898%
2013	30	-6,492%	-0,105%	-141,310%	3,158%
2014	29	-6,697%	0,126%	-142,145%	2,735%
2015	30	-1,867%	0,105%	-17,186%	5,222%
2016	30	-0,956%	-0,396%	-11,851%	2,579%
<b>Ukupno</b>	<b>217</b>	<b>-2,765%</b>	<b>0,217%</b>	<b>-142,145%</b>	<b>5,222%</b>
<b>Panel B. Opervacije sa pozitivnim rezultatom pre oporezivanja</b>					
2010	21	1,235%	1,081%	0,001%	3,949%
2011	21	1,458%	1,448%	0,217%	3,062%
2012	21	1,116%	1,195%	0,019%	2,898%
2013	15	1,224%	1,082%	0,047%	3,158%
2014	17	0,903%	0,392%	0,031%	2,735%
2015	17	1,365%	1,012%	0,001%	5,222%
2016	19	1,225%	1,368%	0,050%	2,579%
<b>Ukupno</b>	<b>131</b>	<b>1,223%</b>	<b>1,095%</b>	<b>0,001%</b>	<b>5,222%</b>

Napomena: Oznaka n odnosi se na broj opervacija.

Izvor: Autori

Posmatrano na ukupnom nivou (131 opervacija), može se zaključiti da ne postoji jaka korelacija između efektivne poreske stope i ROA. Spirmanov koeficijent korelacije  $\rho$  ukazuje na slabu i značajnu pozitivnu vezu između posmatranih varijabli. Posmatrano po godinama, jedino je u 2013. ostvarena značajna i jaka, premda pozitivna, korelacija.

Glavni razlog odsustva jake korelacije na nivou celog uzorka, treba tražiti u činjenici da čak 25,19% opervacija (33 od 131 opervacija) ima efektivnu poresku stopu jednaku nuli. Stoga su u nastavku istraživanja ove 33 opervacije isključene iz analize, pa je koreaciona analiza sprovedena sa preostalih 98 opervacija (Panel B).

Na nivou od 98 opervacija, prisutna je statistički značajna negativna veza između posmatranih varijabli u dve godine. Ipak, ni u jednoj godini ovakva negativna veza nije bila jaka. Na nivou celog uzorka,

jedino je značajan Pirsonov koeficijent korelacije  $r$ , mada on signalizira slabu korelaciju. S obzirom na to da je zaključeno da ne postoji statistički značajna jaka negativna povezanost između efektivne poreske stope i ROA u bankama u RS, treća istraživačka hipoteza nije potvrđena.

## ZAKLJUČAK

Istraživanje u ovom radu obuhvatilo je 34 banke koje su poslovale u RS u periodu 2010-2016, sa ciljem ispitivanja efikasnosti upravljanja porezom na dobitak u bankarskom sektoru.

U radu je pokazano da se efektivno opterećenje porezom na dobitak u prosečnoj banci u RS kontinuirano nalazi ispod statutarnog opterećenja. Štaviše, čak 25% opervacija sa ostvarenim dobitkom

**Tabela 5** Rezultati korelace analize između tekuće efektivne poreske stope i ROA racija banaka u RS u periodu 2010-2016.

Godina	n	Pirsonovo r	Spirmanovo rho
<b>Panel A. Opservacije sa pozitivnim rezultatom (dubitkom) pre oporezivanja</b>			
2010	21	-0,145	0,192
2011	21	-0,039	0,190
2012	21	-0,250	-0,095
2013	15	***0,774	***0,674
2014	17	-0,098	0,153
2015	17	-0,247	0,109
2016	19	0,365	0,349
<b>Ukupno</b>	<b>131</b>	<b>-0,088</b>	<b>***0,275</b>
<b>Panel B. Opservacije sa pozitivnim rezultatom (dubitkom) pre oporezivanja i tekućom efektivnom poreskom stopom većom od 0%</b>			
2010	18	-0,158	0,183
2011	17	**-0,496	*-0,426
2012	18	**-0,472	*-0,439
2013	8	**0,774	*0,667
2014	13	-0,186	0,066
2015	12	-0,358	-0,021
2016	12	***0,721	**0,692
<b>Ukupno</b>	<b>98</b>	<b>**-0,221</b>	<b>0,088</b>

Napomena: Oznaka n odnosi se na broj opservacija; \*, \*\*, \*\*\* se odnosi na statistički značajne rezultate na nivou 10%, 5% i 1%, respektivno.

Izvor: Autori

pre oporezivanja uspelo je da efektivnu poresku stopu svede na 0%. Rezultati istraživanja saglasni su sa zaključcima prethodnih istraživanja (Yin, 2003; Dyring *et al.*, 2008) o mogućnostima finansijskih institucija da izuzetno efikasno upravljaju obavezama za porez na dobitak.

Poslednje povećanje statutarne poreske stope u RS, sa 10% na 15%, nije imalo uticaja na finansijsku strukturu banaka. Analiza je pokazala da se učešće obaveza u pasivi banaka nije statistički značajno povećalo nakon povećanja statutarne stope, nezavisno od stepena kapitalizovanosti banaka. Ovakav nalaz je u suprotnosti sa zaključcima ranijih istraživanja

(Hemmelgarn & Teichmann, 2014; Schandlbauer, 2017). Prilikom poređenja dobijenih rezultata sa rezultatima prethodnih istraživanja, treba imati u vidu da je efektivno poresko opterećenje banaka u RS znatno niže od efektivnog poreskog opterećenja u pomenutim radovima.

