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ANALIZA PROFITABILNOSTI OSIGURAVAJUĆIH DRUŠTAVA PRIMENOM RATIO POKAZATELJA

PREGLEDNI NAUČNI RAD

Apstrakt

Racio analiza je glavni alat za ocenu uspešnosti poslovanja svakog preduzeća, pa i osiguravajućeg društva. Identifikacija ključnih determinanti profitabilnosti društava za osiguranje zahteva primenu rigidnih metodoloških instrumenata, među kojima racio analiza zauzima centralno mesto u proceni operativne i investicione efikasnosti. Ovaj rad analizira profitabilnost sektora osiguranja kroz prizmu ključnih racio pokazatelja, usredsređujući se na identifikaciju faktora koji najviše utiču na krajnji finansijski rezultat. Poseban akcenat stavljen je na korelaciju između šteta, troškova sprovođenja osiguranja i premije, kao osnovnog izvora prihoda, te indikatora prinosa na kapital (ROE) i imovinu (ROA), čime se dobija celovita slika o efikasnosti menadžmenta. Zaključna razmatranja ukazuju na to da održiva profitabilnost nije rezultat samo visoke premije već i discipline u kontroli troškova i pametne alokacije sredstava tehničkih rezervi. Stabilna profitabilnost zahteva stalnu optimizaciju operativnih troškova i preciznu procenu preuzetih rizika.

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JEL klasifikacija G22, G32, M41

I Uvod

Sektor osiguranja predstavlja jedan od ključnih stubova finansijskog sistema, imajući u vidu njegovu ulogu u upravljanju rizicima, mobilizaciji štednje i dugoročnom investiranju. Za razliku od drugih finansijskih institucija, poslovni model osiguravajućih društava zasniva se na prikupljanju premija unapred i isplati obaveza u budućnosti, što dodatno komplikuje analizu njihove profitabilnosti. Profitabilnost osiguravajućih društava predstavlja ključni indikator njihove dugoročne održivosti i sposobnosti da uvećaju kapital i imovinu. Predmet ovog rada je sveobuhvatna analiza finansijskih performansi osiguravača kroz primenu specifičnih i opštih racio pokazatelja. Cilj je utvrđivanje efikasnosti poslovanja društava za osiguranje kroz ključne racio brojeve. U radu se primenjuje metodološki pristup zasnovan na analizi profitabilnosti putem racija šteta, racija troškova, kao i tradicionalnih indikatora poput prinosa na sopstveni kapital (ROE) i prinosa na imovinu (ROA). Rezultati analize ukazuju na to da stabilnost osiguravajućih društava ne zavisi isključivo od obima prikupljene premije, već od optimizacije operativnih troškova i adekvatnog upravljanja tehničkim rezervama. Rad pruža teorijsku i praktičnu osnovu za razumevanje faktora koji generišu profit u specifičnom kontekstu tržišta osiguranja.

II RACIO ANALIZA I PROFITABILNOST OSIGURAVAJUĆIH DRUŠTAVA

U sektoru osiguranja posebnu važnost imaju operativni raciji, među kojima se izdvaja kombinovani racio, koji predstavlja zbir racio troškova i racio šteta. Taj indikator meri koliko je kompanija efikasna u osnovnoj delatnosti pre nego što se uzmu u obzir investicioni prihodi. Glavne grupe pokazatelja obuhvataju operativnu efikasnost, koja se primarno analizira kroz odnos šteta i troškova upravljanja u odnosu na premiju, pri čemu ključnu ulogu ima kombinovani koeficijent koji integriše te dve kategorije rashoda. Uspešnost poslovanja procenjuje se na osnovu rezultata osiguranja nakon pokrića svih rizika, prihoda od investicija, kao i ukupnog operativnog uspeha pre i posle oporezivanja. Racio šteta predstavlja ključni indikator uspešnosti cenovne politike osiguravača, a izračunava se kao odnos nastalih šteta i neto zarađene premije. Ipak, taj pokazatelj nije statičan; on podleže naknadnim korekcijama usled razlika između procenjenih i stvarnih isplata, kao i promena u nivou rezervacija. Iako aktuari pružaju stručno mišljenje o validnosti rezervi, oni obično definišu raspon

prihvatljivih vrednosti, što menadžmentu ostavlja određenu diskrecionu slobodu pri finalizaciji finansijskih izveštaja.⁴

Racio troškova u osiguranju predstavlja ključni pokazatelj finansijske efikasnosti društva za osiguranje. Taj procenat pokazuje koliki se deo prihoda od premije osiguranja troši na svakodnevno poslovanje. Troškovi poslovanja obuhvataju plate zaposlenih, provizije agenata, marketing, zakup prostora i administrativne troškove. Racio troškova direktno i matematički utiče na krajnju cenu polise osiguranja koju plaća klijent. Neto premija pokriva isključivo procenjeni rizik i štete. Racio troškova određuje „dodatak za režiju“ koji se dodaje na cenu osiguranja. Ako kompanija ima visoke troškove poslovanja (npr. 40%), ona mora podići cene polisa kako bi pokrila te troškove i ostala profitabilna. Digitalna osiguranja s niskim raciom troškova (manje kancelarija i agenata) nude znatno jeftinije polise za isti nivo pokrivanja.

Analiza finansijskih izveštaja osiguravajućih društava ima za cilj evaluaciju finansijskog zdravlja, stabilnosti te održivosti osiguravajućih društava na tržištu kapitala. Ključno je utvrditi da li društvo poseduje dovoljan nivo sopstvenih izvora sredstava u odnosu na profil rizika kojem je izloženo. Analitički fokus je na margini solventnosti, koja garantuje da nepredviđeni gubici neće ugroziti prava osiguranika. Jedan od najvažnijih aspekata analize jeste ispitivanje kvaliteta i realnosti obračunatih tehničkih rezervi. One predstavljaju diskontovano vrednost budućih obaveza. Ukoliko su rezerve potcenjene, bilans uspeha će prikazati fiktivnu dobit, dok će stvarna likvidnost društva biti ugrožena u dugom roku.

