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SADRŽAJ:

3 | **Kemal Kozarić**
Emina Žunić Dželihodžić
UTICAJ CIJENA NAFTI
NA ZEMLJE IZVOZNIKE
I UVOZNIKE

17 | **Radmilo Todosijević**
Snežana Todosijević Lazović
KRIZE I RAZVOJNI
(DIS)KONTINUITETI –
KREACIJE, IMITACIJE,
TRAJANJE, OPSTANAK

29 | **Goran Radivojac**
Miloš Grujić
ULAGANJE U KREDITNE
DERIVATE NA TRŽIŠTIMA
U RAZVOJU

47 | **Stefan Blagojević**
OPRAVDANOST POSTOJANJA
POTVRDE O PUTOVANJU
I NJEN ZNAČAJ PRI
FORMIRANJU PAUŠALNE
CIJENE KOD UGOVORA
O ORGANIZOVANJU
PUTOVANJA U REPUBLICI SRBIJI

55 | **Mladen Gajić**
Vladimir Stanimirović
Dragan Janjić
ANALIZA PRINOSA ULAGANJA
U OBVEZNICE NA TRŽIŠTU
KAPITALA REPUBLIKE SRPSKE



UDK 622.323:338.5
DOI: 10.7251/FIN2002003K
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ORIGINALNI NAUČNI RAD

Uticaj cijena nafte na zemlje izvoznice i uvoznice

Oil prices impact on oil exporting and importing countries

Rezime

Ovaj rad sumira tradicionalne ekonomske poglede na svjetsko tržište nafte, sa posebnim fokusom na veliki pad cijena nafte koji se desio tokom 2014. i 2015. godine. Nadalje, u rad u je prezentovana i analiza uticaja pandemije COVID-19 na cijene nafte. U nastavku rada prikazan je uticaj promjena cijena nafte kako na zemlje izvoznice, tako i na zemlje uvoznice. Komparacija određenih ekonomskih pokazatelja (rast realnog BDP-a, stopa inflacije i platnobilansni suficit/deficit) i promjena cijena nafte za najveće zemlje izvoznice i uvoznice nafte takođe je prikazana. Ova analiza pokazala je značajan uticaj promjena cijena nafte kako na zemlje uvoznice, tako i na zemlje izvoznice. Pokazano je da se može očekivati da će se i trenutni naftni šok manifestovati na zemlje izvoznice u skladu sa ovim zaključcima, tj. zemlje koje imaju više diversifikovanu privredu i izvoz, te bolje fiskalne kapacitete i mogućnost povoljnog zaduživanja moći će efektivnije odgovoriti na pad cijena usljed pandemije COVID-19. Na strani uvoznica može se očekivati da će ovakva pojava zakomplikovati donošenje makroekonomskih politika zbog deflatorskih pritiska pada cijena nafte koje sadejstvuju sa deflatorskim pritiscima i očekivanjima koji će proizaći iz ekonomskih posljedica pandemije COVID-19.

Ključne riječi: cijena nafte, zemlje uvoznice naft, zemlje izvoznice nafte

Abstract

This paper summarizes traditional economic views on world oil market as well, with special focus on big fall in oil prices during 2014 and 2015. Further, analysis of COVID-19 pandemic impact on oil prices was presented. Following part of the paper presents analysis of oil prices changes impact on oil exporting and importing countries. Comparison of selected economic indicators for the greatest oil exporting and importing countries was presented. Analysis have shown a huge impact of oil prices on both, oil exporting as well as importing, countries. It was shown that it is to be expected that the current oil shock will manifest itself in the exporting countries in accordance with these conclusions, ie. countries with more diversified economies and exports, and better fiscal capacity and the possibility of favorable borrowing will be able to respond more effectively to falling prices due to the COVID-19 pandemic. On the part of importers, it is to be expected that such a phenomenon will complicate the adoption of macroeconomic policies due to deflationary pressures of falling oil prices, which contribute to deflationary pressures and expectations that will result from the economic consequences of the COVID-19 pandemic.

Keywords: oil price, oil importing countries, oil exporting countries

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UVOD

Cijena nafte na svjetskom tržištu kreće se u zavisnosti od ponude i potražnje koja je u datom trenutku definisana na tržištu. Možemo reći da, pored ove konstatacije, na cijenu nafte utiču i različiti geopolitički događaji koji se u velikoj mjeri pojavljuju u svijetu. U istorijskom kontekstu, cijena nafte bila je kreirana tajnim geopolitičkim planovima od strane vodećih ekonomskih sila u svijetu i nije bila striktno vezana za tržišnu ponudu i potražnju.

Nakon Drugog svjetskog rata, ekonomije širom svijeta započele su proizvodne procese u nadi da će poboljšati ekonomsku situaciju u sferi globalne ekonomije. Tako je jedan od najznačajnijih proizvodnih procesa bio rast i razvoj automobilske industrije, koji su imali veliki uticaj na kretanje cijene nafte. Naime, značajno je porasla prodaja automobila automobilske industrije, a samim tim potražnja je bila značajno povećana. Povećana potražnja za naftnim derivatima značajno je uzdrmala tržište te prema automatizmu dovela do značajnog povećanja cijena barela nafte. U periodu 1947–1948. cijena nafte je značajno skočila sa 19,23 \$ na 25,98 \$ za jedan barel.

Početak 50-ih godina, Iran preuzima vođstvo u pogledu naftne industrije te dolazi do raznih sukoba između Irana, na jednoj strani, i SAD i Velike Britanije, na drugoj strani. Ove dvije zemlje se udružuju i počinju bojkotovati Iran kako bi on osjetio sankcije zbog pokušaja kontrolisanja naftne rafinerije. Britanska vlada imala je značajan uticaj u iranskoj rafineriji sa većim brojem dionica, međutim, iranska vlada donosi odluku o nacionalizaciji te se Velika Britanija povlači iz rafinerije. Naime, ovdje možemo zaključiti da je početkom 50-ih godina prošlog vijeka Velika Britanija bila veoma svjesna svoje pozicije na geopolitičkoj sceni te se uviđa da posjeduje određenu geopolitičku moć i mogućnost intervencija na svjetskoj sceni.

Sredinom 50-ih godina, Egipat je izvršio nacionalizaciju Sueckog kanala kako bi povećao kontrolu nad teretom koji prolazi kroz kanal. Naravno, ovakva reakcija nije mogla proći bez uplitanja drugih država. Naime, Velika Britanija i Francuska, uz pomoć Izraela, započinju sukob sa Egiptom, te je u tom periodu nastupila blokada teretnog prometa, ali i potonuće tankera koji bi pokušali proći kanalom. Ovdje možemo zaključiti da je došlo do smanjenja ponude nafte, što je sa sobom povuklo rast cijena. Ovim događajem Evropa je najviše osjetila ovu blokadu jer je prije izbijanja samog

sukoba kupovala i podmirivala svoje naftne potrebe putem ovog kanala. U ovom slučaju, može se primijetiti neumiješanost SAD, ali su na neki način uspjele iskoristiti ovu situaciju tako što su povećale izvoz sirove nafte i naftnih prerađevina prema Evropi. Tokom ovog perioda, cijena nafte je skočila sa 24,17 \$ na 26,12 \$ po jednom barelu (Engdahl, 1992).

Godine 1960. osnovana je Organizacija zemalja izvoznica nafte (OPEC) u Bagdadu, a zemlje osnivači bile su: Iran, Irak, Kuvajt, Saudijska Arabija i Venecuela. Krajem 1971. godine, šest drugih država pridružilo se ovoj organizaciji, a to su: Katar, Indonezija, Libija, Ujedinjeni Arapski Emirati, Alžir i Nigerija. Glavni cilj OPEC-a jeste koordinacija i ujednačenje naftne politike zemalja članica i ustanovljavanje najboljih načina da se očuvaju njihovi interesi, pojedinačni i kolektivni, smišljanje načina i sredstava za stabilizaciju cijena na međunarodnim naftnim tržištima s ciljem uklanjanja štetnih i nepotrebnih kretanja cijena, stalna briga o interesima zemalja proizvođača i nužnost osiguranja stalnog prihoda zemalja proizvođača, efikasno, ekonomično i stalno snabdijevanje naftom zemalja potrošača, te pravedan povrat uloženog kapitala onima koji ulažu u naftnu industriju.

U 2008. godini započela je ekonomska kriza, koja je zahvatila čitav svijet, a počela je u SAD. Posljedica krize jeste velika recesija, koja se, između ostalog, odrazila i na naftu i na naftne derivate. U ovom periodu dolazi do najvećeg pada nafte, a cijena nafte po barelu je oko 50 \$. Naime, cijena nafte prije ovog pada iznosila je oko 160 \$ po barelu te ovdje možemo uvidjeti kako je ova finansijska kriza znatno poremetila i destabilizovala tržište nafte. Neke države, kao što su Kina i Indija, brzo su izašle iz recesije i povećale potrošnju nafte u skladu sa rastom BDP-a. Neke evropske države još su u 2010. godini znatno produbile krizu, što je imalo uticaja i na stabilnost evra, a samim tim, direktno, i na cijene nafte i naftnih derivata. U ovom periodu, američki dolar je znatno ojačao u odnosu na evro. Naftni sektor se u ovom periodu susreo sa nekim važnim faktorima, a to su (Cerić, 2012):

- ubrzana potrošnja energije,
- ograničene zalihe ugljikovodika,
- pomak prema nekonvencionalnim izvorima i
- političke napetosti.

Grafikon 1. Kretanje cijena nafte



Izvor: U.S.S Energy Information Administration (<https://www.eia.gov/petroleum/>)

Grafikon iznad prikazuje fluktuacije cijena nafte prije globalne finansijske krize, veoma veliki pad cijena nafte krajem 2008. godine, te

dalje fluktuacije cijena nakon krize. Između sredine 2014. godine i rane 2016. godine, svjetska ekonomija suočila se sa jednim od

INTRODUCTION

The price of oil on the world market varies depending on the supply and demand that is currently defined on the market. We can say that in addition to this statement, the price of oil is also influenced by various geopolitical events that are largely occurring in the world. In the historical context, oil prices were created by secret geopolitical plans by the world's leading economic powers and were not strictly tied to market supply and demand.

After World War II, economies around the world began production processes in the hope of improving the economic situation in the sphere of the global economy. Thus, one of the most important production processes was the growth and development of the automotive industries, which had a great influence on the movement of oil prices. Namely, the sales of cars in the automotive industry increased significantly and thus the demand was significantly increased. Increased demand for petroleum products significantly shook the market and automatically led to a significant increase in the price of a barrel of oil. In the period 1947–1948, the price of oil jumped significantly from \$ 19.23 to \$ 25.98 per barrel.

In the early 1950s, Iran took the lead in terms of the oil industry, and various conflicts arose between Iran on the one hand and the United States and Great Britain on the other. The two countries are uniting and starting to boycott Iran in order for it to feel sanctions for trying to control its own oil refinery. The British government had significant influence in the Iranian refinery with a larger number of shares, however the Iranian government made the decision to nationalize and the United Kingdom withdrew from the refinery. Namely, we can conclude here that at the beginning of the 50s of the last century Great Britain was very aware of its position on the geopolitical scene and realized that it has a certain geopolitical power and the possibility of intervention on the world stage.

In the mid-1950s, Egypt nationalized the Suez Canal to increase control over cargo passing through the canal. Of course, such a reaction could not pass without the intervention of other states. Namely, Great Britain and France, with the help of Israel, started a conflict with Egypt, and in that period there was a blockade of cargo traffic, but also the sinking of tankers that would try to pass through the canal. Here we can conclude that there was a decrease in the supply of oil, which led to an increase in prices. With this event, Europe felt this blockade the most, because before the outbreak of

the conflict, it bought and met its oil needs through this channel. In this case, it is obvious to notice the non-involvement of the USA, but in some way it managed to take advantage of this situation by increasing the export of crude oil and petroleum products to Europe. During this period, the price of oil jumped from \$ 24.17 to \$ 26.12 per barrel (Engdahl, 1992).

In 1960, the Organization of the Petroleum Exporting Countries (OPEC) was founded in Baghdad, and the founding countries were: Iran, Iraq, Kuwait, Saudi Arabia and Venezuela. At the end of 1971, six other countries joined the organization: Qatar, Indonesia, Libya, the United Arab Emirates, Algeria and Nigeria. The main goal of OPEC is to coordinate and harmonize the oil policy of member countries and establish the best ways to preserve their interests, individual and collective, devising ways and means to stabilize prices in international oil markets in order to eliminate harmful and unnecessary price movements, constant care of interests producer countries and the need to ensure a steady income of producer countries, and efficient, economical and continuous supply of oil to consumer countries, and a fair return on invested capital to those who invest in the oil industry.

In 2008, economic crisis began, affecting the entire world and beginning in the United States. The consequence of the crisis is a great recession, which, among other things, affected both oil and oil derivatives. During this period, there is the biggest drop in oil at that moment, and the price of oil per barrel is around 50 \$. Namely, the previous oil price significantly disrupted and destabilized the oil market. Some countries such as China and India have quickly emerged from the recession and increased oil consumption in line with GDP growth. Some European countries significantly deepened the crisis in 2010, which had an impact on the stability of the euro and thus directly on the prices of oil and petroleum products. During this period, the US dollar strengthened significantly against the euro. In this period, the oil sector encountered some important factors, such as (Cerić, 2012):

- accelerated energy consumption,
- limited hydrocarbon reserves,
- shift to unconventional sources and
- political tensions.

Graph 1. Oil prices fluctuation



Source: U.S.S Energy Information Administration (<https://www.eia.gov/petroleum/>)

The chart above shows oil price fluctuations before the global financial crisis and a very large drop in oil prices at the end of 2008

and further price fluctuations after the crisis. Between mid-2014 and early 2016, the world economy faced one of the biggest oil

najvećih naftnih šokova u savremenoj istoriji. Kako se navodi u izvještaju Svjetske banke “Global Economic Prospects 2018”, pad cijene sirove nafte na svjetskom tržištu od 70% u odnosu na početak pomenutog perioda bio je jedan od tri najveća takva pada poslije Drugog svjetskog rata. Pored pomenutih, još jedan dugoročni trend uticao je na ovakav razvoj događaja, a to je činjenica da će se čovječanstvo suočiti sa ekološkom krizom velikih razmjera, uzrokovanom povišenim nivoom emisije stakleničkih gasova i posljedičnim rastom svjetskih temperatura.