Analizom u ovom radu je utvrđeno da između efektivne poreske stope i profitabilnosti banaka ne postoji jaka korelacija. Ovakav nalaz može biti indikator da oporezivanje nije značajna determinanta profitabilnosti banaka u RS. Važno je ukazati da su prethodna istraživanja (Demirguc-Kunt & Huizinga, 1999; Albetrazzi & Gambacorta, 2010; Chiarazzo & Milani, 2011), koja su pokazala da poresko opterećenje ne mora nužno negativno uticati na profitabilnost banaka bazirana na značajno različitim statističkim metodama.

Prezentovani rezultati, pak, imaju određena ograničenja. Istraživanje je bazirano na metodi uzorka kroz vremenski period od sedam godina. Takođe, korišćeno je samo po jedno merilo efikasnosti upravljanja porezom na dobitak, finansijske strukture i profitabilnosti. Moguće je da bi rezultati istraživanja bili drugačiji u slučaju drugačijeg vremenskog perioda ili primene drugačijih merila.

Verujemo da rezultati istraživanja mogu biti korisni brojnim interesnim grupama. Vlasnicima i menadžerima banaka u RS mogu koristiti informacije o uticaju poreza na dobitak na poslovanje banaka prilikom odlučivanja o budućim aktivnostima banke. Takođe, nacionalne poreske vlasti mogu imati koristi od istraživanja prilikom odlučivanja o načinu oporezivanja bankarskog sektora u RS.

Buduća istraživanja iz ove oblasti bi mogla uključiti druga merila efikasnosti upravljanja porezom na dobitak, poput ukupne ili gotovinske efektivne poreske stope. Interesantno bi bilo sprovođenje višestruke regresione analize u cilju ispitivanja uticaja efektivne poreske stope na ROA, ROE i neto kamatni prihod banaka. Dodatno, metodologija budućih istraživanja bi mogla uključiti anketiranje menadžera banaka o načinima upravljanja porezom na dobitak.

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**Violeta Todorović** je vanredni profesor na Ekonomskom fakultetu Univerziteta u Kragujevcu na predmetima Bankarstvo i Platni promet, gde je i doktorirala iz oblasti regulative banaka i bankarskih kriza. Glavne oblasti interesovanja su: bankarske krize, regulativa bankarskog poslovanja, upravljanje performansama banaka, i upravljanje rizicima finansijskih institucija

**Jasmina Bogićević** je vanredni profesor na Ekonomskom fakultetu Univerziteta u Kragujevcu na predmetima Finansijsko knjigovodstvo i Budžetsko i poresko računovodstvo. Doktorirala je na Ekonomskom fakultetu u Subotici Univerziteta u Novom Sadu, iz oblasti prevođenja stranih valuta i međunarodnog računovodstva. Glavne oblasti interesovanja su: finansijsko računovodstvo, specifična područja međunarodnog računovodstva, i budžetsko i poresko računovodstvo.

**Stefan Vržina** je istraživač-pripravnik na Ekonomskom fakultetu Univerziteta u Kragujevcu, gde je student doktorskih studija. Glavne oblasti interesovanja su: korporativne finansije, računovodstvo poreza, upravljanje poreskim obavezama i poreska evazija.

## PRILOG

Spisak aktivnih banaka u RS u periodu 2010-2016.

Naziv banke	Uzorkovani period	Naziv banke	Uzorkovani period
Addiko Bank	2010-2016	MTS banka	2010-2016
Agrobanka	2010-2011	NLB banka	2010-2016
AIK banka	2010-2016	Opportunity banka	2010-2016
Banca Intesa	2010-2016	OTP banka Srbija	2010-2016
Banka Poštanska štedionica	2010-2016	Piraeus Bank	2010-2016
Credit Agricole banka Srbija	2010-2016	Privredna banka Beograd	2010-2012
Direktna banka	2010-2016	ProCredit Bank	2010-2016
Expobank	2010-2016	Raiffeisen banka	2010-2016
Erste Bank	2010-2016	Razvojna banka Vojvodine	2010-2012
Eurobank	2010-2016	Sberbank Srbija	2010-2016
Findomestic banka	2010-2016	Societe Generale banka	2010-2016
Halkbank	2010-2016	Srpska banka	2010-2016
Jubanka	2010-2016	Telenor banka	2010-2016
JUBMES banka	2010-2016	Unicredit bank Srbija	2010-2016
Jugobanka Jugbanka	2010-2016	Univerzal banka	2010-2013
Komercijalna banka	2010-2016	Vojvođanska banka	2010-2016
Mirabank	2015-2016	VTB banka	2010-2016

Izvor: Autori

## INCOME TAX MANAGEMENT IN BANKS IN THE REPUBLIC OF SERBIA

Violeta Todorovic, Jasmina Bogicevic and Stefan Vrzina

*Faculty of Economics University of Kragujevac, Kragujevac, The Republic of Serbia*

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**Keywords:** income tax, tax management, effective tax rate, financial structure, profitability, banks

JEL Classification: G21, G30, H25, H26

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Violeta Todorovic\*, Jasmina Bogicevic and Stefan Vrzina

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### INTRODUCTION

The taxation of banks is an important issue of the taxation of economic activities in a country. The importance of banks as taxpayers stems from the role that banks, as financial intermediaries, have in society, a heavy regulation imposed on the banking sector and a potential monopoly power the banking sector may enjoy (Caminal, 2003).

The 2008 economic crisis has led many countries to reexamine, and some are largely reforming, the taxation of financial institutions (Keen, 2011). A number of European countries and some of the leading economic powers among them have introduced a special tax on banks in addition to the usual types of corporate tax (Masiukiewicz & Dec, 2012).