Shodno tome, racio analiza osiguravajućih društava predstavlja specifičnu granu finansijske analize koja se bavi kvantifikovanjem solventnosti, likvidnosti i profitabilnosti. Racio analiza osiguravajućih društava ide u tri pravca:

1. Evaluacija underwriting procesa – centralno mesto u analizi zauzima ispitivanje kvaliteta preuzetih rizika. To se najpreciznije kvantifikuje kroz kombinovani racio – indikator sposobnosti menadžmenta da balansira između agresivnog širenja tržišnog učešća i konzervativne procene rizika.
2. Dinamika solventnosti i regulatorni okvir – za razliku od korporativnih finansija, gde je fokus na ROE (povraćaju na kapital), kod osiguranja je primarni fokus na kapitalnoj adekvatnosti. Akademski radovi često analiziraju usklađenost sa Solvency II standardima, gde se kapital posmatra kao bafer za apsorpciju ekstremnih štetnih događaja.
3. Investicioni portfolio kao sekundarni generator profita – važno je istaći da osiguravači funkcionišu kao institucionalni investitori. Analiza mora obuhvatiti odnos između tehničkog rezultata (prodaja polisa) i investicionog rezultata (prinos na tržištu kapitala), jer se često gubici iz osnovne delatnosti svesno pokrivaju profitima od ulaganja.

⁴ The Excess Line Association of New York, Fundamentals of Insurance Company Financial Analysis, 3-5, dostupno na adresi: www.elany.org/docs/default-source/compliance-advisors/1798.pdf, 11. 6. 2026.

Upotrebom racio pokazatelja, identifikuju se pravci razvoja u poslovanju i vrši se poređenje s konkurentskim osiguravajućim društvima na tržištu, što omogućava precizno rangiranje uspešnosti. Finansijski model društava za osiguranje zasnovan je na diverzifikovanim izvorima prihoda, koji primarno potiču iz tehničkih operacija (underwriting), investicionih aktivnosti i naknada za usluge. Ključni izazov u upravljanju portfolijima kratkoročnih i dugoročnih polisa leži u inherentnoj neizvesnosti odštetnih zahteva, čija realizacija može biti trenutna ili prolongirana znatno nakon isteka same polise. Upravo ta vremenska neusklađenost između prikupljenih premija i potencijalnih gubitaka determiniše strukturu i dospelost aktive unutar investicionog portfolija kompanije. Osim imperativa očuvanja adekvatnosti kapitala i solventnosti radi ispunjenja budućih obaveza, neophodno je dubinsko razumevanje profitabilnosti svih segmenata poslovanja. Detaljna evaluacija operativnog uspeha omogućava menadžmentu da: identifikuje potencijale za stratešku ekspanziju i rast, osigura dugoročnu održivost poslovnog modela, agilno reaguje na tržišne fluktuacije i unapredi proces donošenja odluka zasnovan na preciznim podacima.

Profitabilnost osiguravajućeg društva podrazumeva ostvarenje određene stope prinosa od uloženog kapitala u pružanju usluge osiguranja. Ostvarenje što veće stope jeste cilj poslovanja osiguravajućih kuća, uz maksimalnu zaštitu osiguranika i akcionara.⁵ Profitabilno poslovanje od suštinskog je značaja za poslovanje društava za osiguranje jer je dobar neto rezultat jemac zadržavanja poverenja osiguranika. Takođe, dobitak može predstavljati i dugoročni izvor kapitala.⁵ S druge strane, niska profitabilnost osiguravača može ukazivati na potencijalne probleme s likvidnošću i solventnošću osiguravajućih društava.⁶

Profitabilnost osiguravajućih društava meri se kroz nekoliko ključnih pokazatelja koji upoređuju troškove, prihode i dobit s premijom ili kapitalom. Profitabilnost u savremenom osiguranju definiše se kao sposobnost osiguravajućih društava da uspostave optimalan balans između prihoda od premija, rashoda po osnovu odštetnih zahteva i operativnih troškova, radi očuvanja dugoročne solventnosti i finansijske stabilnosti.

Analiza profitabilnosti osiguravajućih kuća je specifična, jer dobit potiče iz dva izvora:

- Tehnički rezultat: Razlika između prikupljenih premija i isplaćenih šteta uz operativne troškove.
- Investicioni rezultat: Prihodi koje društvo ostvaruje investiranjem sredstava (tehničkih rezervi i kapitala) na finansijskom tržištu.

⁵ Anđelka Aničić et al., „Ocena pokazatelja profitabilnosti osiguravajućih kompanija u Srbiji“, *Trendovi u poslovanju*, br. 1/2025, 166.

⁶ Sokić M., „Analiza CARMEL pokazatelja sektora osiguranja u Republici Srbiji“, *Tokovi osiguranja*, br. 2/2019, 13.

Profitabilnost osiguravajućih društava predstavlja ključni indikator njihove dugoročne održivosti i efikasnosti u upravljanju rizicima.