Usljed pandemije virusa korona, pad nafte od čak 20% značajno je pogodio svjetske proizvođače te njihov napor da poboljšaju cijene postaje sve teži. Čelnici zemalja OPEC-a i Rusije nedavno su se okupili u Beču kako bi razmotrili različite mogućnosti i prepreke vezane za naftu. Prihodi od nafte od kojih zavise vlade poput Saudijske Arabije i Alžira brzo se smanjuju. Pored ovih zemalja, izvoz nafte znatno je opao i u Venecueli, Libiji i Iranu. Međutim, nakon dogovora OPEC-a i drugih proizvođača nafte o rekordnom smanjenju proizvodnje, cijena nafte početkom mjeseca maja je u porastu (Anon., 2020).

se među zemljama izvoznicama nalaze Rusija, Saudijska Arabija, Nigerija, Norveška i Kanada.

Podaci koje poredimo u grupi zemalja uvoznica jesu stopa inflacije, stopa rasta realnog BDP-a, te kretanja salda bilansa tekućeg računa kao procenat ukupnog BDP-a, dok na strani zemalja izvoznica poredimo kretanje salda bilansa tekućeg računa kao procenat ukupnog BDP-a, stopu inflacije, stopu realnog rasta BDP-a i, na kraju, državni prihod kao procenat BDP-a. Podaci koji se koriste u analizi preuzeti su sa statističkog portala Međunarodnog monetarnog fonda. Analiza uključuje i praćenje trendova prije velikog pada cijena nafte u periodu 2014–2015, kako bismo adekvatno izložili uticaj koji je pad cijena nafte na međunarodnom tržištu u tom periodu imao na odabrane ekonomske pokazatelje u zemljama uvoznicama i zemljama izvoznicama nafte. Kako bi se odgovorilo temi ovog rada i došlo do adekvatnih zaključaka i spoznaja, smatramo da je ovu analizu najbolje izvršiti upravo u periodu koji smo odabrali, budući da kretanje konjunktornog ciklusa u svijetu u tom periodu (odustvo recesija i velike inflacije u glavnim svjetskim privredama) pojednostavljuje čitanje podataka i olakšava analizu ove vrste.

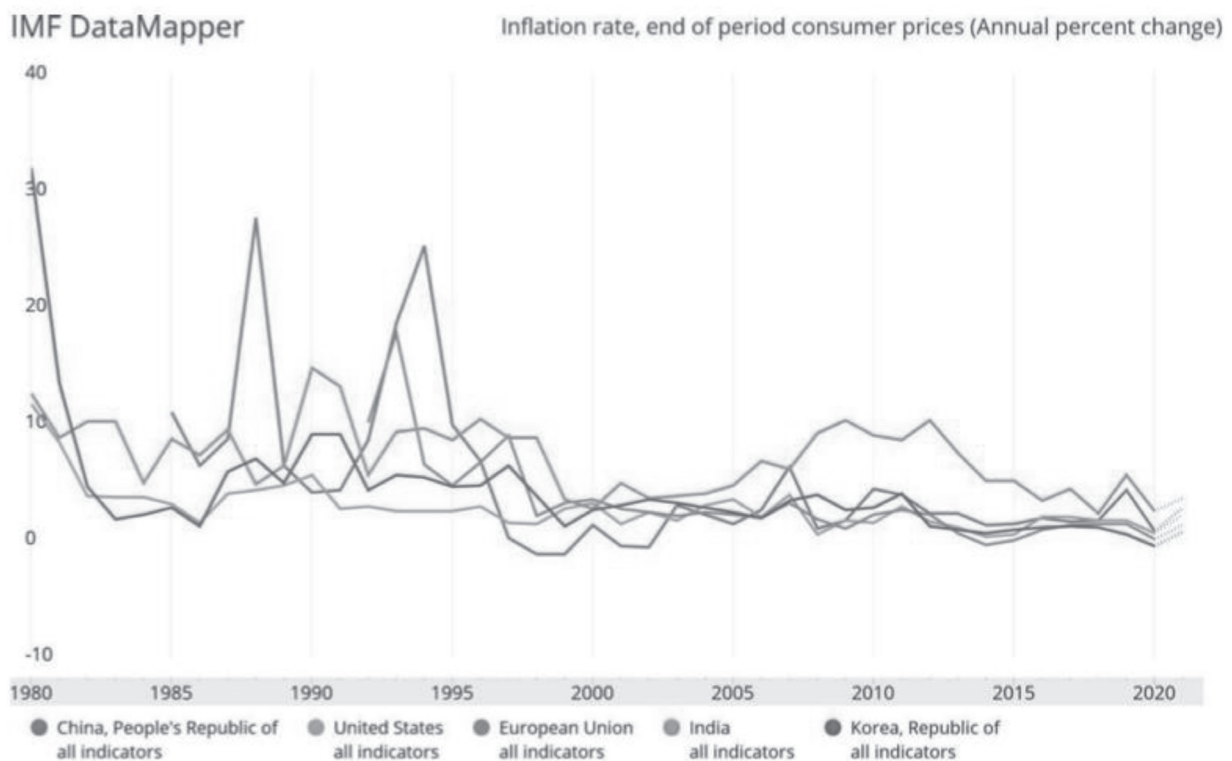
1. METODOLOGIJA

U istraživačkom dijelu ovog rada primijenije se komparativna metoda kojom ćemo izvršiti poređenje određenih ekonomskih pokazatelja zemalja koje predstavljaju uvoznike i izvoznike nafte, sa posebnim akcentom na vrijeme velikog pada cijena nafte u periodu od 2014. do 2015. godine. U našem uzorku za komparaciju, među zemljama uvoznicama nalaze se Kina, SAD, EU, Indija i Republika Koreja, dok

2. REZULTATI ISTRAŽIVANJA

Na samom početku analize, izvršena je komparacija odabranih ekonomskih pokazatelja (stopa inflacije, stopa rasta realnog BDP-a, kretanja salda bilansa tekućeg računa kao procenat ukupnog BDP-a) za odabrane zemlje uvoznice nafte. Na narednom grafikonu prikazano je poređenje kretanja stope inflacije za period 1980–2020. za odabrane zemlje uvoznice nafte: Kina, SAD, EU, Indija i Sjeverna Koreja.

Grafikon 2. Kretanje stope inflacije za odabrane zemlje uvoznice nafte



©IMF, 2020, Source: World Economic Outlook (April 2020)

Izvor: <https://www.imf.org/en/Countries>

U nastavku je prikazano poređenje kretanja stope rasta BDP-a za EU, Indija i Sjeverna Koreja. period 1980–2020. za odabrane zemlje uvoznice nafte: Kina, SAD,

shocks in modern history. According to the report “Global Economic Prospects 2018” of the World Bank, the fall in the price of crude oil on the world market by 70% compared to the beginning of the period was one of the three largest such declines since World War II. In addition to the above, another long-term trend has influenced this development, and that is the fact that humanity will face a large-scale environmental crisis, caused by increased levels of greenhouse gas emissions and the consequent rise in world temperatures.

Due to the coronavirus pandemic, the drop in oil of as much as 20% has significantly affected world producers, and their efforts to improve prices are becoming increasingly difficult. The leaders of the OPEC countries and Russia recently gathered in Vienna to discuss various possibilities and obstacles related to oil. Revenues from oil on which governments like Saudi Arabia and Algeria depend are falling sharply. In addition to these countries, oil exports have fallen significantly in Venezuela, Libya and Iran. However, after an agreement between OPEC and other oil producers on a record reduction in production, the price of oil rose in early May 2020 (Anon., 2020)

Saudi Arabia, Nigeria, Norway and Canada.

The data we compare in the group of importing countries are the inflation rate, the real GDP growth rate, and current account balance movements as a percentage of total GDP, while on the exporting side we compare the current account balance movement as a percentage of total GDP, the rate inflation, the rate of real GDP growth, and finally government revenue as a percentage of GDP. Analyzed data are taken from the statistical portal of the International Monetary Fund. The analysis also includes monitoring trends before the large drop in oil prices in the period 2014–2015, in order to adequately expose the impact of falling oil prices on the international market in that period on selected economic indicators in importing and exporting countries. In order to answer the topic of this paper and come to adequate conclusions and insights, we believe that this analysis is best done in the period we have chosen because the movement of the economic cycle in the world in that period (absence of recessions and high inflation in major world economies) simplifies reading data and facilitates analysis of this kind.

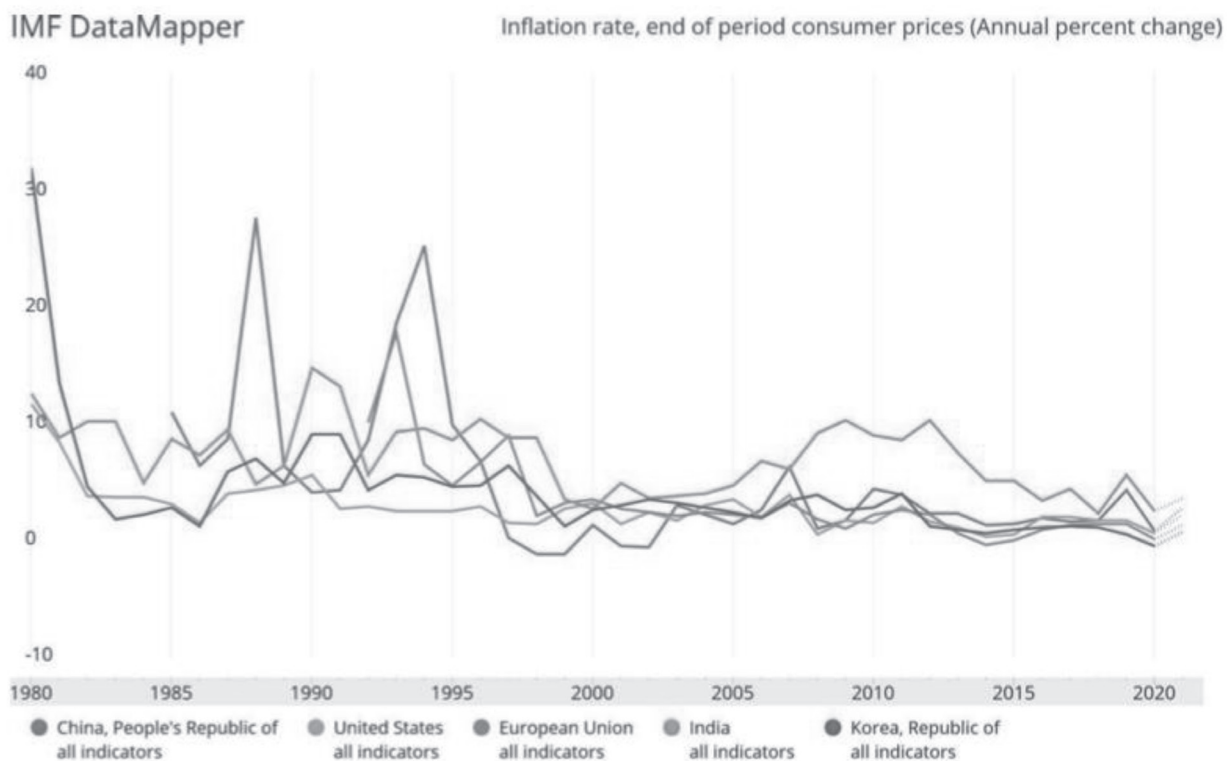
1. METHODOLOGY

In the research part of this paper, a comparative method will be applied by which we will compare certain economic indicators of countries representing oil importers and exporters, with special emphasis on the time of a large drop in oil prices in the period from 2014 to 2015. In our sample for comparison among importing countries are China, USA, EU, India and the Republic of Korea, while in our sample for comparison among exporting countries are Russia,

2. RESULTS

At the very beginning of the analysis, a comparison of selected economic indicators (inflation rate, real GDP growth rate, current account balance movements as a percentage of total GDP) was performed for the countries of the selected oil importing country. The following chart shows a comparison of inflation rates for the period 1980–2020 for selected oil importing countries: China, USA, EU, India and North Korea.

Graph 2. Inflation rate trends for selected oil importing countries



©IMF, 2020, Source: World Economic Outlook (April 2020)

Source: <https://www.imf.org/en/Countries>

The following is a comparison of GDP growth rates for the period 1980–2020 for selected oil importing countries: China, USA, EU,

India and North Korea.

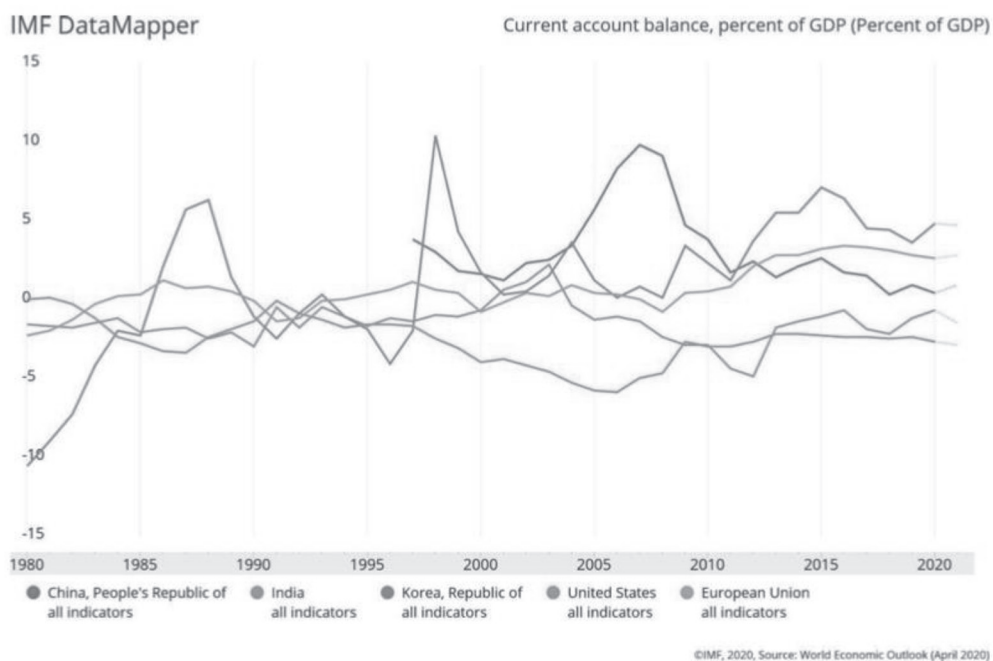
Grafikon 3. Kretanje stope rasta BDP-a za odabrane zemlje uvoznice nafte



Izvor: <https://www.imf.org/en/Countries>

Na narednom grafikonu prikazano je poređenje kretanja salda bilansa tekućeg računa kao procenta ukupnog BDP-a za period 1980–2020. za odabrane zemlje uvoznice nafte: Kina, SAD, EU, Indija i Sjeverna Koreja.