Income tax in banks has a greater relative importance than that in the real sector. This viewpoint stems from the fact that, unlike most real-sector activities, the majority of financial activities are exempt from

\* Correspondence to: V. Todorovic, Faculty of Economics  
University of Kragujevac, Liceja Knezevine Srbije 3, 34000  
Kragujevac, The Republic of Serbia;  
e-mail: v.todorovic@kg.ac.rs

value added tax, which is one of the most important tax types. Therefore, when taxing banks, the focus is primarily put on the reported bank income.

Accordingly, the subject matter of this paper is income tax management, implemented with the aim of minimizing the income tax liabilities of banks. Income tax management in banks is a complex issue. The need for interdisciplinary knowledge (in the fields of bank management, accounting, the tax law, etc.) and frequent changes in the tax regulation support this argument.

Bearing in mind the defined research subject, the objective of the paper is to calculate the effective tax burden of banks in the Republic of Serbia (RS) and examine the impact of income tax on banks' operations. The banks that have efficient income tax management should have lower effective tax rates and higher profitability. Furthermore, banks may use a tax-favorable treatment of borrowed financing sources in order to minimize the tax burden.

In line with the defined research subject and objective, the following research hypotheses are tested in the paper:

- H1: An effective income tax rate in banks is statistically significantly lower than the statutory income tax rate.
- H2: An increase in the statutory income tax rate leads to a statistically significant increase in bank leverage.
- H3: There is a statistically significant strong negative correlation between the effective income tax rate and bank profitability.

The research study carried out in this paper is primarily empirically oriented since it captures commercial banks in the RS in the period 2010-2016. In this regard, quantitative research methods, with a special focus put on modern statistical methods, are dominant in this paper.

The paper contributes to the existing, primarily foreign, findings on income tax management in banks. According to the information available to the

authors, this is the first research in the RS on income tax management in banks. The research results can be of interest to the owners and managers of banks in the RS, as well as to the national tax authorities.

Beside the introduction, the conclusion, and the appendix, the paper consists of three parts. The first part is a presentation of the theoretical and empirical findings on bank income taxation. In the second part, the research methodology is explained. The third part presents the results of the empirical research and the discussion.

## THEORETICAL AND EMPIRICAL BACKGROUNDS

### Bank Income Taxation

Income taxation in banks does not substantially differ from the income taxation of the companies operating in the real sector. The legal basis for bank income taxation is the Corporate Income Tax Law (Službeni glasnik Republike Srbije, 2017) with the related by-laws. The RS applies the proportional system of bank income taxation at a statutory tax rate of 15% (until 1 January 2013, the rate was 10%).

The taxable base (taxable income) is calculated in the tax balance after the adjustment of pre-tax income from bank income statement. The taxable income from the tax balance is often different from the pre-tax income from the income statement due to the different treatment of a certain revenue and certain expenses in the income statement and the tax balance. Certain categories of revenue and expenses presented in the income statement are not allowed in the tax balance; some categories are allowed in the tax balance only up to the prescribed amount, whereas some categories are allowed in the tax balance in a different accounting period compared to the income statement.

A difference between pre-tax income and taxable income and many tax incentives leads to a difference between the effective tax burden (the ratio of the

income tax burden and pre-tax income) and the statutory burden. Therefore, effective income tax management tends to maximize pre-tax income and minimize taxable income and the effective tax burden (Manzon & Plesko, 2002). Furthermore, H. Huizinga (2004) notes that the system of separate reporting for business and tax purposes makes the possibility of manipulating tax liabilities particularly available to the banking sector.

Separate reporting for business and tax purposes leads to specific situations in banking practice. Thus, it is possible for a bank to have no income tax expense despite the reported pre-tax income. On the other hand, it is possible that, after an adjustment has been made in the tax balance, the realized pre-tax loss transforms into taxable income, so that the bank with the reported pre-tax loss has an income tax expense in the reporting period.

The income statement made by banks in the RS prepared in line with the International Financial Reporting Standards contains the total income tax expense consisting of the current tax expense and the deferred tax expense. The current tax expense represents the amount of the income tax expense attributable to the reporting accounting period, whereas deferred tax represents the amount of the income tax related to future accounting periods, arising from the recognition of the revenue and expenses in the tax balance in different accounting periods compared to the income statement.

## **Efficiency of Income Tax Management in Banks**

Tax liabilities management is an important category of banking management. M. Scholes, G. Wilson and M. Wolfson (1990) conclude that banks are motivated to take tax-reducing actions if the costs of such activities are lower than potential tax benefits.

Multinational banks, whose subsidiaries dominate the Serbian banking sector, are involved in international tax planning in order to minimize world-wide tax liabilities. E. Thalassinos, B. Venediktova, D. Staneva-Petkova and V. Zampeta (2013) argue that the taxes

levied in the host country are an important factor for multinational banks' decisions to operate in the host country as a branch or as a subsidiary. E. Cerutti, G. Dell'Ariccia and M. Peria (2007) show that banks tend to operate as a branch in countries with high corporate taxes.

Like the real-sector companies, banks can also manage their tax liabilities through leverage adjustment. H. De Angelo and R. Stulz (2015) show that, due to the specific nature of the industry they operate in, banks have higher leverage compared to the real-sector companies. Substituting equity sources with borrowed financing sources increases the interest expenses that are, contrary to dividends paid, a deductible item in the tax balance. Using borrowed sources in order to reduce tax liabilities is known as a debt tax shield mechanism (Pyles, 2014, 262).