Ključni pokazatelji profitabilnosti kao indikatori za ocenu uspešnosti su:

- ROA (Return on Assets): meri sposobnost društva da efikasno koristi ukupnu imovinu za ostvarenje prihoda.

$$ROA = \frac{\text{Neto dobit}}{\text{Ukupna imovina}} * 100$$

- ROE (Return on Equity): Prikazuje prinos na uloženi kapital akcionara⁷

$$ROE = \frac{\text{Neto dobit}}{\text{Sopstveni kapitala}} * 100$$

- Kombinovani racio (Combined Ratio): predstavlja zbir racija šteta i racija troškova sprovođenja osiguranja (troškovi pribave+troškovi uprave). Ukoliko je njegova vrednost ispod 100%, osiguravajuće društvo ostvaruje profit direktno iz osnovne delatnosti osiguranja.⁸

Kombinovani racio = racio šteta + racio troškova sprovođenja osiguranja

$$\text{Racio šteta} = \frac{\text{nastale štete}}{\text{zarađena premija}} * 100$$

Osiguravajuće društvo je profitabilnije ukoliko je racio šteta niži, i obrnuto, ukoliko je racio visok (blizu 100% ili preko toga), to govori da premije nisu dovoljne da pokriju gubitke, što može ugroziti solventnost.

$$\text{Racio troškova sprovođenja osiguranja} = \frac{\text{nastale štete}}{\text{zarađena premija}} * 100$$

Što je racio troškova niži, to je kompanija profitabilnija (ostaje više novca nakon isplate troškova pribave i troškova uprave), i obrnuto, ukoliko je racio visok

⁷ Mladenka Balaban, Petar Bojović, *Upravljanje poslovnim finansijama*, Univerzitet za poslovne studije, Banja Luka, 2009, 56.

⁸ Jelena Kočović, Predrag Šulejić, Tatjana Rakonjac-Antić, *Osiguranje*, Centar za izdavačku delatnost Ekonomskog fakulteta Beograd, Beograd, 2010.

(blizu 100% ili preko toga), to govori da premije nisu dovoljne da pokriju gubitke, što može ugroziti solventnost. U troškove sprovođenja osiguranja ulaze troškovi pribave (provizije agentima, marketing), troškovi uprave (plate zaposlenih, zakup prostora, IT sistemi) i ostali administrativni troškovi.

Osiguravajuća društva su značajni učesnici na finansijskim tržištima, na kojima ostvaruju značajne prinose, pa se prilikom utvrđivanja ukupne profitabilnosti moraju uključiti i ovi prilivi. Shodno tome, ukupna profitabilnost osiguravajuće kuće ocenjuje se na osnovu razlike kombinovanog racija i racija investiranja:

$$\text{Ukupna profitabilnost} = \text{kombinovani racio} - \text{racio investiranja}$$

Osiguravajuća društva posluju profitabilno ako je e dobijeni rezultat <1 (100%).⁹

Na profitabilnost utiče i niz internih faktora, kao što su veličina kompanije i povećanje obima premije. Postoji statistički značajan pozitivan uticaj veličine aktive na profitabilnost, što se često objašnjava ekonomijom obima. Povećanje obima premije, naročito u segmentima s niskim raciom šteta, direktno korelira s višim profitnim maržama. Pored internih faktora, i makroekonomski uslovi predstavljaju eksterne faktore koji utiču na profitabilnost. Niske kamatne stope, visoka inflacija i spor ekonomski rast negativno utiču na investicione prinose i povećavaju troškove šteta.

III UZORAK I METODOLOGIJA

Analiza racija profitabilnosti zasnovana je na modeliranim podacima kreiranim za potrebe analize i ilustracije primene finansijskih racija u sektoru osiguranja. Struktura i odnosi između pokazatelja zasnovani su na karakteristikama i tokovima prisutnim u finansijskim izveštajima osiguravajućih društava u Republici Srbiji. Autori su na bazi kalkulacije racija profitabilnosti dobili uporedni pregled tih pokazatelja, u cilju analize i razumevanje različitih poslovnih modela – od konzervativnih strategija usredsređenih na niske štete, do agresivnih tržišnih nastupa koji svesno žrtvuju kratkoročnu profitabilnost zarad povećanja tržišnog učešća. Cilj autora je da kroz kvantitativne pokazatelje profitabilnosti dešifruje strateške pravce menadžmenta na primeru osiguravača u Republici Srbiji. Kroz interpretaciju tih pokazatelja, rad nastoji da dokaže da racio analiza služi kao kontrolni mehanizam koji menadžmentu ukazuje na potrebu za korekcijom tarifa, reosiguranjem ili optimizacijom troškova, a sve u cilju očuvanja dugoročne profitabilnosti i poverenja osiguranika.

⁹ Ibidem.

Tabela 1. – Osnovni finansijski podaci osiguravajućih društava A, B, C

U mil. RSD

Osiguravajuće društvo	Godina	Premije	Štete	Troškovi	Neto dobit	Aktiva	Kapital
A	2021	32.500	19.800	8200	2100	85.000	22.000
A	2022	35.000	23.000	9100	1600	88.000	23.500
A	2023	38.500	24.500	9800	2400	92.000	25.000
B	2021	21.000	12.500	6800	1200	60.000	18.000
B	2022	22.500	15.000	7500	700	63.000	18.500
B	2023	24.000	16.800	8200	600	66.000	19.000
C	2021	15.000	9.800	3800	900	40.000	14.000
C	2022	16.200	10.500	4200	800	42.000	14.500
C	2023	17.500	11.200	4800	750	45.000	15.000

Izvor: Autori

Na bazi simuliranih podataka za tri poslovna entiteta (A, B i C) u trogodišnjem intervalu (2021–2023), istraživanje se usredsređuje na sledeće ciljeve:

- Kvantifikaciju uticaja merila uspešnosti: analizu uticaja tehničkih pokazatelja, primarno koeficijenta šteta (*loss ratio*), troškova sprovođenja osiguranja (*expense ratio*) i merodavnog kombinovanog racija (*combined ratio*), na stope prinosa ROA i ROE.
- Tipološku diferencijaciju poslovnih modela: komparativni prikaz performansi efikasnog, neefikasnog i konzervativnog strateškog pristupa u poslovanju.
- Evaluaciju risk-menadžmenta: isticanje esencijalne uloge kontrole operativnih rashoda i upravljanja rizicima u funkciji održavanja solventnosti i profitabilnosti.
- Kritički osvrt na metodologiju: ukazivanje na inherentna ograničenja racio analize, uz naglašavanje neophodnosti kontekstualne interpretacije dobijenih rezultata.¹⁰

Tabela 2. – Racio pokazatelji osiguravajućeg društva A

Godina	Kombinovani racio	ROA	ROE
2021	86%	2.5%	9.5%
2022	92%	1.8%	6.8%
2023	89%	2.6%	9.6%

Izvor: Autori

¹⁰ Kehinde Isiaq Olayi, "Impact of underwriting and financial ratios on profitability: an empirical analysis of insurance firms", *Modern Management Review*, No. 2/2025, 117.