Grafikon 4. Kretanje salda bilansa tekućeg računa kao procenta ukupnog BDP-a



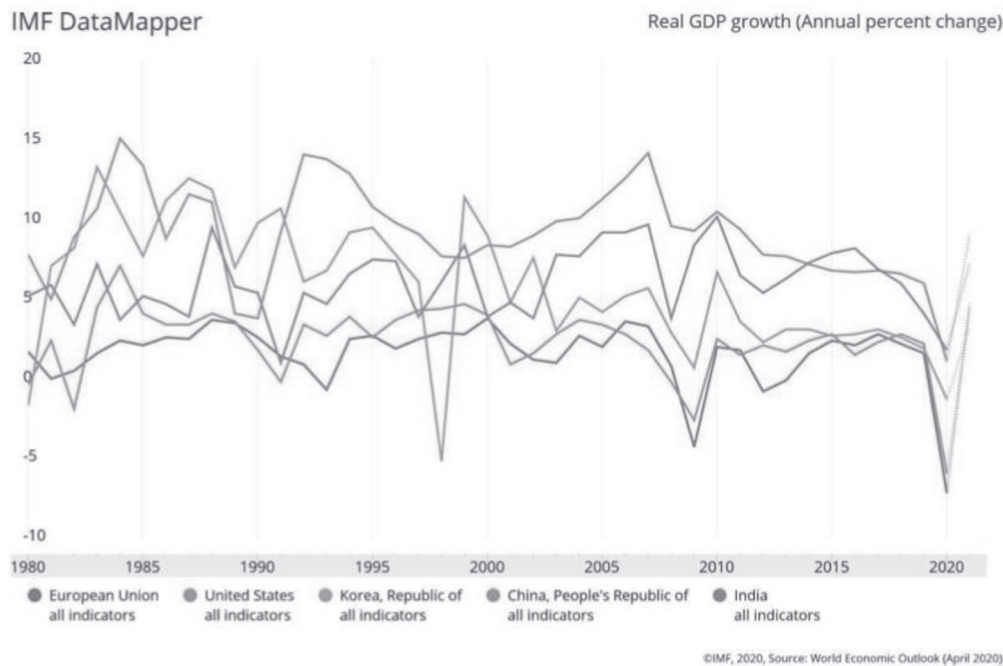
Izvor: <https://www.imf.org/en/Countries>

Posmatrajući stopu inflacije, uočavamo njeno smanjenje u svakoj od analiziranih privreda, gdje je Indija imala najveće smanjenje inflacije, tj. smanjenje stope inflacije za 2,4% na kraju 2014. godine u odnosu na kraj 2013. godine. Kina i EU zabilježile su padove u stopi inflacije od 1%, s tim da je EU imala zabilježenu deflaciju od 0,2% u istom periodu. SAD i Republika Koreja imale su najmanje promjene sa padovima u stopi inflacije od 0,8% i 0,3% respektivno. U 2015. su sve zemlje, osim Indije, koja je ostala na istom nivou inflacije, zabilježile rast u stopi inflacije. U 2016. se isti trend nastavlja, sa ponovnim izuzetkom Indije, koja bilježi pad stope inflacije od 1,7%.

Kada pogledamo stopu rasta realnog BDP-a između kraja 2013. i 2014. godine, vidimo rast stope rasta za SAD, EU i Indiju od 0,7%, 1,7% i 1% respektivno, usporavanje stope rasta Kine za 0,5% i nepromijenjenu stopu rasta za Republiku Koreju za isti period. SAD, EU, Indija i Kina ostaju u istom trendu povećanja stope rasta, dok Republika Koreja bilježi pad stope rasta od 0,4% između krajeva 2014. i 2015. godine. U 2016. godini u SAD, Kini i EU vidimo usporavanje rasta, dok u Indiji i Južnoj Koreji vidimo povećanje stope rasta.

Posmatrajući deficit/suficit na tekućem računu platnog bilansa, u 2014. godini zabilježen je rast suficita Kine od 0,5% i smanjenje deficita Indije

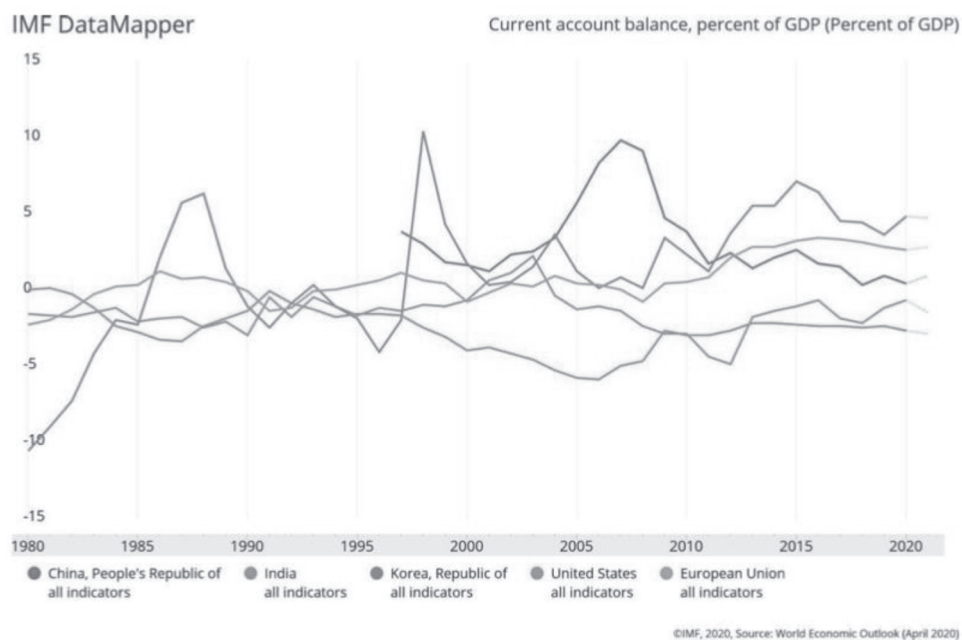
Graph 3. Trends in GDP growth rate for selected oil-importing countries



Source: <https://www.imf.org/en/Countries>

The following chart shows a comparison of current account balances as a percentage of total GDP for the period 1980–2020 for selected oil importing countries: China, USA, EU, India and North Korea.

Graph 4. Movement of the current account balance as a percentage of total GDP



Source: <https://www.imf.org/en/Countries>

Observing the inflation rate, we notice its decrease in each of the analyzed economies, where India had the largest decrease in inflation, ie. a decrease in the inflation rate by 2.4% at the end of 2014 compared to the end of 2013. China and the EU recorded declines in the inflation rate of 1%, with the EU recording deflation of 0.2% in the same period. The US and the Republic of Korea had the smallest changes with declines in inflation rates of 0.8% and 0.3% respectively. In 2015, all countries except India, which remained at the same level of inflation, recorded an increase in the inflation rate. In 2016, the same trend continues with the repeated exception of India, which recorded a drop in inflation rate of 1.7%.

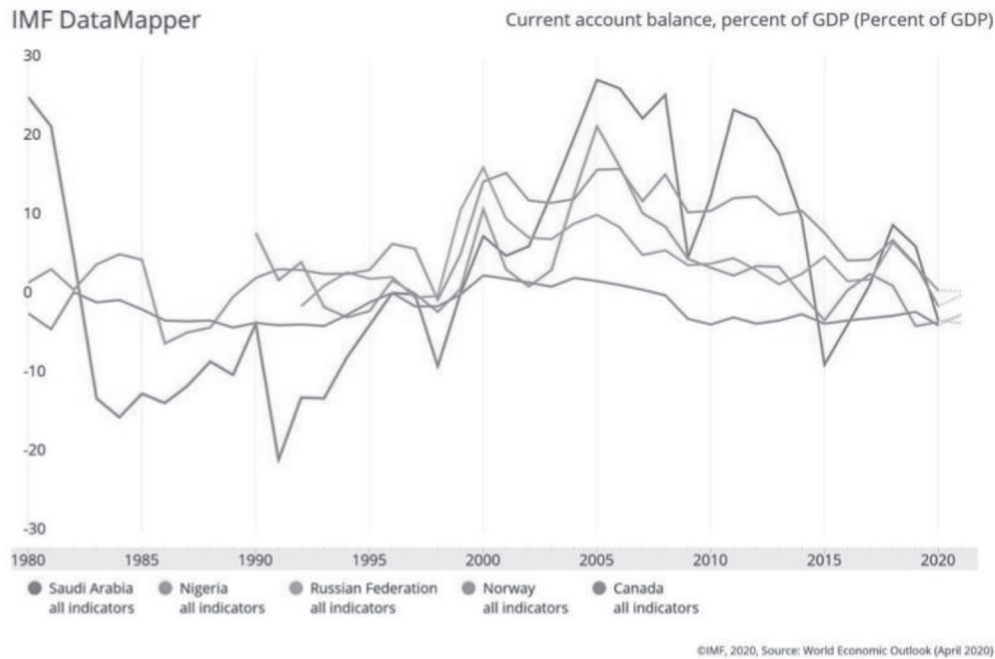
When we look at the real GDP growth rate between the end of 2013 and 2014 we see growth rates for the US, EU and India of 0.7%, 1.7% and 1% respectively and we see a slowdown in China's growth rate by 0.5% and an unchanged rate growth for the Republic of Korea for the same period. The US, EU, India and China remain in the same trend of increasing growth rates, while the Republic of Korea recorded a decline in growth rates of 0.4% between the end of 2014 and 2015. In 2016, we see a slowdown in growth in the US, China and the EU, while in India and South Korea we see an increase in the growth rate.

od 0,4%, dok su salda tekućih računa ostalih analiziranih privreda ostala nepromjenjena. U 2015. godini, sve privrede osim SAD bilježe rast suficita/ pad deficita. U 2016. godini uočavamo rast suficita/ pad deficita u Indiji i EU, dok ostale zemlje bilježe pad suficita/ rast deficita.

U nastavku analize izvršena je komparacija odabranih ekonomskih pokazatelja (kretanje salda bilansa tekućeg računa kao procenat

ukupnog BDP-a, stopa inflacije, stopa realnog rasta BDP-a, državni prihod kao procenat BDP-a) za odabrane zemlje izvoznice nafte. Na narednom grafikonu prikazano je poređenje kretanja salda bilansa tekućeg računa kao procenta ukupnog BDP-a za period 1980–2020. za odabrane zemlje izvoznice nafte: Saudijska Arabija, Nigerija, Rusija, Norveška i Kanada.

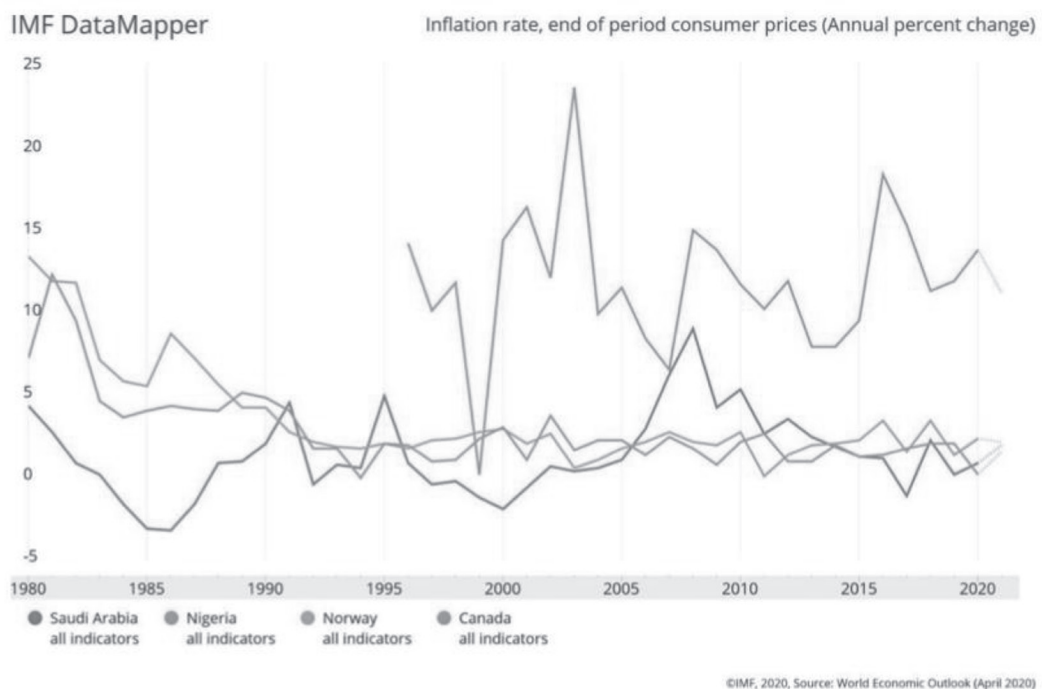
Grafikon 5. Kretanje salda bilansa tekućeg računa kao procenta ukupnog BDP-a za zemlje izvoznice



Izvor: <https://www.imf.org/en/Countries>

U nastavku je prikazano poređenje stope inflacije za period 1980–2020. za odabrane zemlje izvoznice nafte: Saudijska Arabija, Nigerija, Rusija, Norveška i Kanada.