Multinational banks manage the leverage of their subsidiaries through intragroup lending transactions. This concept is based on lending to a subsidiary incorporated in a country with a high-income tax rate by a subsidiary of the same banking group incorporated in a country with a low-income tax burden. In this way, the calculated interest incurred on loans is transferred to the country with a favorable tax treatment, thus minimizing the amount of the world-wide income tax paid. A. Demirguc-Kunt and H. Huizinga (2001) conclude that such mechanisms of income shifting to countries with relatively low tax rates are the common practice of multinational banks, which is a significant comparative advantage of these banking groups.

Contrary to the real-sector companies, banks are imposed a considerably higher regulation, so the tax-motivated borrowing of banks should be discussed in parallel with efforts to maintain the regulatory capital level and secure capital adequacy. J. Graham, J. Raedy and D. Shackelford (2012) argue that banks are willing to forgo tax benefits when a reduction in tax liabilities would adversely affect the regulatory position of banks.

Banks may also use the other types of costs in order to minimize income tax liabilities. For instance, banks may contract certain services, such as market

research services or consulting services, with related-party entities. Such transactions increase the bank's costs and decrease its taxable base, thus leading to a reduced income tax liability.

The prior years' tax loss carryforward and the investment tax carryforward are the mechanisms equally available to both real-sector companies and financial institutions. However, unlike real-sector companies, banks are important investors in the shares of domestic organizations and government securities. Income from dividends and interest incurred on such investments is income-tax exempt in RS.

The minimization of income tax liabilities conducted within the legal framework should have positive effects on bank profitability. On the other hand, an increase in the income tax expense does not necessarily have a negative impact on bank profitability if banks are able to shift the tax burden to their customers through increased prices for their banking services. If such a shift is missing, G. Capelle-Blancard and O. Havrylychuk (2014) note that the tax burden is borne by bank shareholders or employees.

Regarding market value, M. Desai (2005) points out the fact that the market does not often award efficient income tax management, suspecting managerial malfeasance or the legality of tax minimization activities. However, the issue of the market reaction to income tax management in banks in the RS is of little importance since the shares of only a few banks are quoted on the Belgrade Stock Exchange.

In the last few decades, a number of income tax management measures have been developed in the literature. J. Slemrod (2004) concludes that an effective tax rate is the key measure for the efficiency of tax department managers in large organizations. M. Hanlon and S. Heitzman (2010) list three most widely used types of effective income tax rates, namely:

- the total effective tax rate (a ratio of the total income tax expense and pre-tax income),
- the current effective tax rate (a ratio of the current income tax expense and pre-tax income), and

- the cash effective tax rate (a ratio of income tax paid and pre-tax income tax).

The current effective tax rate will be used in the paper because the total effective tax rate, *inter alia*, captures a deferred tax expense as a non-cash income statement position, whereas the cash effective tax rate mixes real categories (an income tax outflow) and accrual categories (pre-tax income).

## Review of the Empirical Research

An interest in income tax management in order to minimize tax liabilities is particularly evident in countries with high statutory income tax rates, often higher than 30%. With the statutory rate of 15%, the Republic of Serbia belongs to the countries with a moderate level of the tax burden.

G. Yin (2003) notes that the effective tax rate of the companies operating in the financial sector which are members of the S&P 500 index is continuously lower than the federal tax rate in the United States (US). Another US research study which tracked a ten-year cash effective tax rate shows that financial institutions are among the companies with the lowest income tax burden. Furthermore, two of the three sampled companies with the lowest ten-year cash rate are financial institutions (Dyreng, Hanlon & Maydew, 2008).

G. Schepens (2016) finds a significant impact of the tax treatment of dividends and interest rates on bank leverage - a reduction in the gap in the tax treatment between these two categories decreases bank leverage. T. Hemmelgarn and D. Teichmann (2014) find a statistically significant impact of the statutory income tax rate on bank leverage. They find that, in the period of three years after an increase in the statutory tax rate, there is an increase in bank leverage. A. Schandlbauer (2017) finds that an increased income tax burden in banks leads to an increase in the leverage of better-capitalized banks, primarily through non-deposit borrowing.

J. Merz and M. Overesch (2016) confirm that bank income taxation may be a significant determinant

of bank profitability. They studied the subsidiaries of multinational banks in 131 countries and found that the subsidiaries operating in the countries with higher statutory income tax rates have a lower level of profitability.

A number of research studies are dedicated to the study of the relation between the effective income tax burden and bank profitability. A research study conducted on Swiss banks shows that the effect of the effective tax rate on bank profitability is negative, though quite weak (Dietrich & Wanzenried, 2011). Another research shows that the effective tax rate negatively affects bank profitability in the middle- and low-income countries (Dietrich & Wanzenried, 2014). On the other hand, C. Gaganis, F. Pasiouras and A. Tsaklanganos (2013) find a positive non-linear correlation between the effective tax burden and bank profitability.

There are also important findings according to which the income tax burden will not derivate bank profitability due to the ability of banks to shift the tax burden to their clients. A. Demirguc-Kunt and H. Huizinga (1999) argue that banks are fully able to shift the tax burden to their clients. U. Albetrazzi and L. Gambacorta (2010) conclude that banks shift at least 90% of the burden to their clients. V. Chiorazzo and C. Milani (2011) conclude that banks can shift the income tax and value added tax burdens to their clients by increasing prices for their banking services.

## RESEARCH METHODOLOGY

The research study on income tax management is empirically oriented. Abstracting other microeconomic and macroeconomic determinants, the study will examine how income tax management affects the effective tax rate, leverage, and bank profitability.