Osiguravajuće društvo A pokazuje relativno stabilan i efikasan poslovni model tokom posmatranog perioda. Kombinovani racio se kreće u intervalu od 86% do 92%, što ukazuje na kontinuirano ostvarivanje operativnog profita. U 2022. godini dolazi do pogoršanja tog pokazatelja (92%), što je prvenstveno posledica rasta racija šteta, to jest povećanja izdataka za štete. Takvo kretanje je u skladu sa širim makroekonomskim okolnostima, pre svega inflatornim pritiscima i rastom troškova. Međutim, već u 2023. godini dolazi do poboljšanja kombinovanog racija (89%), što ukazuje na uspešnu adaptaciju kompanije kroz unapređenje *underwriting* politike ili kontrolu troškova. Iz aspekta profitabilnosti, ROA beleži pad u 2022. (1,8%), a zatim oporavak (2,6%), ROE prati istu tendenciju, s rastom na 9,6% u 2023. To ukazuje na efikasno upravljanje kapitalom i sposobnost društva da amortizuje šokove.

Tabela 3. – Racio pokazatelji osiguravajućeg društva B

Godina	Kombinovani racio	ROA	ROE
2021	92%	2%	6.7%
2022	100%	1.1%	3.8%
2023	104%	0.9%	3.1%

Izvor: Autori

Osiguravajuće društvo B pokazuje jasnu negativnu tendenciju tokom posmatranog perioda. Kombinovani racio raste sa 92% u 2021. na 104% u 2023. godini, što znači prelazak iz zone operativnog profita u zonu operativnog gubitka. Ta tendencija ukazuje na: rast troškova (*expense ratio*), povećanje šteta (*loss ratio*) nedovoljnu kontrolu operativne efikasnosti. Profitabilnost reflektuje te promene: ROA opada sa 2,0% na 0,9%, ROE opada sa 6,7% na 3,1%, a pogoršanje operativnih racija direktno utiče na pad prinosa.

Tabela 4. – Racio pokazatelji osiguravajućeg društva C

Godina	Kombinovani racio	ROA	ROE
2021	91%	2.2%	6.4%
2022	91%	1.9%	5.5%
2023	91%	1.7%	5%

Izvor: Autori

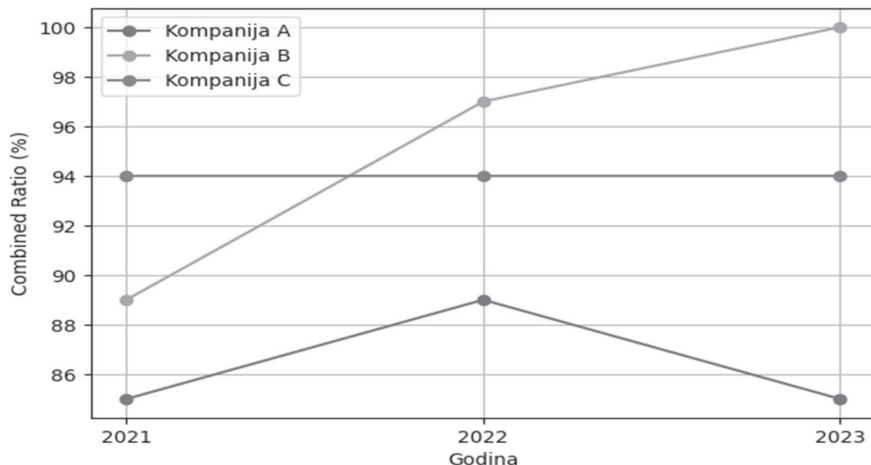
Osiguravajuće društvo C pokazuje visok stepen stabilnosti, s konstantnim kombinovanim raciom na nivou od 91% tokom celog perioda. Takva stabilnost ukazuje na: konzervativnu *underwriting* politiku – kontrolisane troškove, nizak nivo volatilnosti. Međutim, ta stabilnost dolazi uz cenu niže profitabilnosti: ROA opada sa 2,2% na 1,7% i ROE opada sa 6,4% na 5,0%, stabilnost ≠ visoka profitabilnost. Za

razliku od Kompanije A, koja balansira efikasnost i rast, Kompanija C ostaje u zoni „defanzivne strategije“.

Na osnovu prethodne analize mogu se doneti sledeći zaključci:

- Osiguravajuće društvo A predstavlja primer uravnoteženog modela poslovanja, gde operativna efikasnost i finansijska stabilnost rezultiraju održivom profitabilnošću. Njeni rezultati u skladu su s principima korporativnih finansija, pogotovo u delu optimizacije prinosa na kapital.
- Osiguravajuće društvo B predstavlja primer neefikasnog upravljanja troškovima i rizicima, gde rast kombinovanog racija iznad 100% vodi ka sistemskom padu profitabilnosti. Takav obrazac ukazuje na potrebu za restrukturiranjem poslovnog modela i unapređenjem kontrole troškova.
- Osiguravajuće društvo C predstavlja model stabilnog, ali konzervativnog poslovanja, gde se prioritet daje kontroli rizika i očuvanju stabilnosti, čak i po cenu nižih prinosa.