Grafikon 6. Kretanje stope inflacije za zemlje izvoznice



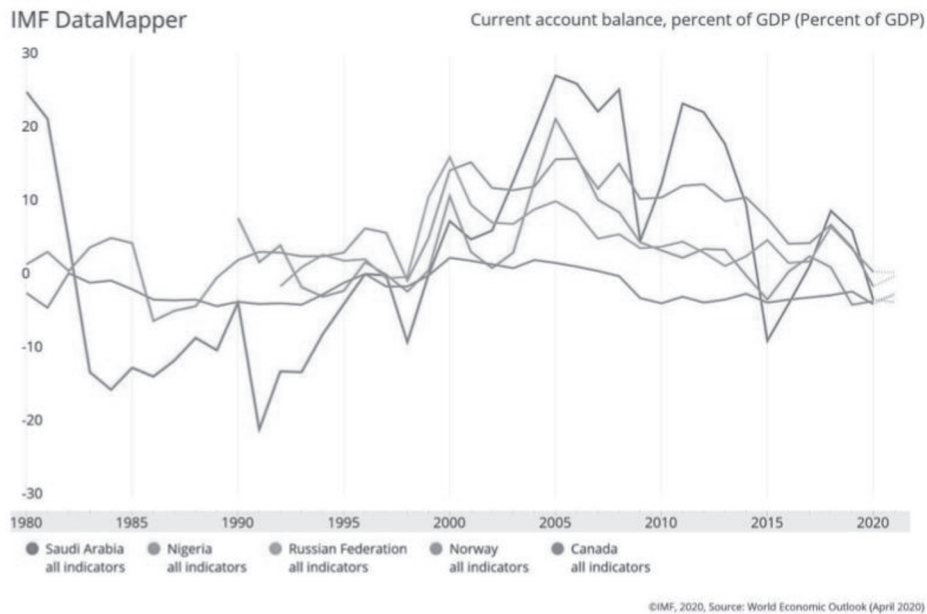
Izvor: <https://www.imf.org/en/Countries>

Naredni grafikon prikazuje poređenje stope rasta BDP-a za period 1980–2020. za odabrane zemlje izvoznice nafte: Saudijska Arabija, Nigerija, Rusija, Norveška i Kanada.

Observing the current account deficit / surplus, in 2014 there was a growth of China's surplus of 0.5 and a decrease of India's deficit of 0.4%, while the current account balances of other analyzed economies remained unchanged. In 2015, all economies except the USA recorded a surplus growth / deficit decline. In 2016, we see a surplus growth / deficit decline in India and the EU, while other countries record a surplus / deficit growth.

In the continuation of the analysis, a comparison of selected economic indicators (current account balance as a percentage of total GDP, inflation rate, real GDP growth rate, government revenue as a percentage of GDP) was performed for the countries of the selected oil exporting country. The following chart shows a comparison of current account balances as a percentage of total GDP for the period 1980–2020 for selected oil exporting countries: Saudi Arabia, Nigeria, Russia, Norway and Canada.

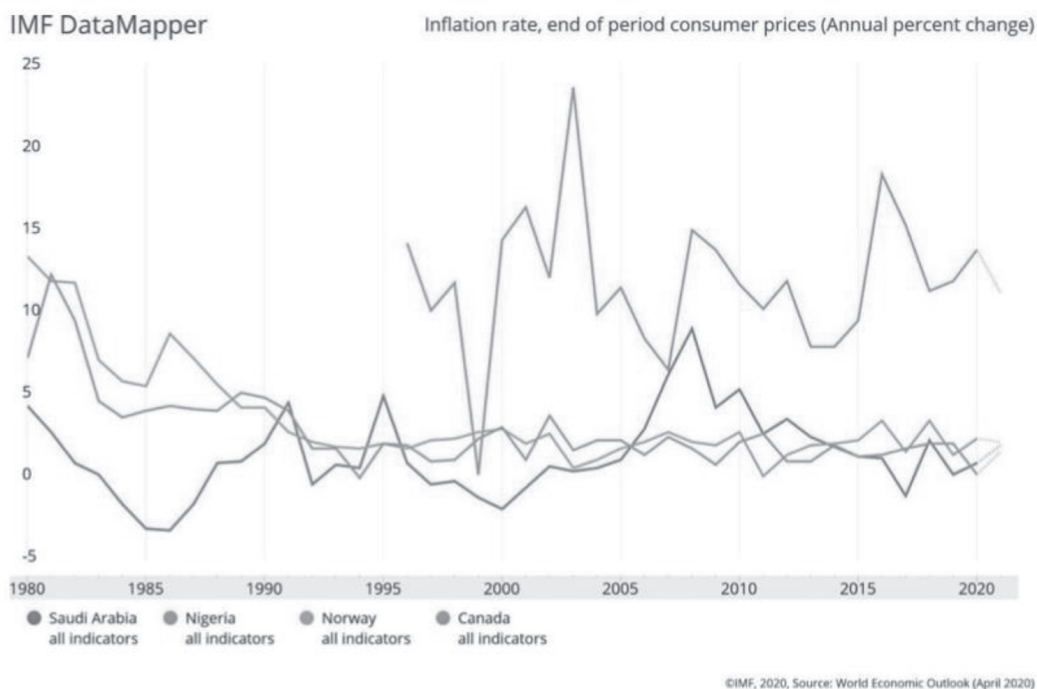
Graph 5. Movement of the current account balance as a percentage of total GDP for oil exporting countries



Source: <https://www.imf.org/en/Countries>

The following is a comparison of the inflation rate for the period 1980–2020 for selected oil exporting countries: Saudi Arabia, Nigeria, Russia, Norway and Canada.

Graph 6. Inflation rate trends for oil exporting countries



Source: <https://www.imf.org/en/Countries>

The following chart shows a comparison of the GDP growth rate for the period 1980–2020 for selected oil exporting countries: Saudi Arabia, Nigeria, Russia, Norway and Canada.

Grafikon 7. Kretanje stope rasta BDP-a za zemlje izvoznice

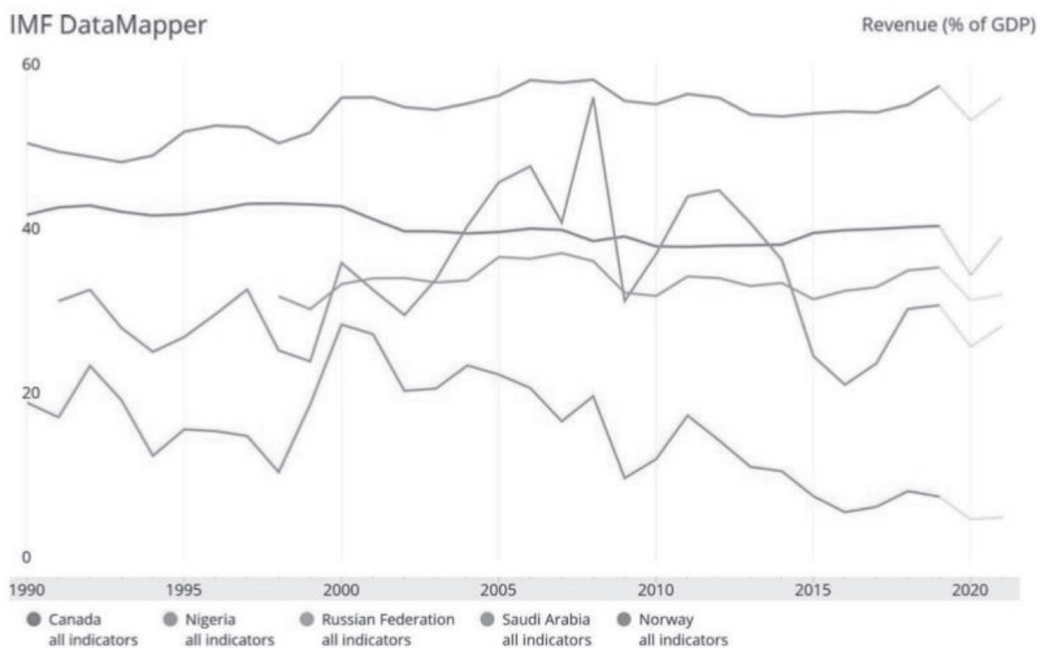


©IMF, 2020, Source: World Economic Outlook (April 2020)

Izvor: <https://www.imf.org/en/Countries>

U nastavku, prikazano je poređenje državnog prihoda kao procenat BDP-a za period 1980–2020. za odabrane zemlje izvoznice nafte: Saudijska Arabija, Nigerija, Rusija, Norveška i Kanada.

Grafikon 8. Kretanje državnog prihoda kao procenat BDP-a za zemlje izvoznice



©IMF, 2020, Source: Fiscal Monitor (April 2020)

Izvor: <https://www.imf.org/en/Countries>

Na strani izvoznica u parametru udjela salda na tekućem računu platnog bilansa u ukupnom BDP-u u 2014. godini u odnosu na 2013. godinu vidimo pad suficita/ rast deficita kao procenta

BDP-a u Saudijskoj Arabiji i Nigeriji od 8,3% i 3,3% respektivno, dok u Rusiji, Norveškoj i Kanadi vidimo rast suficita/pad deficita od 1,3%, 0,5% i 0,8% respektivno. U 2015. godini se uočavaju veće posljedice, te sve zemlje osim Rusije bilježe pad suficita/ rast deficita, dok u 2016. godini vidimo rast suficita/ pad deficita za

sve analizirane zemlje osim Rusije i Norveške. U pogledu inflacije, očekivano, vidimo rast inflacije u svim zemljama u 2014. osim Nigerije, gdje je ona ostala na nivou iz 2013, i Saudijske Arabije, koja je zabilježila pad stope inflacije za 0,6%. Bitno je napomenuti da je najznačajniji rast stope inflacije imala Rusija, sa rastom od 4,9%, za njom slijede Kanada, sa rastom od 1%, i Norveška, sa rastom od 0,1%, u poređenju sa 2013. godinom. U 2015. godini vidimo nastavak istog trenda, sa izuzetkom Kanade, čija stopa

Graph 7. GDP growth rates for exporting countries

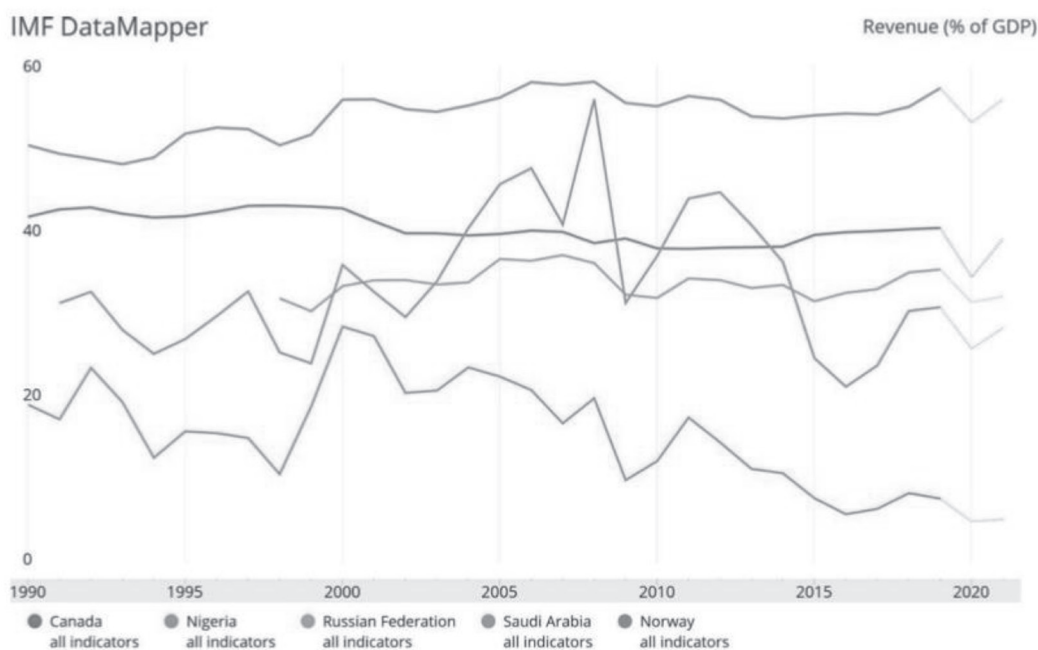


©IMF, 2020, Source: World Economic Outlook (April 2020)

Source: <https://www.imf.org/en/Countries>

The following is a comparison of government revenue as a percentage of GDP for the period 1980–2020 for selected oil exporting countries: Saudi Arabia, Nigeria, Russia, Norway and Canada.

Graph 8. Trends in government revenue as a percentage of GDP for exporting countries



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Source: <https://www.imf.org/en/Countries>

On the exporting side, in the parameter of the share of the current account balance in total GDP in 2014 compared to 2013, we see a decline in surpluses / deficit growth as a percentage of GDP in Saudi Arabia and Nigeria of 8.3% and 3.3% respectively, while in Russia, Norway and Canada we see an increase in surpluses / decrease in deficits of 1.3%, 0.5% and 0.8% respectively. In 2015, greater consequences were observed, and all countries except Russia recorded a decline in surplus / deficit growth, while

in 2016 we see a growth in surplus / deficit deficit for all analyzed countries except Russia and Norway. In terms of inflation, we expect inflation to grow in all countries in 2014 except Nigeria, where it remained at the level of 2013, and except for Saudi Arabia, which recorded a decline in inflation by 0.6%. It is important to note that the most significant increase in the inflation rate was in Russia with a growth of 4.9%, followed by Canada with a growth of 1% and Norway with a growth of 0.1% compared to 2013. In 2015,

inflacije pada za 0,7%. U 2016. godini je uočljiva stabilizacija u Rusiji, sa padom stope inflacije od 7,5%, i eskalacija u Nigeriji, sa rastom stope inflacije za 8,9%. U Kanadi i Norveškoj vidimo rast stope inflacije za 0,1% i 1,2% respektivno, dok se u Saudijskoj Arabiji nastavlja trend pada stope inflacije.