For the research purposes, a sample is formulated, comprising each commercial bank active in the territory of the RS in the period 2010-2016, at the end of the sampled years. In this way, the unbalanced panel data that initially consist of 217 observations are

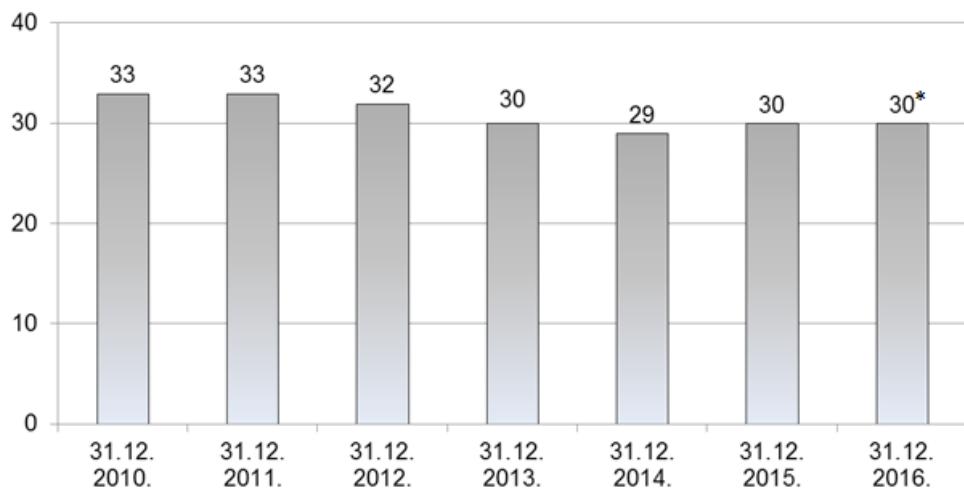
formed, while 131 of the 217 observations recorded pre-tax income. In order to avoid the existence of negative (and unusable) effective tax rates, these rates are calculated for the observations with pre-tax income only. The number of the active banks by years is shown in Figure 1. The list of all the banks included in the research study, presented by years, is given in the Appendix.

There are many arguments for sampling the banks that periodically reported a pre-tax loss during the observed period. First, all banks in the RS file the tax balance and the tax return for income tax regardless of their profitability. Second, it is possible that the banks with an accounting pre-tax loss have taxable income and an income tax liability. Third, it is possible that the banks that were profitable in each of the seven observed years had losses in some of the previous years and reduce their tax liabilities on the basis of the tax losses carryforward.

The research study is conducted by using the publicly available data. The data on the banking sector were retrieved from the official website of the National Bank of Serbia, while the financial data (from statutory financial statements) on the banks were retrieved from the official website of the Business Registers Agency of the RS. The confidence levels  $\alpha = 0.10$ ,  $\alpha = 0.05$ , and  $\alpha = 0.01$  are used to determine statistical significance.

Apart from descriptive statistics and the tests of normality, the testing of the defined research hypotheses is conducted as follows:

- the first hypothesis is tested by comparing the effective and the statutory income tax rates by using appropriate tests to compare the two dependent groups (i.e. the paired t-test or the Wilcoxon signed-rank test);
- the second hypothesis is tested by comparing the leverage of the banks at the time of the increase in the statutory income tax rate (31 December 2012) and the leverage of the banks at the time one year (31 December 2013), two years (31 December 2014) and three years (31 December 2015) after the increase in the statutory income tax rate by using



\*As at 31 December 2016, a total of 31 banks had a license – however, one of them (Bank of China Serbia) did not actively operate in 2016 (it was established on 22 December 2016), so that bank is not included in the sample.

**Figure 1** The number of active banks in the RS in the period 2010-2016

Source: Authors

appropriate tests to compare the two independent groups (the t-test for the independent samples, or the Mann-Whitney test) - the debt ratio, i.e. the ratio of the total bank liabilities and total assets is used as a leverage proxy, and

- the third hypothesis is tested by applying the Pearson and Spearman correlation coefficients, whereby ROA (the ratio of net income and the total assets of a bank) is used as a profitability proxy.

## RESEARCH RESULTS AND DISCUSSION

The obtained research results are interpreted following the defined research hypotheses. For the purposes of testing the validity of the first research hypothesis, Table 1 is formed, with the descriptive statistics of the current effective tax rates and the outcomes of the tests of the difference between the statutory and the effective tax rates.

Since the employed variable, i.e. the effective tax rate, does not follow a normal distribution, the results

are more appropriate to be commented on a median rather than arithmetic mean basis. It is noticeable that the effective tax rate of the average bank in the RS is continuously below the statutory tax rate. The Wilcoxon test outcomes show that the difference between the statutory and the effective tax rate is statistically significant in almost each sampled year. Observed at the whole-sample level, the difference is statistically significant at the 1% level.

The results of the analysis are not quite different if a total of the 33 observations with the effective tax rate of 0% (the observations in which, despite the pre-tax income, not one dinar of the current tax expense was calculated, Panel B) are excluded. It is interesting to note that the two largest effective tax rates in Table 1 (i.e. 112.048% in 2015 and 70.130% in 2014) refer to the one and the same bank - Jugobanka.