Grafik 1. Kretanje kombinovanog racija



Izvor: autori na bazi dobijenih rezultata

Na osnovu prethodne analize, može se zaključiti da postoji veza između efikasnosti profitabilnosti, a kombinovani racio je snažan indikator performansi. Sva tri društva imaju različite poslovne modele. Društvo A balansirani model, društvo B rizičan i neefikasan model i društvo C konzervativan model. Rezultati komparativne analize ukazuju da niži kombinovani racio doprinosi višoj profitabilnosti, ali da optimalni finansijski performans zavisi od sposobnosti kompanije da balansira operativnu efikasnost.

IV Zaključak

Poslovanje osiguravajućih društava karakterišu ciklične fluktuacije prinosa, uslovljene nestabilnošću kamatnih stopa, pooštavanjem cenovne politike, katastrofalnim štetama i pojavom disruptivnih tržišnih faktora. Adekvatna evaluacija profitabilnosti prevazilazi puku analizu agregatnih pokazatelja, poput neto dobiti ili tehničkog rezultata po segmentima. Za efikasno proaktivno upravljanje, neophodna je visoka granulacija podataka koja omogućava anticipaciju tržišnih kretanja. Primena sistematičnog okvira za analizu profitabilnosti osnažuje organizacije da promptno evaluiraju strateške alternative i iskoriste tržišne prilike. S obzirom na to da eksterni potresi mogu nastupiti naglo, održivost osiguravača direktno zavisi od fleksibilnosti njihovih analitičkih modela. Razvoj scenarija i simulacija unutar tih modela predstavlja ključni instrument za pravovremenu mitigaciju rizika u uslovima visoke tržišne neizvesnosti.

Rezultati sprovedene analize potvrđuju da finansijski raciji predstavljaju metodološki relevantan instrument za evaluaciju profitabilnosti osiguravajućih društava, ali i da njihova interpretacija zahteva uvažavanje specifičnosti poslovnog modela ovog sektora. Naročito se izdvaja značaj kombinovanog racija, kao ključnog indikatora operativne efikasnosti, s obzirom na to da neposredno reflektuje odnos između premija, šteta i troškova poslovanja.

Empirijski nalazi ukazuju na postojanje pozitivne povezanosti operativne efikasnosti i ukupne profitabilnosti, pri čemu niže vrednosti kombinovanog racija po pravilu korespondiraju s višim vrednostima pokazatelja kao što su ROA i ROE. Ipak, utvrđeno je da ta povezanost nije deterministička, budući da investicioni prihodi mogu značajno uticati na konačan finansijski rezultat, što dodatno komplikuje analizu performansi društava za osiguranje.

Komparativna analiza posmatranih poslovnih modela ukazuje na značaj upravljanja troškovima i adekvatne selekcije rizika kao ključnih determinanti finansijskog uspeha. Istovremeno, identifikovana je i određena tenzija između stabilnosti poslovanja i maksimiranja prinosa, pri čemu konzervativni model karakteriše niža volatilnost, ali i ograničen potencijal rasta profitabilnosti. Profitabilnost osiguravajućih društava proizlazi iz interakcije operativnih performansi, investicionih aktivnosti i strukture kapitala. Stoga se može zaključiti da racio analiza, iako neophodna, nije dovoljna kao samostalan analitički pristup, već mora biti integrisana u širi okvir finansijske analize.

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PROFITABILITY ANALYSIS OF INSURANCE COMPANIES USING FINANCIAL RATIOS

REVIEW SCIENTIFIC PAPER

Abstract

Ratio analysis is the primary tool for assessing the operational performance of any enterprise, including insurance companies. Identifying the key determinants of insurance company profitability requires the application of rigorous methodological instruments, among which ratio analysis occupies a central position in evaluating both operational and investment efficiency. This paper examines the profitability of the insurance sector through the lens of key financial ratios, with a particular focus on identifying the factors that exert the greatest influence on overall financial performance. Particular attention is paid to the relationship between claims incurred, underwriting expenses, and premium income as the primary source of revenue, as well as to return on equity (ROE) and return on assets (ROA) as key indicators of management efficiency. The findings suggest that sustainable profitability is driven not only by premium growth but also by disciplined cost management and the prudent management of technical reserves. Sustained profitability requires ongoing optimisation of operating costs and precise assessment of underwriting risks.

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I INTRODUCTION

The insurance sector stands as one of the key pillars of the financial system, given its role in risk management, savings mobilisation, and long-term investment. Unlike other financial institutions, the business model of insurance companies is based on the advance collection of premiums and the deferred settlement of claims and other policyholder obligations, which further complicates the analysis of their profitability. The profitability of insurance companies is a critical indicator of their long-term sustainability and their capacity to increase equity and assets. The subject of this paper is a comprehensive analysis of insurers' financial performance using both insurance-specific and general financial ratios. The objective is to assess the operational efficiency of insurance companies using key financial ratios. The methodology applied is based on profitability analysis through the loss ratio, the expense ratio, and traditional performance indicators such as return on equity (ROE) and return on assets (ROA). The findings indicate that the stability of insurance companies does not depend solely on the volume of premiums written, but also on the optimisation of operating expenses and the effective management of technical reserves. The paper provides both a theoretical and practical framework for understanding the factors that drive profitability within the specific context of the insurance market.