3. DISKUSIJA

U pogledu efekata na rast realnog BDP-a zemalja neto izvoznica nafte u 2014. još se ne vide veći efekti pada cijena nafte, sa povećanjem u rastu BDP-a svake od analiziranih privreda, osim Rusije, koja bilježi smanjenje stope rasta od 1,1%. U 2015. se već pokazuju određene posljedice, tj. svaka od analiziranih zemalja bilježi smanjenje u stopi rasta realnog BDP-a, sa izuzetkom Norveške, koja bilježi stopu rasta identičnu onoj u 2014. godini, i Saudijske Arabije, koja bilježi povećanje stope rasta od 0,4%. Najteže pogođena biva Rusija, čiji rast BDP-a pada za 2,7%, uz kontrakciju ukupne ekonomske aktivnosti za 2%. U 2016. godini vidimo oporavak stope rasta u Kanadi i Rusiji, dok se pad stope rasta pojavljuje u Saudijskoj Arabiji u iznosu od 2,4%, i nastavlja u Norveškoj i Nigeriji, sa padom stope rasta u iznosu od 0,9% i 4,3% respektivno. Nigerija sa ovakvim padom bilježi kontrakciju ukupne ekonomske aktivnosti u iznosu od 1,6%. U pogledu državnih prihoda kao procenta realnog BDP-a u 2014. godini je zabilježen pad tog parametra u Nigeriji, Saudijskoj Arabiji i Norveškoj od 0,54%, 4,5% i 0,24% respektivno. S druge strane, Rusija i Kanada su zabilježile rast datog parametra za 0,38% i 0,08% respektivno. U 2015. godini, rast datog parametra zabilježile su Kanada i Norveška, u iznosu od 1,41% i 0,37% respektivno, dok su Saudijska Arabija, Nigerija i Rusija zabilježile padove od 11,7%, 3,03% i 1,98% respektivno. U 2016. godini vidimo oporavak u svim državama osim u Nigeriji, gdje vrijednost ovog parametra pada za 1,96%.

ZAKLJUČAK

Provedena analiza pokazala je da se u zemljama uvoznicama generalno može uočiti trend rasta realnog BDP-a, pada inflacije i rasta suficita/ smanjenja deficita na tekućem računu platnog bilansa. Suprotni učinci su se očekivali u zemljama izvoznicama, što međutim ova analiza nije pokazala budući da analizirane zemlje izvoznice imaju drugačije privredne i fiskalne sisteme. Učinci koje smo očekivali uglavnom su se manifestovali u zemljama koje nemaju dovoljno diversifikovanu privredu i izvoz (Nigerija), i u zemljama koje nemaju dovoljan fiskalni kapacitet da ublaže učinak koji šok pada cijena nafte ima na njihove privrede (Rusija).

U ovom kontekstu, može se očekivati da će se i trenutni naftni šok manifestovati na zemlje izvoznice u skladu sa ovim zaključcima, tj. zemlje koje imaju više diversifikovanu privredu i izvoz, te bolje fiskalne kapacitete i mogućnost povoljnog zaduživanja će moći efektivnije odgovoriti na pad cijena usljed pandemije COVID-19. Na strani

uvoznica može se očekivati da će ovakva pojava zakomplikovati donošenje makroekonomskih politika zbog deflatorskih pritisaka pada cijena nafte koje sadejstvuju sa deflatorskim pritiscima i očekivanjima koji će proizaći iz ekonomskih posljedica pandemije COVID-19.

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we see the continuation of the same trend with the exception of Canada, whose inflation rate is falling by 0.7%. In 2016, there was a noticeable stabilization in Russia with a fall in the inflation rate of 7.5% and an escalation in Nigeria with a rise in the inflation rate of 8.9%. In Canada and Norway, we see inflation rates rising by 0.1% and 1.2% respectively, while in Saudi Arabia the downward trend in inflation rates continues.

3. DISCUSSION

In terms of the effects on real GDP growth of net oil exporting countries in 2014, no major effects of falling oil prices are seen, with an increase in GDP growth of each of the analyzed economies except Russia, which recorded a decrease in growth rate of 1.1%. In 2015, certain consequences are already being shown, ie. each of the analyzed countries recorded a decrease in the real GDP growth rate with the exception of Norway, which recorded a growth rate identical to that in 2014, and Saudi Arabia, which recorded an increase in the growth rate of 0.4%. Russia is the hardest hit, with GDP growth falling by 2.7% and contracting total economic activity by 2%. In 2016, we see a recovery in growth rates in Canada and Russia, while a growth rate decline occurs in Saudi Arabia of 2.4%, and continues in Norway and Nigeria with a growth rate decline of 0.9% and 4, 3% respectively. With this decline, Nigeria recorded a contraction in total economic activity of 1.6%. In terms of government revenues as a percentage of real GDP in 2014, there was a decline in this parameter in Nigeria, Saudi Arabia and Norway of 0.54%, 4.5% and 0.24% respectively. On the other hand, Russia and Canada recorded growth of the given parameter by 0.38% and 0.08%, respectively. In 2015, the growth of this parameter was recorded by Canada and Norway in the amount of 1.41% and 0.37%, respectively, while Saudi Arabia, Nigeria and Russia recorded declines of 11.7%, 3.03% and 1.98 % respectively. In 2016, we see a recovery in all countries except Nigeria where the value of this parameter is falling by 1.96%.

CONCLUSION

The conducted analysis showed that in the importing countries there is a general trend of real GDP growth, falling inflation and growth of the surplus / reduced deficit on the current account of the balance of payments. The opposite effects were expected in the exporting countries, which, however, this analysis did not show since the analyzed exporting countries have different economic and fiscal systems. The effects we expected were mainly manifested in countries that do not have sufficiently diversified economies and exports (Nigeria), and in countries that do not have sufficient fiscal capacity to mitigate the impact that the fall in oil price shock has on their economies (Russia).

In this context, it is to be expected that the current oil shock will manifest itself in the exporting countries in accordance with these conclusions, ie. countries with more diversified economies and exports, and better fiscal capacity and the possibility of favorable

borrowing will be able to respond more effectively to falling prices due to the COVID-19 virus pandemic. On the part of importers, it is to be expected that such a phenomenon will complicate the adoption of macroeconomic policies due to deflationary pressures of falling oil prices, which contribute to deflationary pressures and expectations that will result from the economic consequences of the COVID-19 pandemic.

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UDK 338.124.4:316.32

DOI: 10.7251/FIN2002017T

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ORIGINALNI NAUČNI RAD

Krize i razvojni (dis)kontinuiteti – kreacije, imitacije, trajanje, opstanak

Crisis and development (dis)continuity – creations, imitations, duration, survival

Rezime

Sposobnost anticipacije javlja se kao najveća moguća sposobnost čoveka. Njome se ide u susret budućnosti. Budućnost projektujemo kao izraz radoznalosti i očekivanja ili kao izažene potrebe čoveka. Danas se pokazuje ko je najznačajniji u stvaranju vrednosti. Čovek, radnik, projektant, operativni izvršilac. Relacija: kapital–rad je prekinuta. Kapital je uzrok svih neregularnosti i najveći remetički faktor u prirodi i društvu. Eto vam kapitala! Stoji! Propašće ako ne doživi valorizaciju uz pomoć čoveka. Valjda je socijalna dimenzija razvoja sada vidljiva više nego ikada u istoriji civilizacije. Postavljamo pitanje: Da li kreiramo ili samo imitiramo? Na određenom stepenu razvoja, društva postaju dekadentna, ne nalaze puteve daljeg razvoja i sistem se raspada. Kapital je nužna pretpostavka i njegovi senzori su jednosmerni. Ide tamo gde može da se održi i uveća. Prohodnost i način funkcionisanja obezbeđuju mu odluke prediktivnog karaktera. Društvena dimenzija suprotstavljena je ciljevima kapitala. Ona je korektivni faktor njegovog ponašanja, jer nastoji da povremene poremećaje koji nastaju ponašanjem kapitala usmeri u strukturno prilagođavanje kako bi društvo i ekonomija negovali stanje ravnoteže za zadovoljavanje menjajućih pojedinačnih i društveno-ekonomskih potreba. Predviđanje ponašanja okruženja predstavlja generalnu razvojnu opciju i smer kretanja preduzeća. Predviđanje i planiranje osmišljeni su da izvrše redukciju nesigurnosti dopuštanjem da donosioci odluka ne čekaju na predviđene događaje i reaktivno reaguju, već da proaktivno i preventivno, idući u susret budućnosti, utiču na tokove ishoda nastupajućih promena. Za ex ante reagovanje u odnosu na prognoziranu kretanja neke pojave, potrebna nam je prognoza visokog nivoa pouzdanosti. Tehnološke promene, u evolutivnom smislu, izazivaju, a i one su izazov za budućnost. Preduzeća i društvo svesni su činjenice da tehnološka promena ima masovan i suptilan karakter i da se njene posledice, po pravilu, protežu kroz vremenski tok, na dužu vremensku projekciju.

Ključne riječi: razvoj, kriza, novac, okruženje, ekonomija, preduzeće, inovacije

Abstract

Ability of anticipation comes as the greatest ability of man. Along with it, we go towards future. We project future as an expression of curiosity and expectation or as expressed needs of humans. We can see who is most important in creation of value today? Human, worker, project manager, operator. Relation: capital – work has been canceled. Capital is the cause of all irregularities and greatest disturbance factor in nature and society. There You go the Capital! It stands there! It will collapse if it doesn't get valorized by humans. Maybe social dimension of development is seen now more than ever in history of civilization. On certain level of development, societies become decadent, they are not finding ways of further development and system falls apart. Capital is a necessary assumption and its sensors are single sided. It goes only where it can sustain and grow. Patency and way of functioning provide it decisions of predictive character. Social dimension is contradictory to goals of capital. It is a corrective factor of its behavior, because it endeavors to point intermittent disorders which become from capitals behavior, to a structural adaptation in order for society and economy can achieve equilibrium for satisfaction of interchangeable individual and social economic needs. Prognostics and planning are created to reduce insecurities, by allowing decision makers to not have to wait on predicted events and react, but to proactively and preventive, going towards future, influence flows of outcomes of upcoming changes. For ex ante reaction in comparison to prognostic movements of some events, we need prognostic of high level of security. Technologic changes, in evolutionary sense challenge and are challenging for the future. Enterprises and society, are aware of the fact that technological change has mass and subtle character and that its consequences, by the rule, stretch through a timeline and longer time projection.

Keywords: *development, crisis, money, environment, economy, enterprise, innovation.*

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UVOD

Sutrašnji dan već je svanuo, ali neće biti ni nalik na prethodni. Vri novi svet Olda Hakslija (Haksli, 2009), napisan po naučnim informacijama koje mu je preneo brat Džulijan Haksli, čuveni biolog, ponovo čitamo (Haksli 2016). U nedovoljno razvijenim zemljama, razvoj je uvek praćen i plaćen socioekonomskim dualizmom. Kriza se naslućivala sredinom 2019. godine, pogotovo zato što ona iz 2007/2008. nije završena. Pandemija je „božji dar”, kao opravdanje za promašaje u ponašanju razvijenih ekonomija. Sve je u funkciji pojedinačnog interesa. I državni interes je pojedinačni interes. Suprotstavljeni stavovi propagandističkog karaktera oko validnosti neoklasičnog pristupa u oblasti ekonomske nauke između Kembridža i Masačusetskog instituta, koji decenijama i još uvek traju, iznedrili su osvešćenje kod nekih ekonomija i zemalja. Potrebno je da razvijemo evolutivne modele na bazi algoritama koji korespondiraju sa ponašanjem prirode. Tada nema recepture i nema gramzivosti i poniženja koje sa sobom donosi i ostavlja kapital. To, pre svega, nisu nikakve škole, već preovlađujući stavovi i mišljenja pojedinaca, koje su nekritički prihvatili nedovoljno učeni ekonomisti i, po osnovu idolopoklonstva, u odsustvu sopstvenog misaonog eksperimenta, promovisali takvu lavinu nepotvrđenih stavova koji su naneli više štete nego koristi ekonomijama sveta u razvoju. Odbacili su ekonomsku istoriju da bi opravdali sopstveno liberalno-korisničko shvatanje. Klasično i neoliberalno ponašanje koje diktira kapital, bolje reći – oni koji njime upravljaju, nisu doneli ništa dobro kod 6/7 svetskog stanovništva. Sve industrijski razvijene ekonomije u razvoju su pribegavale protekcionizmu, a na dostignutom stepenu sopstvenog razvoja nameću vam doktrinu slobodnog tržišta? Kada je „gusto”, svi se zatvaraju, pravila više ne važe!? Čuvaj sopstvenu poziciju, a vi i dalje morate biti otvoreni jer vaši resursi pripadaju svima. Prevelika otvorenost u ekonomskom smislu opasnija je od prevelike zatvorenosti. Nema odbrambenog sistema. Dolazi do gubitka identiteta i nemogućnosti strukturne samoorganizovanosti ekonomije i društva. Dokazujemo da su tržište i mediji svugde u svetu slobodni samo onoliko koliko im društvo i priroda dozvole. Sada su sva ponašanja usmerena ka tržištu. Kao da je ono slobodno!? Kao da ono prihvata i odbacuje. Međutim, niko više ne skriva, niti je to moguće, državne intervencije ne samo u sektore gde bi došlo do zaostajanja u tehničko-tehnološkom napretku, već i u druge strukture, bez obzira na karakteristike vlasništva. Tržište je pokorilo, istorijski posmatrano, feudalizam, a tržište će isto tako biti odbačeno i evolutivno eliminisano digitalizmom. Tek će digitalizacija možda biti uvod u hiperdemokratiju. Pogrešne su teorije o uticaju tržišta na strategije razvoja! One mogu dati samo neke polazne informacije o tražnji poznatog outputa. Kao da će tržište rešiti sve razvojne nesuglasice. Kakva greška, koja traje! Kakvo neznanje! Trajanje ove floskule je samo u interesu kapitala! Šta je istina? Tehnologija, a ne tržište, određivaće smer i tempo privrednog razvoja. Tehnologija će nam ponuditi proizvode koji su nam danas nepoznati i stvoriti svet novih potreba koje su nam danas nepoznate. Tehnologija, koju su ekonomisti godinama smatrali rezidualnim faktorom, otvoriće nam vrata za činjenice budućnosti. Ovaj stav promoviše sledeća dva: ne manje tehnologije, već više tehnologije; ne manje znanja, već više znanja, jer je jedino na takav način moguće oslobađanje čoveka od sudbine.