There are a number of the reasons why there is a significant difference between the statutory and the effective tax rates in the banks. The banks that invest more than one billion dinars in fixed assets and employ one additional hundred workers are allowed to reduce the income tax liability due to the

**Table 1** Testing the statistical significance of the difference between the statutory tax rate and the current effective tax rate

Year	Statutory tax rate	Current effective tax rate - descriptive statistics					Wilcoxon Z
		n	Arithmetic mean	Median	Minimum	Maximum	
<b>Panel A. The observations with a positive result (income) before tax</b>							
2010	10%	21	8.552%	6.130%	0.000%	65.833%	***-2.834
2011	10%	21	6.827%	5.612%	0.000%	27.167%	**-2.104
2012	10%	21	9.243%	6.948%	0.000%	49.778%	-1.582
2013	15%	15	3.163%	0.130%	0.000%	12.655%	***-3.447
2014	15%	17	7.820%	1.330%	0.000%	70.130%	***-2.726
2015	15%	17	12.490%	1.114%	0.000%	112.084%	**-2.018
2016	15%	19	3.588%	0.194%	0.000%	15.435%	***-3.804
Total	131	7.465%	4.821%	0.000%	112.084%	***-7.281	
<b>Panel B. The observations with a positive result (income) before tax and the current effective tax rate higher than 0%</b>							
2010	10%	18	9.978%	7.648%	0.131%	65.833%	**-2.373
2011	10%	17	8.434%	7.571%	0.032%	27.167%	-1.207
2012	10%	18	10.783%	8.526%	0.219%	49.778%	-0.936
2013	15%	8	5.931%	5.793%	0.130%	12.655%	**-2.521
2014	15%	13	10.226%	4.311%	0.011%	70.130%	**-2.132
2015	15%	12	17.694%	8.936%	0.014%	112.084%	-1.177
2016	15%	12	5.681%	4.075%	0.102%	15.435%	***-2.981
Total	98	9.979%	6.857%	0.011%	112.084%	***-5.236	

Note: n refers to the number of the observations; \*, \*\*, \*\*\* refer(s) to the statistically significant results at the levels of 10%, 5%, and 1%, respectively.

Source: Authors

investment tax incentive. The largest banks in the RS find these investment criteria relatively easy to meet.

A significant reduction in the income tax liabilities of the banks is a result of a reduction in the current tax expense in the name of the prior years' tax loss carryforward. Banks are allowed to use the tax loss carryforward in a period of five years after the year in which the loss is reported. The importance of the reported losses for a reduction in the tax burden can be illustrated with the fact that out of the 29 banks that continuously operated in the period from 2010 to 2016, only six banks (namely AIK banka, Banca Intesa, Erste Bank, ProCredit Bank, Raiffeisen banka and Unicredit bank Serbia) reported pre-tax income in each sampled year.

It is worth noting that the analysis of the notes to the banks' financial statements (the section on the reconciliation of pre-tax income to taxable income) shows that the adjustment of revenues represents an important and frequent item, particularly so in large banks. Although the notes usually do not state an explicit reason for such an adjustment, it is rational to assume that this is a result of the interest income on the government financial instruments and dividends paid by the legal entities residents in the RS.

On the other hand, there are 27 observations in which the pre-tax loss from the income statement has been transformed into taxable income in the tax balance, so the current tax expense (which is greater than zero) is reported despite the pre-tax loss. Although it is

possible to identify several reasons for this, the key reason is the taxation of the banks' capital gains taxed at the moment of income taxation, but independently of the reported income (a profit or a loss) from the other bank activities.

Previous paragraphs indicate that banks in the RS are relatively efficient in managing income tax as they use legal possibilities of reducing income tax liabilities to a significant extent. Therefore, the first research hypothesis is not rejected.

For the purposes of testing the validity of the second research hypothesis, it is necessary to examine the leverage of the banks in the RS at the end of the sampled years. The descriptive statistics of the banks' debt ratio and the outcomes of the non-parametric Mann-Whitney test (used due to a lack of a normal distribution of the debt ratio variable) are shown in Tables 2 and 3.

**Table 2** The descriptive statistics for the debt ratio of the banks in the RS in the period 2010-2016

Year	n	Arithmetic mean	Median	Minimum	Maximum
2010	33	0.788	0.806	0.443	0.927
2011	33	0.793	0.807	0.447	1.000
2012	32	0.782	0.813	0.167	0.982
2013	30	0.774	0.820	0.146	0.925
2014	29	0.768	0.820	0.172	0.874
2015	30	0.762	0.803	0.182	0.880
2016	30	0.780	0.812	0.298	0.912
Total	217	0.779	0.807	0.146	1.000

Note: n refers to the number of the observations.

Source: Authors

The data in Table 2 show that the banks in the RS are highly leveraged, in line with the specific features of the industry they operate in. In each sampled year, the debt ratio median is higher than 80%. However, there are important extreme values in the leverage of the banks, primarily in smaller banks. The minimum

values of the debt ratio in the period 2010-2011 relate to JUBMES bank, and in the period 2012-2016, to Jugobanka. The only observation with a debt ratio of 1.000 refers to Agrobanka, which, at the end of 2011, reported a loss above the owners' equity, only to have its license revoked in 2012.

The outcomes of the Mann-Whitney test, presented in Table 3, show that there is no statistically significant increase in bank leverage in the RS in any one observed period. In the next paragraphs of the research study, the two additional tests that were conducted - the one only including the banks that continuously operated in the period from 2012 to 2015 (Panel B) and the other only including the banks with the lowest debt ratios, i.e. the largest additional borrowing capacity (Panel C) - are presented. The results of these tests are not quite different from the original results.

It is obvious that bank managers in the RS did not incorporate the effects of the increasing statutory income tax rate in their financial decisions, expressed as an increase in the tax shield benefits. One of the reasons explaining why the bank managers failed to pay attention to the increase in the statutory rate rests on the fact that the Serbian banking system is dominated by the subsidiaries of foreign banks headquartered in the countries with quite higher statutory tax rates. At the time of the increase in the statutory tax rate (1 January 2013), the largest number of the Serbian banks were the subsidiaries of Greek, Austrian, French, and Italian multinational banking groups. According to Ernst & Young (2013), in 2013, corporate income in these countries had the following tax burdens:

- in Greece, the statutory tax rate was 26%,
- in Austria, the statutory tax rate was 25%,
- in France, the statutory tax rate was 33.33%, increased by the variable additional tax, and
- in Italy, the statutory tax rate was 27.5% plus additional regional income tax.