II RATIO ANALYSIS AND THE PROFITABILITY OF INSURANCE COMPANIES

Within the insurance sector, operational ratios are of particular significance. Chief among these is the combined ratio, which represents the sum of the expense ratio and the loss ratio. This indicator measures how efficiently a company manages its core underwriting operations, before investment income is taken into account. The principal categories of performance indicators include operational efficiency, assessed primarily through the relationship between claims and management expenses relative to premiums, with the combined ratio playing a central role in integrating these two expense categories; underwriting performance, assessed on the basis of underwriting results after covering all insured risks; and investment income together with overall operating performance, both before and after tax. The loss ratio is a key indicator of an insurer's pricing policy, calculated as the ratio of incurred claims to net earned premiums. However, this indicator is not static; it is

subject to subsequent adjustments arising from differences between estimated and actual claim payments, as well as changes in reserve levels. While actuaries provide expert opinion on reserve adequacy, they typically define a range of acceptable values, leaving management with a certain degree of discretion in the final preparation of the financial statements.⁴

The expense ratio is a key indicator of an insurance company's financial efficiency, expressing what proportion of premium income is consumed by day-to-day business operations. Operating expenses include employee salaries, agent commissions, marketing costs, office rental costs, and administrative expenses. The expense ratio has a direct and quantifiable impact on the premium charged to policyholders. The net premium is intended solely to cover expected costs arising from insured risks and claims, while the expense ratio determines the expense loading added to the premium to cover the insurer's operating costs. If an insurer operates with a high expense ratio (e.g. 40%), it must charge higher premiums to cover its operating costs and maintain profitability. By contrast, digital insurers, characterized by lower expense ratios due to their reduced reliance on physical offices and agent networks, are often able to offer substantially lower premiums while providing the same level of insurance coverage.

The analysis of insurance companies' financial statements aims to assess their financial soundness, stability, and market sustainability. A key objective is to determine whether a company holds sufficient own funds relative to its risk profile. The analytical focus is on the solvency margin, which serves as the safeguard ensuring that unexpected losses do not jeopardize policyholders' rights. One of the most important aspects of this analysis is assessing the adequacy and accuracy of the calculated technical reserves, which represent the discounted value of future liabilities. If technical reserves are understated, the income statement will report artificial profits, while the company's actual long-term solvency and liquidity may be placed at risk.

Accordingly, ratio analysis applied to insurance companies constitutes a distinct branch of financial analysis, concerned with the assessment of solvency, liquidity, and profitability. In practice, the ratio analysis of insurance companies generally proceeds along three principal dimensions:

- 1. Evaluation of the underwriting process** – the quality of underwriting risks holds a central place in the analysis and is most precisely assessed through the combined ratio, which reflects management's ability to balance aggressive market share expansion with prudent risk selection and pricing.

⁴ The Excess Line Association of New York, Fundamentals of Insurance Company Financial Analysis, 3-5, available at: www.elany.org/docs/default-source/compliance-advisors/1798.pdf, 11. 6. 2026.

2. Solvency dynamics and the regulatory framework – unlike corporate finance, where the primary focus falls on return on equity (ROE), the insurance sector places emphasis on capital adequacy. Academic research frequently examines compliance with Solvency II standards, under which capital functions as a buffer designed to absorb extreme loss events.

3. The investment portfolio as a secondary driver of profitability – it is worth noting that insurers operate as institutional investors. Any analysis must consider the relationship between the technical result (policy sales) and the investment result (capital market returns), since underwriting losses are often deliberately offset by investment income.

Through the application of financial ratio analysis, business trends can be identified and performance benchmarked against competing insurers, enabling a precise assessment of competitive position. The financial model of insurance companies is based on diversified revenue streams, primarily derived from technical operations (underwriting), investment activities, and service fees. The core challenge in managing portfolios of short- and long-term insurance policies lies in the uncertainty of claims liabilities, which may arise either during the policy period or long after the policy has expired. This temporal mismatch between premiums collected and potential losses shapes the composition and maturity structure of assets within the company's investment portfolio. Alongside maintaining adequate capital and solvency to meet future obligations, insurers must possess a comprehensive understanding of profitability across all business segments. A detailed evaluation of operating performance enables management to: identify opportunities for strategic expansion and growth; ensure the long-term sustainability of the business model; respond swiftly to market fluctuations; and improve decision-making grounded in accurate data.

The profitability of an insurance company refers to its ability to generate a return on capital invested in the provision of insurance services. Achieving the highest possible rate of return is one of the primary objectives of insurance companies, ensuring maximum protection of policyholders and shareholders.⁵ Strong profitability is of fundamental importance to insurance companies, as robust net earnings help maintain policyholder confidence and support long-term financial stability. Moreover, earnings can provide a long-term source of capital. Conversely, low profitability may signal potential liquidity and solvency concerns for insurers.⁶

Insurance company profitability is measured through several key indicators that relate costs, revenues, and profit to either premiums or capital. In the modern

⁵ Anđelka Aničić et al., "Ocena pokazatelja profitabilnosti osiguravajućih kompanija u Srbiji", *Trendovi u poslovanju*, No. 1/2025, 166.

⁶ Sokić M., "Analiza CARMEL pokazatelja sektora osiguranja u Republici Srbiji", *Tokovi osiguranja*, No. 2/2019, 13.

insurance context, profitability is defined as the ability of insurance companies to achieve an optimal balance between premium income, claims expenditure, and operating costs, in order to preserve long-term solvency and financial stability.

The profitability analysis of insurance companies is distinctive because earnings are generated from two primary sources:

- **Technical (underwriting) result** – the difference between earned premiums and claims incurred, after accounting for operating expenses.
- **Investment result** – income generated through the investment of funds, including technical reserves and equity, in financial markets.

The profitability of insurance companies is a key indicator of their sustainability and efficiency in risk management practices.