1. PREGLED LITERATURE I OKVIR ISTRAŽIVANJA

1.1. Postoji li red vožnje – kontinuitet?

Istorija nam svedoči o periodičnim odumiranjima i nastajanjima ljudskih civilizacija. Tako je bilo sa civilizacijama Vavilona, Egipta, Vizantije, Rima... Nastupa mračnija srednjeg veka, događaju se buržoaske revolucije, nastupa tehničko-tehnološki progres, epidemije (u ime biologije i možda evolucije), ratovi u ime demokratije kao „propisanog reda” ili naredbodavno od strane autoritarnih režima kao još većeg – „diktiranog reda”. Sledi raspad i jednih i drugih, dolaze novi, koji se ne pitaju koliko će trajati. Dostignuća su Luka Pačiolio – beleženje promena, ali i Melerovič, Gutenberg, Šmalenbah, Perović, Vasiljević, Kolaric, Kračević – troškovi, troškovi, kao suština ekonomskog racionalnog ponašanja privrednih subjekata. Ako makroekonomija nastoji da uvede i sprovedi red u ponašanju društvenih subjekata, u preduzeću se radnim angažovanjem stvara vrednost i raspoređuje na stvaraocima i korisnike. U trendu su industrije sa opadajućim troškovima, čija dugoročna kriva ponude ima opadajući nagib. Ovaj stav nosi sa sobom pretpostavku „važnih” ekonomija u eksternom okruženju preduzeća i interno u okviru industrije (Pirs, 2015 str. 159). Sa aspekta menadžmenta, stepen važnosti treba dati dedukciji, koja čini osnovu racionalne koordinacije konstituišućih delova preduzeća.

Nova makroekonomija je izgrađena na hipotezi o prirodnoj stopi nezaposlenosti. Rast društvenog proizvoda je funkcija investicija i zaposlenosti, a nacionalni dohodak je izvor društvene potrošnje. Povećanjem fonda radnog vremena povećava se zaposlenost, a time i rast društvenog proizvoda bez novih investicija. Povećanjem stepena tehnološkičnosti (modernosti, savremenosti, tehničke dominantnosti) proizvodnog rada, ostvaruje se povećanje stvorene i dodatne vrednosti. Neočekivani rast agregatne tražnje, izazvane društvenim poremećajima (ekonomske krize, pandemije, poplave, požari, zemljotresi, ratovi...) može dovesti do neočekivane inflacije. Ekonomska struktura miruje, cene rastu, kao i plate, koje se participativno doniraju, a nisu zarađene. Društveni proizvod pada. Međutim, percipirani rast plata i cena sa kojima se ekonomski subjekat suočava dovodi do rasta outputa i zaposlenosti, što je verovatna reakcija ponude na ponašanje cena. Kada se sve unormali, output i zaposlenost se takođe normalizuju. Nova klasična makroekonomija nastoji da pokaže uzaludnost kejnzijanske politike upravljanja tražnjom i opredeljuje se na strategije ponude.

Ekonomije balkanskih zemalja siromašne su u ponudi. Tržišta su im mala i previše otvorena. Razvoj domaćeg složenog proizvoda ne postoji, bez njega nema ponude, ili je osiromašen do potpune inovativne nezainteresovanosti. Uvozni lobi dominira, a njegov nužni pratilac je korupcija. Nema skokovitog rasta i razvoja. Postepenost je neizbežna. Uslov za to je „stvaranje uslova za produktivno zapošljavanje radne snage” i „zaštita sopstvenog proizvođača” (Todorović, 2010). Ako Evropska unija precizira proces postepenosti kroz prilagođavanje država i ekonomija, to treba da prihvate i kao recepturu za sopstveno ponašanje. Determinante institucionalnog reagovanja i ponašanja su neophodne, bez obzira na to kako bi ih protivnici proglašavali. Sopstveni interesi, i kao imitacija i kao projekat, iznad su drugih interesa i ponašanja. Takvo ponašanje nam je nametnuto. I to jedino treba imitirati, jer je to funkcija opstanka malih ekonomija i njihovih država.¹

Da li je trebalo da balkanske zemlje postave granice između sebe i destruktivnog upada trgovine, obezvređene tehnologije, transnacionalnih kompanija i obrazovnih i ideoloških uticaja i na taj način

¹ Nekada smo imali: „Nemačka iznad svega”, danas: „Amerika pre svega”. Još traje: „Ja sam tvoj gospod bog, nemaj drugih bogova osim mene”. Možda će se ponovo dogoditi: „Proleterci svih zemalja, ujedinite se (uožbiljite se)”.

INTRODUCTION

Tomorrow has already dawned, but it will not be like the previous one. Brave New World - Aldous Huxley (Haksli, 2009), written according to scientific information transmitted to him by his brother Julian Huxley, a famous biologist, we read again (Haksli 2016). In underdeveloped countries, development is always accompanied and paid for by socio-economic dualism. The crisis was anticipated in mid-2019, especially since the one from 2007/08 was not over. A pandemic is a „gift of God” as a justification for failures in the behavior of developed economies. Everything is in the function of individual interest. And the state interest is an individual interest. Opposing propaganda views on the validity of the neoclassical approach to economics between Cambridge and the Massachusetts Institute, which have been going on for decades, have brought awareness to some economies and countries. We need to develop evolutionary models based on algorithms that correspond to the behavior of nature. Then there is no recipe and no greed and humiliation that brings with it and leaves capital. Above all, these are not schools, but the prevailing attitudes and opinions of individuals, which were uncritically accepted by insufficiently educated economists and on the basis of idolatry, in the absence of their own thought experiment, promoted such an avalanche of unconfirmed attitudes that did more harm than good. They rejected economic history in order to justify their own liberal-user perception. Classical and neoliberal behavior dictated by capital, or rather those who manage it, has not brought anything good to 6/7 of the world's population. All industrialized economies have resorted to protectionism in their development, and at the level of their own development they have imposed the doctrine of the free market on you!? When “the problems start” everyone closes, the rules no longer apply!? Keep your own position, and you still have to be open because your resources belong to everyone. Too much openness in economic terms is more dangerous than too much closedness. There is no defense system. There is a loss of identity and the impossibility of structural self-organization of the economy and society. We are proving that the market and the media everywhere in the world are free only to the extent that society and nature allow them. Now all behaviors are directed towards the market. Like it's free!? Like, it accepts and rejects. However, no one is hiding state interventions anymore, nor is it possible, not only in sectors where there would be a lag in technical and technological progress, but also in other structures, regardless of ownership characteristics. Historically, the market has conquered feudalism, and the market will also be rejected and evolutionarily eliminated by digitalism. Only digitalization may be an introduction to hyper-democracy. Theories about the influence of the market on development strategies are wrong! They can only provide some initial information about the demand for a known output. Like, the market will resolve all development disagreements. What a mistake which lasts! What ignorance? The duration of this phrase is only in the interest of capital! What is the truth? Technology, not the market, will determine the direction and pace of economic development. Technology will offer us products that are unknown to us today and will create a world of new needs that are unknown to us today. Technology, which economists have considered a residual factor for years, will open the door to the facts of the future. This attitude promotes the following two: not less technology, but more technology, not less knowledge but more knowledge, because only in that way is it possible to free humans from destiny.

1. LITERATURE REVIEW AND RESEARCH FRAMEWORK

1.1. Is there a timetable - continuity

History testifies to the periodic extinctions and emergence of human civilizations. This was the case with the civilizations of Babylon, Egypt, Byzantium, Rome... , the darkness of the Middle Ages, bourgeois revolutions, technical and technological progress, epidemics (in the name of biology and perhaps evolution), wars in the name of democracy „as prescribed” or commanded by authoritarian regimes “as an even larger - dictated order. The disintegration of both follows, new ones are coming who do not wonder how long it will last. The achievements are Luca Pacioli - recording changes, but also Melerovic, Gutenberg, Schmalenbach, Perovic, Vasiljevic, Kolaric, Krajcevic - costs, costs, as the essence of economic rational behavior of economic entities. If macroeconomics strives to introduce and enforce order in the behavior of social subjects, value is created in the company through work engagement and distributed to creators and users. Industries with declining costs are on trend, whose long-term supply curve has a declining slope. This attitude carries with it the assumption of “important” economies in the external environment of the enterprise and internally within the industry (Pirs, 2015 str. 159). From the aspect of management, the degree of importance should be given to deduction, which is the basis of rational coordination of the constituent parts of the company.

The new macroeconomy is built on the hypothesis of a natural unemployment rate. Gross domestic product growth is a function of investment and employment, and the national income is the source of social consumption. Increasing the working time fund increases employment and thus the growth of gross domestic product without new investments. By increasing the degree of „techno-logicalness” (modernity, technical dominance) of production work, an increase in created and added value is achieved. Unexpected growth of aggregate demand, caused by social disturbances (economic crises, pandemics, floods, fires, earthquakes, wars...), can lead to unexpected inflation. The economic structure is dormant, prices are rising as well as salaries that are participatory donated but not earned. Gross domestic product is declining. However, the perceived growth of wages and prices that the economic entity faces leads to an increase in output and employment, which is a probable reaction of supply to price behavior. When everything is normal, output and employment also return to normal. The new classical macroeconomics seeks to show the futility of Keynesian demand management policy and opts for supply strategies.

The economies of the Balkan countries are poor in supply. Their markets are small and too open. The development of a domestic complex product does not exist, without which there is no supply, or it is impoverished to the point of complete innovative disinterest. The import lobby dominates, whose necessary companion is corruption. There is no rapid growth and development. Graduality is inevitable. The condition for that is: “creating conditions for productive employment” and “protection of it's own producer”(Todosijević, 2010). If the European Union specifies a process of gradualness through the adjustment of countries and economies, you should accept it as a recipe for your own behavior. Determinants of institutional response and behavior are necessary, no matter how opponents proclaim them. Self-interests, both as an imitation and as a project, are above other interests and behaviors. Such behavior is imposed on us. And that should only be imitated, because it is a function of the survival of small economies and their states.¹

² We used to have: Germany above all, today America above all. It still goes on: “I am your lord god, have no other gods but me.” It may happen again: “Proletarians of all countries, unite (get serious)”

da teže projektovanju sopstvenog modela rasta, što bi dovelo do cepanja bambusove ili sirotinjske zavese i zavisnosti (receptura bogatih) i odvelo nas, možda, u izolaciju u međunarodnim odnosima, ili je to možda samo prolazna kratkovidost?

Percepcije se menjaju, naglašavane stvari se menjaju i ne postoje brze konverzije velikih razmera. Prihvatili smo ili smo se vratili ortodoksnom načinu mišljenja. Strah od nove izolacije, kao psihološki momenat, verovatno je bio dominantan, uključujući i rizike takvog pristupa. Stavovi i mišljenja mogu alternirati i imati svoju interakciju, ali usklađivanje viđenja može proizaći iz stava da razvoj može biti ubrzan od strane međunarodnog sistema, ali i da je nerazvijenost prouzrokovana tim sistemom. (Todosijević R. i Todosijević L. S., 2004). Razvijene industrijske zemlje emituju veliki broj impulsa dve vrste: one koji pružaju šanse za brži i bolji razvoj nego što bi inače bilo potrebno, i one koji predstavljaju prepreke razvoju – one koji sprečavaju rast. Razumni ljudi mogu se razilaziti oko pitanja neto bilansa ovih impulsa, npr. da li „eksploatacija“ od strane transnacionalnih kompanija izjednačava raspoloživost određenih količina naučnih, tehnoloških i organizacionih znanja, ili je šteta koja nastaje odlivom mozgova veća ili manja od koristi dobijene putem strane tehnološke pomoći, ili da li dotok poklona i zajmova po povlašćenim kamatnim stopama izravjava vezanost zbog pomoći ili beg kapitala itd. Zanimljivo pitanje tada nije da li zemlja ima koristi ili gubi od svoje egzistencije sa razvijenim zemljama, već kako možemo da sledimo selektivnu politiku koja bi nam omogućila da izvučemo koristi iz pozitivnih snaga, a da se istovremeno ne izložimo šteti nepoželjnih sila. Ako se stvari tako posmatraju, tada se postavlja pitanje projektovanja selektivnih politika za pomoć, trgovinu, inostrane investicije, prelazne kompanije, tehnologiju, strano obrazovanje, pokretljivost ljudi i dr. Kao da su nejednakosti i siromaštvo bitni za rast. Rast se kod nas koncentrisao na usko područje savremene „urbane industrije“ i pokazuje se da su vlade bile nespремne da koriste poreze i javne službe za izjednačavanje rastućih nejednakosti, kao i da spreče koncentraciju kapitala u rukama malog broja bogatih. Izostale su generalne i parcijalne razvojne politike, kao i novi institucionalni uslovi za razvoj.