An important number of managers from the mentioned countries are on the boards of directors

**Table 3** Testing the statistical significance of the difference in the leverage of the banks in the RS in different years

Year 1	n	Year 2	n	Mann-Whitney U	Z
<b>Panel A. All the banks that operated in the sampled years</b>					
2012	32	2013	30	472.000	-0.113
2012	32	2014	29	449.000	-0.217
2012	32	2015	30	437.000	-0.606
<b>Panel B. The banks that operated in the period 2012-2015</b>					
2012	29	2013	29	408.000	-0.194
2012	29	2014	29	418.000	-0.039
2012	29	2015	29	411.000	-0.148
<b>Panel C. A total of 10 banks with the lowest debt ratio on 31 December 2012</b>					
2012	10	2013	10	46.000	-0.302
2012	10	2014	10	50.000	0.000
2012	10	2015	10	50.000	0.000

Note: n refers to the number of the observations; \*, \*\*, \*\*\* refer(s) to the statistically significant results at the levels of 10%, 5%, and 1%, respectively.

Source: Authors

and executive boards of the Serbian subsidiaries of multinational banks. Given the fact that the income tax burden is significantly higher in these countries, the increase in the statutory income tax rate in the RS from 10% to 15% is obviously not seriously discussed by the managers of those banks.

Using borrowed financing sources implies the existence of the fixed maturity dates of liabilities and, in general, a priority in payment compared to equity financing sources. Such negative effects are obviously more valued by bank managers in the RS than the positive tax effects of additional borrowing. Since there has been no significant increase in bank leverage after the increase in the statutory tax rate, the second research hypothesis is rejected.

For the purposes of testing the validity of the third research hypothesis, the descriptive statistics for the banks' ROA in the sampled period are given in Table 4 below. Unlike moderate positive returns, there is an observation with an extremely negative rate of net return on total assets in almost every sampled year.

It is interesting that the minimum value of ROA (-142.145%) refers to Srpska Banka in 2014, whereas

the maximum value (5.222%) refers to the same bank in 2015. The case of Telenor Bank is also interesting, this bank having the lowest ROA in 2013. After the losses incurred in the following two years and the ownership changes, this bank had the lowest ROA in 2016.

In Table 5, the results of the correlation analysis between the current effective tax rate and the ROA of the banks in the RS are shown. The Pearson *r* coefficient and the Spearman *rho* coefficient are presented; according to the outcomes of the normality tests (showing a lack of a normal distribution in the majority of the observed variables, both by years and in total), it is more appropriate to rely on the Spearman *rho* coefficient. The interpretation of the correlation coefficients is performed in line with the Cohen criteria (Hemphill, 2003), according to which the coefficient of correlation:

- between 0.10 and 0.29 indicates a weak correlation;
- between 0.30 and 0.50 indicates a moderate correlation, and
- higher than 0.50 indicates a strong correlation.

**Table 4** The descriptive statistics for the banks' ROA in the RS in the period 2010-2016

Year	n	Arithmetic mean	Median	Minimum	Maximum
Panel A. All observations in the sampled years					
2010	33	-0.447%	0.325%	-8.539%	3.949%
2011	33	-1.314%	0.375%	-47.833%	3.062%
2012	32	-2.130%	0.144%	-55.737%	2.898%
2013	30	-6.492%	-0.105%	-141.310%	3.158%
2014	29	-6.697%	0.126%	-142.145%	2.735%
2015	30	-1.867%	0.105%	-17.186%	5.222%
2016	30	-0.956%	-0.396%	-11.851%	2.579%
Total	217	-2.765%	0.217%	-142.145%	5.222%
Panel B. The observations with a positive result before tax					
2010	21	1.235%	1.081%	0.001%	3.949%
2011	21	1.458%	1.448%	0.217%	3.062%
2012	21	1.116%	1.195%	0.019%	2.898%
2013	15	1.224%	1.082%	0.047%	3.158%
2014	17	0.903%	0.392%	0.031%	2.735%
2015	17	1.365%	1.012%	0.001%	5.222%
2016	19	1.225%	1.368%	0.050%	2.579%
Total	131	1.223%	1.095%	0.001%	5.222%

Note: n refers to the number of the observations.

Source: Authors

Observed at the total level (131 observations), it can be concluded that there is no strong negative correlation between the effective tax rate and ROA. The Spearman *rho* correlation coefficient indicates a weak and significant positive correlation between the observed variables. Observed by years, a significant and strong, though positive, correlation is only found in 2013.

The main reason for the absence of a strong significant correlation at the whole-sample level should be found in the fact that 25.19% of the observations (33 out of 131 observations) have an effective tax rate equal to zero. Therefore, in the next paragraph, these 33 observations are removed, so the correlation analysis is conducted with the remaining 98 observations (Panel B).

At the level of 98 observations, there is a statistically significant negative correlation between the employed variables in two years. However, such a negative

correlation is not strong in either year. At the total level, only the Pearson r correlation coefficient is significant, though indicating a low correlation. Since it is concluded that there is no statistically significant strong negative correlation between the effective tax rate and ROA in the banks in the RS, the third research hypothesis is rejected.

## CONCLUSION

The conducted research study presented in this paper included 34 banks having operated in the RS in period from 2010 to 2016 in order to examine the efficiency of income tax management in the banking sector.