The key profitability indicators used to assess performance are:

- **ROA (Return on Assets):** measures the company's ability to generate earnings from its total asset base.

$$ROA = \frac{\text{Net Profit}}{\text{Total Assets}} \times 100$$

- **ROE (Return on Equity):** reflects the return on capital invested by shareholders.⁷

$$ROE = \frac{\text{Net Profit}}{\text{Shareholders' Equity}} \times 100$$

- **Combined Ratio:** the sum of the loss ratio and the expense ratio (acquisition costs plus administrative expenses). If the combined ratio is below 100%, the insurer generates an underwriting profit from its core insurance operation.⁸

$$\text{Combined Ratio} = \text{Loss Ratio} + \text{Expense Ratio}$$

$$\text{Loss Ratio} = \frac{\text{Claims Incurred}}{\text{Earned Premiums}} \times 100$$

⁷ Mladenka Balaban, Petar Bojović, *Upravljanje poslovnim finansijama*, Univerzitet za poslovne studije, Banja Luka, 2009, 56.

⁸ Jelena Kočović, Predrag Šulejić, Tatjana Rakonjac-Antić, *Osiguranje*, Centar za izdavačku delatnost Ekonomskog fakulteta, Beograd, 2010.

An insurer is generally more profitable when its loss ratio is lower. Conversely, a high loss ratio (approaching or exceeding 100%) indicates that premium income may be insufficient to cover claims costs, which may threaten solvency.

$$\text{Expense Ratio} = \frac{\text{Underwriting Expenses}}{\text{Earned Premiums}} \times 100$$

The lower the expense ratio, the more profitable the insurance company (more premium income remains after covering acquisition costs and administrative expenses). Conversely, a high expense ratio (approaching or exceeding 100%) indicates that premium income cannot cover operating expenses, which may also pose a risk to solvency. Insurance operating expenses comprise acquisition costs (such as agent commissions, marketing), administrative expenses (including salaries, office rental costs, IT systems), and other general expenses.

Insurance companies are significant participants in financial markets and generate considerable investment income; accordingly, these investment incomes must be incorporated into any overall assessment of profitability. Therefore, the overall profitability of an insurance company is assessed as the difference between the combined ratio and the investment income ratio:

$$\text{Overall Profitability} = \text{Combined Ratio} - \text{Investment Income Ratio}$$

Insurance companies operate profitably when the resulting value is below 1 (100%).⁹

Profitability is also influenced by a range of internal factors, including company size and premium volume growth. There is a statistically significant positive relationship between asset size and profitability, commonly attributed to economies of scale. Growth in premium volume, particularly in segments with low loss ratios, correlates directly with higher profit margins. In addition to these internal determinants, macroeconomic conditions exert external influence on profitability. Low interest rates, high inflation, and weak economic growth adversely affect investment returns while simultaneously increasing claims costs.

⁹ *Ibidem.*

III SAMPLE AND METHODOLOGY

The profitability ratio analysis is based on model-generated data developed for the purposes of analysis and illustrating the application of financial ratios within the insurance sector. The structure and relationships among the indicators reflect the financial characteristics and business dynamics typically observed in insurance companies operating in the Republic of Serbia. Based on the calculated profitability ratios, a comparative analysis was conducted to examine different business models, ranging from conservative strategies focused on maintaining low claims costs and stable underwriting performance to more aggressive market approaches aimed at increased market share, even at the expense of short-term profitability. The objective of the study is to identify and interpret management’s strategic orientation through the application of quantitative profitability indicators, using insurance companies operating in the Republic of Serbia as a case study. Through the interpretation of these indicators, the paper demonstrates that ratio analysis serves as a managerial control mechanism, highlighting the need for tariff adjustments, reinsurance arrangements, or cost optimisation measures, all aimed at preserving long-term profitability and policyholder confidence.

Table 1. Key Financial Data for Insurance Companies A, B and C
In RSD millions

Insurance Company	Year	Premiums	Claims	Expenses	Net Profit	Assets	Equity
A	2021	32.500	19.800	8200	2100	85.000	22.000
A	2022	35.000	23.000	9100	1600	88.000	23.500
A	2023	38.500	24.500	9800	2400	92.000	25.000
B	2021	21.000	12.500	6800	1200	60.000	18.000
B	2022	22.500	15.000	7500	700	63.000	18.500
B	2023	24.000	16.800	8200	600	66.000	19.000
C	2021	15.000	9.800	3800	900	40.000	14.000
C	2022	16.200	10.500	4200	800	42.000	14.500
C	2023	17.500	11.200	4800	750	45.000	15.000

Source: Authors

Based on simulated data for three insurance companies (A, B, and C) over a three-year period (2021–2023), the research focuses on the following objectives:

- Quantifying the impact of performance metrics: analysing the effect of technical indicators, primarily the *loss ratio*, the *expense ratio*, and the *combined ratio*, on the profitability measures on ROA and ROE.
- Typological differentiation of business models: a comparative presentation of the performance of efficient, inefficient, and conservative strategic approaches.
- Risk management evaluation: highlighting the essential role of operating cost control and risk management in maintaining solvency and profitability.
- Critical assessment of the methodology: identifying the inherent limitations of ratio analysis and emphasizing the need for contextual interpretation of results.¹⁰

Table 2. Financial Ratios for Insurance Company A

Year	Combined Ratio	ROA	ROE
2021	86%	2.5%	9.5%
2022	92%	1.8%	6.8%
2023	89%	2.6%	9.6%

Source: Authors

Insurance Company A demonstrates a relatively stable and efficient business model throughout the observation period. The combined ratio ranges between 86% and 92%, indicating the consistent generation of underwriting profit. In 2022, this indicator deteriorated (92%), primarily as a result of an increase in the loss ratio, that is, increased claims costs. This trend is consistent with broader macroeconomic conditions, in particular inflationary pressures and rising operating costs. However, the combined ratio improved to 89% in 2023, indicating that the company successfully adapted through enhancements to its *underwriting* policy and more effective cost control. From a profitability standpoint, ROA declined to 1.8% in 2022 before recovering to 2.6% in 2023. ROE followed a similar pattern, increasing to 9.6% in 2023. These results indicate effective capital management and the insurer's ability to absorb adverse shocks while maintaining financial stability.