Pokazaće se da problem nije u „nezaposlenosti“, što je, u stvari, zapadni koncept koji pretpostavlja zapošljavanje u modernom sektoru, tržišta radne snage, razmenu radne snage i socijalna davanja u slučaju nezaposlenosti. Problem je neplaćeni, neproduktivni rad siromašnih, naročito radničke i seoske sirotinje. Naglasak na „zaposlenoj sirotinji“ doveo je do zainteresovanosti za redistribuciju produktivnih osnovnih sredstava kao trasi ka manjoj nejednakosti. Sa aspekta nove makroekonomije, izostaje strategija ponude. Nijedna ekonomija Balkana nema kao ponudu složen output, osim iz takozvane namenske proizvodnje. Tu nastaju i drugi problemi: još uvek demarkaciona linija između vojnog i civilnog sektora. Nerazvijena specijalizacija i standardizacija zapostavile su kooperaciju i izostaje proizvodna i poslovna saradnja. Preduzetništvo je u zapećku. Na drugoj strani, nastaje „urbana industrija“, proizvodnja delića, komponenata i elementa na bazi mehaničke obrade i montaže. Nema proizvodnje sklopova i agregata. Izostaju savremeni automatizovani digitalni procesi. Ostvaruje se prodor kapitala nezavisno od lokacije. Neki drugi faktori, globalističkog tipa, prevladavaju. Sopstveni odbrambeni ekonomski sistem nema jasne orijentire za definisanje budućnosti. Da li magla postaje sve gušća, a ćorsokak sve blatnjaviji i neprohodniji?

Progres se kreće od visoko agregiranih veličina do sve više dezagregiranih ciljeva, do zadovoljavanja specifičnih ljudskih potreba konkretnih siromašnih grupa: deca, žene, penzioneri, ljudi u udaljenim regionima. Ukupni problemi, problemi bogatih ili problemi siromašnih, nisu samo njihovi problemi. Oni su globalni problemi i

odatle naglasak na međuzavisnostima. Potreban nam je efikasan i brz napad kroz razvojne opcije na izazove budućnosti. To podrazumeva potrebnu koncentraciju kadrova, koncentraciju kapaciteta i koncentraciju sredstava. Inovativno-stimulativne i mobilizujuće mere se podrazumevaju. Pitanje koje se postavlja moglo bi da glasi: „Da li poći od međunarodne harmonije interesa i pozitivnih igara zbira ka većem naglasku na stvarnom ili potencijalnom konfliktu i nultoj igri zbira?“ Odgovor je u kooperaciji nasuprot konfrontaciji (Todosijević R. i Todosijević L. S., 2004).

2. REZULTATI I DISKUSIJA

2.1. Moguće razvojne pretpostavke

Strategija restrikcije industrijskog uvoza (antiimportna orijentacija) i naglasak na izvozu (eksportna orijentacija) može dovesti do startnih i posledičnih promašaja. Moguće su varijante strategijskog reagovanja u vidu prelaska sa investiranja u fizičkom kapitalu na investiranje u formalno obrazovanje i okretanje ka neformalnom obrazovanju i motivaciji, zatim zaokret sa naglaska na rastu outputa na kalkulacije društvenih troškova i dr. Dileme mogu nastati između pesimizma i euforije, između poljoprivrede i industrije, tehnike velikih naspram malih razmera, formalnog naspram „neformalnog“ sektora, pogoršanja naspram poboljšanja uslova trgovanja, materijalnih nasuprot socijalnim ciljevima, rasta naspram okruženja, tehničkih naspram društvenim limitima rasta. Nerazvijenim državama i njihovim ekonomijama sve treba, a mogućnosti je malo. Diversifikacija ciljeva treba da bude obuzdavana i svedena na pojedinačna vremena preduzimanja njihove realizacije i dospeća. Radi se o širokoj lepezi viđenja oko naizmeničnih strana klatna. Sprovesti preduzeće ili privredu kroz dinamiku promena i pritom ostati u progresu i izbeći regres je i znanje i veština. Nažalost, nama se regresivna stanja dešavaju u kontinuitetu i kao da su programirana. Diskontinuiteti nalažu potrebu njihovog prevazilaženja, a krizama treba upravljati, jer se one upravo javljaju kao greške u pretpostavljenom kontinuitetu. Sukob umeća i konteksta treba podići na nivo saradnje, jer i političke odluke moraju imati karakter stručnih odluka i podlegati proveru i odgovornosti. Osnovu za ekspanziju investicija treba da popuni praznina za izvorima investicionih ulaganja i značajnim indikatorima zamenjujuće komparativne prednosti i regionalne međuzavisnosti – izvora investicionih sredstava.

Indikator investicija u regionalnoj promeni strukture i komparativnih prednosti može biti naglasak na ranoj, srednjoj i kasnoj industriji. Sada je pitanje koliko digitalizacija tome protivureči. Naglasak je u razvoju: brzo, brže, još brže (Davidson M., 1995), dok klasični pristupi industrijskom razvoju bivaju obezvređeni kroz vremensku dimenziju jer je za procesnu industriju potrebno 4–6 godina od projektovanja do realizacije, za hidrocentralu 3–5 godina, termoelektranu 32 meseca, za fabriku šećera tri godine, a smenjivost proizvoda sa aspekta životnog veka proizvoda u informatičkim tehnologijama približava se granici od 12 meseci. Pošto vreme nema supstitut, brzina tokova investicionih aktivnosti i procesa i visina investicija predominantno će uticati na izbor razvojnih opredeljenja. Pokazuje se da se investicije javljaju kao najveći mogući vid štednje. Razgraničenja na rane, srednje i kasne industrije niko više ne pominje. Govori se samo o privatnim investicijama, a one nisu faktor strukturne uravnoteženosti, već profita kao rezultata senzora kapitala. Intervencija na planu društvene politike razvoja je neminovna. Tekstilna industrija kao „rana“ može biti u oživljavanju, ali je ostala bez sirovinske osnove (vuna, pamuk, orlon, krilon, najlon...). Hemijsku industriju iz domena „srednje“ industrije sve više karakteriše stepen determinacije sopstvenih kapaciteta i tu bi

Should the Balkan countries draw boundaries between themselves and the destructive intrusion of trade, devalued technology, transnational companies and educational and ideological influences and thus strive to design their own growth model, leading to bamboo bark break or „poverty” curtain and dependence (recipes of the rich) and perhaps led us into isolation in international relations, or is it perhaps only a transient short-sightedness?

Perceptions change, stressed things change, and there are no large-scale fast conversions. We have accepted or returned to the orthodox way of thinking. Fear of new isolation, as a psychological moment, was probably dominant and included the risks of such an approach. Attitudes and opinions may alternate and interact, but the harmonization of views may result from the view that development can be accelerated by the international system, but also that underdevelopment is caused by that system (Todosijević R. i Todosijević L. S., 2004). Developed industrialized countries emit a large number of impulses of two kinds: those that provide opportunities for faster and better development than would otherwise be needed, and those that pose obstacles to development - those that hinder growth. Reasonable people may disagree about the issue of the net balance of these impulses, e.g. whether „exploitation” by transnational companies equates the availability of certain amounts of scientific, technological and organizational knowledge, or whether the damage caused by brain drain is greater or less than the benefits of foreign technological assistance, or whether the inflow of donations and loans at preferential interest rates, equalizes attachment due to aid or capital flight, etc. The interesting question then is not „does the country benefit or lose from its existence with developed countries?” But „how can we pursue a selective policy that would allow us to benefit from the positive forces without exposing ourselves to the damage of undesirable forces.” If things are viewed that way, then the question arises regarding the design of selective policies for aid, trade, foreign investment, transition companies, technology, foreign education, mobility of people, etc. As if inequality and poverty are essential for growth. Growth in our country is concentrated in the narrow area of modern „urban industry” and it is shown that governments were unwilling to use taxes and public services to equalize growing inequalities, as well as to prevent the concentration of capital in the hands of a small number of rich. General and partial development policies as well as new institutional conditions for development were missing.

It will be shown that the problem is not in „unemployment”, which is in fact a Western concept that assumes: employment in the modern sector, labor markets, labor exchange and social benefits in case of unemployment. The problem is the unpaid, unproductive work of the poor, especially the working and rural poor. The emphasis on the “employed poor” has led to an interest in the redistribution of productive fixed assets as a route to less inequality. From the aspect of the new macroeconomics, there is no supply strategy. No economy in the Balkans has a complex output as an offer, except from the so-called purpose-built production. Other problems arise here: there is still a line of demarcation between the military and civilian sectors. Underdeveloped specialization and standardization have neglected cooperation and there is a lack of production and business cooperation. Entrepreneurship is neglected. On the other hand, there is an „urban industry”, the production of parts, components and elements based on mechanical processing and assembly. There is no production of assemblies and aggregates. Modern automated digital processes are missing. Capital penetration is achieved regardless of location. Some other factors, of the globalist type, predominate. The self-defense economic system does not have clear guidelines for defining the future. Is the fog getting thicker and the dead end more muddy and impassable?

Progress ranges from highly aggregated sizes to increasingly disaggregated goals, to meeting the specific human needs of specific poor groups: young children, women, retirees, people in remote regions. Total problems, problems of the rich or problems of the poor, are not just their problems. They are global problems and that is why the

emphasis is on interdependencies. We need an efficient and rapid attack through development options on the challenges of the future. This implies the necessary concentration of staff, concentration of capacity and concentration of resources. Innovative stimulating and mobilizing measures are taken for granted. The question that could be asked could be: whether to move from an international harmony of interests and positive games of sums to a greater emphasis on actual or potential conflict and a zero game of sums. The answer is in cooperation versus confrontation (Todosijević R. i Todosijević L. S., 2004).

2. RESULTS AND DISCUSSION

2.1. Possible developmental assumptions?

The strategy of restricting industrial imports (anti-import orientation) and the emphasis on exports (export orientation) can lead to initial and consequent failures. Variants of strategic response are possible in the form of transition from investing in physical capital to investing in formal education and turning to non-formal education and motivation, then turning from the emphasis on the growth of output to calculations of social costs, etc. Dilemmas can arise between pessimism and euphoria, between agriculture and industry, large-scale to small-scale techniques, formal versus „informal” sector, deterioration versus improved trading conditions, material versus social goals, growth versus environment, technical versus social growth limits. Underdeveloped countries and their economies need everything, and opportunities are few. Diversification of goals should be curbed and reduced to individual times of undertaking their realization and maturity. It is a wide range of views around the alternating sides of the pendulum. It is both knowledge and skills to guide a company or the economy through the dynamics of change and at the same time stay in progress and avoid regress. Unfortunately, regressive states happen to us continuously and as if they are programmed. Discontinuities dictate the need to overcome them and crises need to be managed, because they just appear as errors in the assumed continuity. The conflict of skills and context should be raised to the level of cooperation, because political decisions must also have the character of professional decisions and be subject to verification and responsibility. The basis for investment expansion should be filled by the gap behind the sources of investment and significant indicators of substituting comparative advantages and regional interdependence - sources of investment funds.

An indicator of investment in regional structure change and comparative advantages may be the emphasis on early, middle and late industry. The question now is how much digitization contradicts that. The emphasis is on development: fast, faster, even faster (Davidson M., 1995), while classical approaches to industrial development are devalued through the time dimension because the process industry takes 4 to 6 years from design to implementation, a hydropower plant 3 to 5 years, a thermal power plant 32 months, a sugar factory 3 years and product changeability in terms of product life in information technology is approaching the limit of 12 months. Since time has no substitute, the speed of the flow of investment activities and processes and the amount of investment will predominantly influence the choice of development commitments. It turns out that investments appear as the largest possible type of savings. The distinction between early, middle and late industries is no longer mentioned. We are talking only about private investments and they are not a factor of structural balance but of profit as a result of capital sensors. Intervention in the field of social development policy is inevitable. The textile industry as a „wound” may be in revival, but it has been left without a raw material basis

digitalizacija mogla pomoći kod povećanja stepena fleksibilnosti za proizvodnu diversifikaciju. „Kasne“ industrije, kao što su mašino-gradnja, elektromašino-gradnja, elektronska industrija, transportno mašinstvo, mogu biti afirmisane samo po osnovu proizvoda specijalne izrade, i to na osnovu prethodnih narudžbi. Složeni proizvodi na bazi mehaničke obrade i montaže mogu biti razvijeni do nivoa sofisticiranosti, ali se tada postavlja pitanje masovnosti izrade, tržišta i, uopšte, konkurentnosti. Kooperacija u međunarodnom okruženju znači saradnju a ne konflikt, može nadomestiti domaća ograničenja. Diskontinuitet u radu „kasnih“ industrija učinio je da one izgube reference nastupa, pa je njihova revitalizacija ili rekonstrukcija visoko neizvesna. Novogradnje (kompleksni finalni proizvod) će na ovom području zasad, a i ubuduće, izostati. Digitalizacioni procesi koje karakterišu informatičke tehnologije, kompjuteri i telekomunikacije verovatno će supstituisati nestanak (obezvređenih) proizvoda i procesa.

Kada je Srbija dozvolila neselektivni uvoz polovnih automobila, ona je istovremeno obezvređila svoj dotad jedini složeni proizvod – automobil, ali i unazadila svoj finasijski sektor. Umesto da razvija gamu novih tipova automobila i promoviše kreditnu politiku domaćih finasijskih institucija, ova odluka je obezvređila preko 500 kooperanata – preduzetnika i lišila građane da voze pod povoljnim uslovima novi auto, sa mogućnošću zamene svake četiri godine. Umesto novog „fiće“, vozimo evropski krš. A odliv keša ima dimenziju neverovatnog. Nema ulaganja investicija u teške metale, dolazi do pomeranja i potreba i komparativnih prednosti u okviru ukupnog proizvodnog ciklusa, izostaje koncentracija i izostaju i oblici proizvodne i poslovne saradnje – specijalizacija, kooperacija, standardizacija i tipizacija. Dramatične promene se neće dogoditi, ali to ne znači da inovativno i kreativno ne treba razvojno delovati. Oslobođena inicijativa može mnogo toga promeniti. Naglasak može biti i kroz razvoj sektora koji bi bili izvozno orijentisani, a naglasak bi bio na radnointenzivnom izvozu i tendencijama prema većim lokalnim izvorima inputa. Orijehtacija na komparativne prednosti u smislu izazova traži pretpostavku i oslonac u investicijama, bez obzira na njihovo poreklo. Indikator promena i unutar ekonomije, ali i u regionalnoj podeli rada, može se identifikovati kroz generalne uzroke povezanosti između investicionih ulaganja.