The paper has shown that the effective income tax burden in an average bank in the RS is continuously below the statutory burden. Furthermore, as much as 25% of the observations with reported pre-tax

**Table 5** The results of the correlation analysis of the current effective tax rate and the ROA of the banks in the RS in the period 2010-2016

Year	n	Pearson r	Spearman rho
Panel A. The observations with a positive result (income) before tax			
2010	21	-0.145	0.192
2011	21	-0.039	0.190
2012	21	-0.250	-0.095
2013	15	***0.774	***0.674
2014	17	-0.098	0.153
2015	17	-0.247	0.109
2016	19	0.365	0.349
Total	131	-0.088	***0.275
Panel B. The observations with a positive result (income) before tax and the current effective tax rate higher than 0%			
2010	18	-0.158	0.183
2011	17	**-0.496	*-0.426
2012	18	**-0.472	*-0.439
2013	8	**0.774	*0.667
2014	13	-0.186	0.066
2015	12	-0.358	-0.021
2016	12	***0.721	**0.692
Total	98	**-0.221	0.088

Note: n refers to the number of the observations; \*, \*\*, \*\*\* refer(s) to the statistically significant results at the levels of 10%, 5%, and 1%, respectively.

Source: Authors

income reduced the effective tax rate to 0%. The research results are consistent with the conclusions of a previous research study (Yin, 2003; Dyring *et al.*, 2008) on the ability of financial institutions to efficiently manage their income tax.

The latest increase in the statutory tax rate in the RS from 10% to 15% has not had an impact on the financial structure of the banks. The analysis has shown that the share of liabilities in the total financing sources of the banks has not statistically significantly increased after the increase in the statutory rate, regardless of the capitalization of the banks. This finding is contrary to prior research findings (Hemmelgarn

& Teichmann, 2014; Schandlbauer, 2017). When comparing the obtained results with the results of prior research, the fact that the effective tax burden of the banks in the RS is significantly lower than the effective tax burden in prior research should be taken into consideration.

According to the analysis carried out in this paper, it is clear that there is no strong correlation between the effective tax rate and bank profitability. Such a finding indicates the fact that taxation is not an important determinant of the profitability of the banks in the RS. It is important to note that the previous research study (Demirguc-Kunt & Huizinga, 1999; Albetrazzi & Gambacorta, 2010; Chiorazzo & Milani, 2011) showing that the tax burden does not necessarily negatively impact bank profitability is based on quite different statistical methods.

There are, however, certain limitations pertaining to the presented results. The research study is based on the sampling method in a period longer than seven years. Also, only one measure for each (the efficiency of income tax management, the financial structure and profitability) are employed. It is possible that the research results would be different in the case of a different time period or the employment of different measures.

We believe that many interested groups may benefit from the results of this research study. When deciding on the future banking activities of their banks, the owners and managers of banks in the RS may benefit from the information on the impact of income tax on banks' operations. In addition, the national tax authorities may benefit from the research study when making decisions on the modality of the taxation of the banking sector in the RS.

Future research in this area could include the other measures for the efficiency of income tax management, such as the total or cash effective tax rate. It would be interesting to employ multiple regression analysis in order to examine the effect of the effective tax rate on banks' ROA, ROE and net interest income. In addition, the methodology of future research may include interviewing bank managers about the methods for income tax management.

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**Violeta Todorovic** is an associate professor at the University of Kragujevac, Faculty of Economics, teaching Banking and Payment Transactions. She received her PhD degree in the field of banking regulation and banking crisis at the Faculty of Economics in Kragujevac. Her main areas of interest are: banking crises, banking regulations, bank performance management, and risk management of financial institutions.

**Jasmina Bogicevic** is an associate professor at the University of Kragujevac, Faculty of Economics, teaching Financial Accounting and Budget and Tax Accounting. She received her PhD degree in the field of conversion of foreign currencies and international accounting at the Faculty of Economics in Subotica. Her main areas of interest are: financial accounting, specific areas of international accounting and budget and tax accounting.

**Stefan Vrzina** is a research trainee at the University of Kragujevac, Faculty of Economics. He is a PhD student at the Faculty of Economics in Kragujevac. His main areas of interest are: corporate finance, tax accounting, tax liability management and tax evasion.

## APPENDIX

The list of the active banks in the RS in the period 2010-2016

Bank	Sampled period	Bank	Sampled period
Addiko Bank	2010-2016	MTS banka	2010-2016
Agrobanka	2010-2011	NLB banka	2010-2016
AIK banka	2010-2016	Opportunity banka	2010-2016
Banca Intesa	2010-2016	OTP banka Srbija	2010-2016
Banka Poštanska štedionica	2010-2016	Piraeus Bank	2010-2016
Credit Agricole banka Srbija	2010-2016	Privredna banka Beograd	2010-2012
Direktna banka	2010-2016	ProCredit Bank	2010-2016
Expobank	2010-2016	Raiffeisen banka	2010-2016
Erste Bank	2010-2016	Razvojna banka Vojvodine	2010-2012
Eurobank	2010-2016	Sberbank Srbija	2010-2016
Findomestic banka	2010-2016	Societe Generale banka	2010-2016
Halkbank	2010-2016	Srpska banka	2010-2016
Jubanka	2010-2016	Telenor banka	2010-2016
JUBMES banka	2010-2016	Unicredit bank Srbija	2010-2016
Jugobanka Jugbanka	2010-2016	Univerzal banka	2010-2013
Komercijalna banka	2010-2016	Vojvođanska banka	2010-2016
Mirabank	2015-2016	VTB banka	2010-2016

Source: Authors