¹⁰ Kehinde Isiaq Olayi, "Impact of underwriting and financial ratios on profitability: an empirical analysis of insurance firms", *Modern Management Review*, No. 2/2025, 117.

Table 3. Ratio Indicators of Insurance Company B

Year	Combined Ratio	ROA	ROE
2021	92%	2%	6.7%
2022	100%	1.1%	3.8%
2023	104%	0.9%	3.1%

Source: Authors

Insurance Company B shows a clear and consistent deterioration trend throughout the observation period. The combined ratio climbed from 92% in 2021 to 104% in 2023, crossing the threshold from underwriting profit into underwriting loss. This trend reflects rising operating expenses (expense ratio), increasing claims (loss ratio), and insufficient control of operational efficiency. Profitability mirrors these developments: ROA fell from 2.0% to 0.9%, ROE declined from 6.7% to 3.1%, and the deterioration in operating ratios translated directly into lower returns and reduced profitability.

Table 4. Ratio Indicators of Insurance Company C

Year	Combined Ratio	ROA	ROE
2021	91%	2.2%	6.4%
2022	91%	1.9%	5.5%
2023	91%	1.7%	5%

Source: Authors

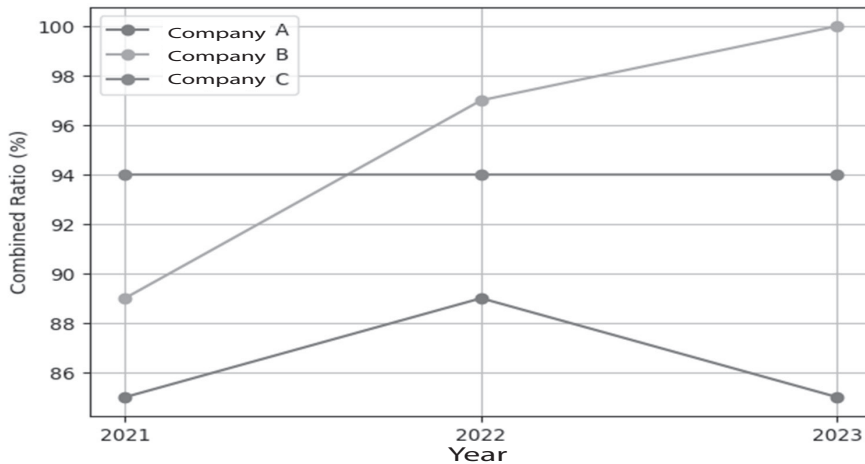
Insurance Company C demonstrates a high degree of stability, maintaining a constant combined ratio of 91% throughout the entire observation period. This consistency reflects a conservative *underwriting* policy – controlled operating costs, and a low earnings volatility. However, this stability comes at the expense of lower profitability: ROA declined from 2.2% to 1.7%, and ROE from 6.4% to 5.0%, stability ≠ high profitability. Unlike Company A, which balances operational efficiency and growth, Company C remains firmly in “defensive strategy” mode.

Based on the preceding analysis, the following conclusions can be drawn:

- Insurance Company A represents a balanced business model in which operational efficiency and financial stability translate into sustainable profitability. Its results align with the principles of corporate finance, particularly regarding the optimization of return on equity.
- Insurance Company B is an example of ineffective cost and risk management, where a combined ratio above 100% results in a systemic deterioration in profitability. This pattern indicates the need for business model restructuring and stronger cost controls.

- Insurance Company C represents a stable yet conservative operating model, where risk control and financial stability take priority, even at the expense of lower returns.

Chart 1. Combined Ratio Trend



Source: Authors, based on calculated results

The preceding analysis supports the conclusion that a clear relationship exists between operational efficiency and profitability, and that the combined ratio is a powerful performance indicator. All three companies operate under markedly different business models: Company A pursues a balanced approach, Company B a high-risk and inefficient one, and Company C adopts a conservative model. The comparative analysis demonstrates that a lower combined ratio contributes to higher profitability, but that optimal financial performance ultimately depends on the company's ability to maintain operational efficiency.

IV CONCLUSION

The operations of insurance companies are characterised by cyclical fluctuations in returns, driven by interest rate volatility, stricter pricing conditions, catastrophic losses, and the emergence of disruptive market forces. An adequate assessment of profitability extends beyond the mere analysis of aggregate indicators such as net profit or technical results by segment. Effective proactive management requires a high degree of data granularity to support the anticipation of market trends. A systematic framework for profitability analysis enables organisations to

evaluate strategic alternatives promptly and capitalise on market opportunities. Given that external shocks can materialise without warning, the long-term sustainability of insurers depends directly on the adaptability of their analytical models. Scenario analysis and simulation modelling within these frameworks constitute a critical instrument for the timely mitigation of risk under conditions of high market uncertainty.

The findings of this analysis confirm that financial ratios represent a methodologically robust instrument for assessing the profitability of insurance companies. At the same time, they demonstrate that the interpretation of these ratios requires careful consideration of the specific characteristics of the insurance business model. The combined ratio stands out as the key indicator of operational efficiency, given that it directly reflects the relationship between premiums, claims, and operating expenses.

The empirical findings indicate a positive relationship between operational efficiency and overall profitability, with lower combined ratio values generally corresponding to higher levels of ROA and ROE. However, this relationship is not deterministic, as investment income can materially influence overall financial result, adding further complexity to the analysis of insurer performance.

The comparative analysis of the observed business models underlines the importance of cost management and adequate risk selection as key determinants of financial success. At the same time a degree of tension between business stability and the maximisation of returns was identified, with the conservative model exhibiting lower volatility but also a limited capacity for profitability growth. The profitability of insurance companies results from the interaction of operating performance, investment activities, and capital structure. It may therefore be concluded that ratio analysis, while essential, is insufficient as a standalone analytical approach and must be integrated into a broader framework of financial analysis.

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