U nedostatuku ponude složenog proizvoda i po osnovu njega razgrnate preduzetničke proizvodne saradnje, moguće je razvoj ostvarivati i po modelu „letećih gusaka“, gde bi zemlja dobila „sofisticirane proizvode iz naprednih ekonomija koje prebacuju svoju pažnju na još naprednije proizvode“. Ovde je pretpostavka kvalitet ljudskih resursa i nivo tehničke savremenosti, što se direktno odražava na nivo kvaliteta autputa. U modelu rasta „berbe“, polazimo od činjenice da su investicije shvaćene kao aktivnosti koje su ugradile tehnički progres i na taj način smanjile prosečnu starost (obezvređenost) fiksnog kapitala, čime, po pravilu, dolazi do povećanja njegovog učešća u novoj tehnologiji (Pirs, 2005). Postoji trend kretanja ka nestručnoj radnointenzivnoj proizvodnji, gde bi rezultat bio porast horizontalne podele rada i podele rada u okviru firme. Investicije će ustanoviti i vertikalni tip horizontalne trgovine, što će uključivati razmenu dobara unutar sličnih investicija na različitim stadijumima proizvodnje. Iznosimo stav Mirdala (1964) da je za siromašnije zemlje sigurnije da se razvijaju nezavisno od bogatih zemalja, koje uvek postavljaju neka ograničenja. Mirdal je verovao da razvijene zemlje inhibiraju razvoj iz svojih sopstvenih interesa. U razvijenim ekonomijama postoje „šupljine“ zbog nemogućnosti apsolutne strukturne ravnoteže (nema apsolutnih organizacija) i u te „šupljine“ moguće je „uklinjavanje“ pojedinih sektora i preduzeća zemalja u razvoju. Institucionalni faktori značajniji su nego tržišni odnosi u definisanju ekonomskih događanja.

2.2. Startovanje novog pristupa razvoju od 2020. godine ili raspad postojećeg

Agregatne investicione odluke i njihova veza sa ravnotežnim nacionalnim autputom, zbog karaktera svojinskih odnosa, na čemu počiva kejnzijski pristup, mislimo da više nije moguće. Investicione aktivnosti sve više dobijaju pojedinačni interes i karakter, a sve manje društvenu dimenziju. Nejednakosti se produbljuju, a njihov uzrok je kapital (Piketi, 2015).

Slabljenje pretpostavki o homogenosti proizvoda dovodi do povećanja konceptualnih i operativnih teškoća. Preko kategorije „grupe proizvoda“ redefiniše se industrijski razvoj kao kriterijum identifikacije (Todosijević, 1987). Ako je smisao egzistencije „samo da se ostane živ“, tada će razvojni procesi izostati. Izgraditi psihologiju mase na filozofiji pukog preživljavanja u stvari je odricanje od željene budućnosti u sadašnjosti. Horizontalna hijerarhija je neophodna, a ona pretpostavlja mobilizaciju svih vrsta resursa (naročito ljudskih) u korist posla koji se radi. „Soljenje pameti“ u vidu receptura tada ne prolazi. Sistemi koji funkcionišu od „danas za danas“ u sutrašnjem danu će se raspasti. Novac buja kao korov, a dugovi se vraćaju novim zaduživanjem. Dugovi korporacija, neki savremenici misle da uništavaju finasijski sistem!? Mi, naprotiv, mislimo suprotno. Ti rastući dugovi veoma su efikasni u proizvodnji (štampanju) novca. Međunarodni ekonomski sistem trenutno nosi sa sobom karakteristiku kao da je pod sankcijama ili u odbrambenom ratu. Granice se zatvaraju i vlada opšta otimačina za sredstvima samozaštite i izolacije. Proklamovane politike bivaju zaboravljene i odbačene, a onda će slijediti propaganda pravdanja i opravdavanja. Ogromna emisija novca od nekoliko hiljada milijardi dolara koja je na pomolu, za zapadne ekonomije neće biti diskutabilna. Da li je moguće inflatorni način finansiranja investicija? Mislimo da je to jedan od potencijalnih načina, uz uslov da efekti investicija budu brži od početka negativnog delovanja inflacije. To znači da vremenska dimenzija investiranja, do aktiviranja investicije, ne bi smela biti duža od deset meseci. To je period u kome se inflacija može kontrolisati na zadovoljavajućem nivou. To je istovremeno i šansa za investiranje u preduzetničke aktivnosti, u mlade netradicionalne grane, i afirmacija industrije 4.0, koja već sada proizvodi „činjenice“ budućnosti. Industrija 4.0. u svim svojim segmentima nosi sa sobom karakteristiku univerzalne difuzije, a kao pelcer za kalemljenje njoj je poslužila informatička tehnologija, čiju paradigmu čine: kompjuter, robotika i telekomunikacije. Afirmacijom ove razvojne filozofije, gde su čovek i ciljna autput orijentacija osnovni resursi, stvaramo pretpostavku za ubrzaniji rast i razvoj.

„Zapadni sistemi su sjajni kada treba ‘proizvoditi’ finasijske derivate, alate za gubljenje vremena na društvenim mrežama, za holivudske proizvode za ispiranje mozga.“ (Katić, 2020) Taktika emitovanja novca imaće svoj domet. Kada prestane da funkcioniše, slede mnogobrojne opasnosti razgradnje sistema. Banke, osiguranja i finasijska tržišta misle da su u dobitku. Pozajmljuje se novac od banaka koje taj novac nemaju. Nema depozita. Sistem zasad i u Evropi i u Americi funkcioniše. Rezultati će ga, sigurni smo, demantovati. Ovakve aktivnosti imaju karakteristiku “totalitarnih eksperimenata”, koji u uslovima masovne hipnoze zbog stanja okruženja bivaju prihvaćeni, zaboravljajući pritom da u društvenim sistemima nema eksperimenta i da zaključivanje na bazi indukcije nije moguće. Privreda i građani su u kontinuitetu zaduženi. To proizvodi krizu. Nova zaduženja radi oduživanja se odloženo pojačavaju. Šanse za razvoj nalaze se najviše u nacionalnom okruženju. Za građane ne postoje kompenzujući amortizeri duga. Države i banke ih peglaju. Realna ekonomija je područje gde se virusi stvaraju, razvijaju i šire. Često je preko sistema samoodržanja prepuštena sebi, dok je osnovna aktivnost skoro uvek “spasavanje finasijskog sektora”.

(wool, cotton, orlon, grilon, nylon ...). The chemical industry in the domain of „medium“ industry is increasingly characterized by the degree of determination of its own capacities, and here digitalization could help increase the degree of flexibility for production diversification. „Late“ industries such as mechanical engineering, electrical engineering, electronics, transport engineering, can be affirmed only on the basis of special products and on the basis of previous orders. Complex products based on mechanical processing and assembly can be developed to the level of sophistication, but then the question of mass production, market, and competitiveness in general arises. Cooperation in an international environment implies cooperation, not conflict, and can compensate for domestic limitations. The discontinuity in the work of the „late“ industry has made them lose their performance references, so their revitalization or reconstruction is highly uncertain. New constructions (complex final product) in this area are now absent and they will be absent in the future. Digitization processes characterized by information technology, computer and telecommunications are likely to replace the disappearance of (devalued) products and processes.

When Serbia allowed the non-selective import of used cars, at the same time it devalued its, until then, the only complex product - the car, but also set back its financial sector. Instead of developing a range of new types of cars and promoting the credit policy of domestic financial institutions, this decision devalued over 500 subcontractors - entrepreneurs and deprived citizens of driving a new car under favorable conditions, with the possibility of replacement every four years. Instead of the new „Fica“, we drive european rubble. And the cash outflow has the dimension of the incredible. There is no investment in heavy metals, there is a shift in needs and comparative advantages within the overall production cycle, there is no concentration and there are no forms of production and business cooperation - specialization, cooperation, standardization and typification. Dramatic changes will not happen, but that does not mean that we should not act innovatively and creatively. A liberated initiative may change a lot. The emphasis can also be on the development of export-oriented sectors and the emphasis would be on labor-intensive exports and tendencies towards larger local sources of input. Orientation to comparative advantages in terms of challenges requires assumption and support in investments, regardless of their origin. The indicator of changes within the economy and in the regional division of labor can be identified through the general causes of the correlation between investments.

In the absence of a complex product offer and branched entrepreneurial production cooperation based on it, it is possible to develop according to the „flying geese“ pattern of development, where the country would get „sophisticated products from advanced economies that shift their attention to even more advanced products.“ Here is the assumption - the quality of human resources and the level of technical modernity, which is directly reflected in the level of output quality. In the „harvest“ growth model, we start from the fact that investments are understood as activities that incorporate technical progress and thus reduce the average age (impairment) of fixed capital, which usually leads to an increase in its participation in new technology (Pirs, 2005). There is a trend towards unprofessional labor-intensive production where the result would be an increase in the horizontal division of labor and the division of labor within the firm. Investments will also establish a vertical type of horizontal trade, which will involve the exchange of goods within similar investments at different stages of production. We present the view of Myrdal (1964) that it is safer for poorer countries to develop independently of rich countries, which always set some limits. Myrdal believed that developed countries inhibited development for their own interests. In developed economies, there are „cavities“

due to the impossibility of absolute structural balance (there are no absolute organizations) and in these „cavities“ it is possible to „wedge“ certain sectors and companies of developing countries. Institutional factors are more important than market relations in defining economic events.

2.2. Starting a new approach to development from 2020 or disintegrating the existing one

Aggregate investment decisions and their connection with the equilibrium national output, due to the nature of property relations, on which the Keynesian approach is based, we think is no longer possible. Investment activities are increasingly gaining individual interest and character, and less and less a social dimension. Inequalities are deepening and their cause is capital (Piketi, 2015).

Weakening assumptions about product homogeneity leads to increased conceptual and operational difficulties. Through the category of „product group“, industrial development is redefined as an identification criterion (Todosijević, 1987). If the meaning of existence is „just to stay alive“, then developmental processes will be absent. To build the psychology of the masses on the philosophy of mere survival is in fact a renunciation of the desired future in the present. A horizontal hierarchy is necessary, and it presupposes the mobilization of all types of resources (especially human) in favor of the work being done. „To be a smarty pants“ in the form of recipes then does not work. Systems that operate from „today for today“ will fall apart tomorrow. Money thrives like a weed and debts are repaid with new borrowing. Debts of corporations - some contemporaries think they are destroying the financial system!? On the contrary, we think the opposite, these growing debts are very efficient in the production (printing) of money. The international economic system currently looks like it is under sanctions or in a defensive war. The borders are closing and there is a general robbery of means of self-protection and isolation. Proclaimed policies are forgotten and rejected, and then the propaganda of justification will follow. The huge emission of money of several thousand billion dollars that is on the horizon will not be debatable for Western economies. Is an inflationary way of financing investments possible? We think that this is one of the potential ways, provided that the effects of investments are faster than the beginning of the negative effects of inflation. This means that the time dimension of the investment, until the activation of the investment should not be longer than ten months. It is a period of time in which inflation can be controlled at a satisfactory level. At the same time, it is a chance to invest in entrepreneurial activities, in young non-traditional branches and the affirmation of Industry 4.0, which is now producing the „facts“ of the future. Industry 4.0, in all its segments, has the characteristic of universal diffusion, and as a scion for grafting, it was served by information technology whose paradigm consists of: computer, robotics and telecommunications. By affirming this development philosophy, where man and goal output orientation are basic resources, we create a precondition for faster growth and development.

„Western systems are great when it comes to „producing“ financial derivatives, tools for wasting time on social media, for Hollywood brainwashing products.“ (Katić, 2020) The tactics of issuing money will have their reach. When it stops working, there are many dangers of system breakdown. Banks, insurance and financial markets think they are profiting. Money is borrowed from banks that do not have that money. No deposit. The system of plantations works in both Europe and America. The results will, we are sure, deny it. Such activities are characterized by „totalitarian experiments“, which in the conditions of mass hypnosis due to the state of the environment are accepted, forgetting that there is no experiment in social systems and that inference based on induction is not possible. The economy and citizens are continuously indebted. It produces

Država, koja je najveći neto dužnik na svetu, i dalje je u prednosti, jednostavno zbog činjenice da i dalje može da štampa dolar kao rezervnu svetsku valutu. Nadamo se da je osvešćenje na pomolu.

2.3. Opstanak i trajanje

Globalizacija traži odgovor na dva osnovna pitanja: zašto nas je sećanje napuštalo i zašto se kontinuitet kidao? Privredne imperije, ali i države, kroz istoriju dokazujemo, mogu iznenada ili postepeno propadati i nestati. Rimsko carstvo se dugo gasilo. Rusko carstvo je nestalo 1917, Sovjetski Savez 2000. godine. Šta će biti sa Sjedinjenim Američkim Državama i njenim vazalima Velikom Britanijom, Kanadom, Australijom, Novim Zelandom, Japanom, Južnom Korejom? Evropska unija počela je da se razgrađuje. Kohezione snage slabe, pojedinačni interesi rastu, nejednakosti se ispoljavaju i pokazuju, nezadovoljstvo tinja. Određeni preduslovi pogoduju raspadu sistema: akutne krize (uzroci mogu biti različiti) koje sistem nije predvideo, naišle su kao iznenađenje, nema adekvatne reakcije na osnovu sopstvenih resursa, bez obzira na snagu sistema (imperije) i, drugo, nespремnost koja korespondira sa nesposobnostima institucionalne strukture sistema za preduzimanje neophodnih promena kako bi se sistem adaptacijom reorganizovao. Što je sistem veći i kompleksniji, to su posledice krize jače i snažnije, entropija naglašenije deluje. Entropija ne trpi prazno. Rupa mora biti popunjena afirmativnim, a ne obezvređujućim reagovanjem. Očigledno je da je svetska imperijalna mreža u sistemskoj krizi. Gramzivost vlasnika kapitala, nejednaka distribucija vrednosti u odnosu na stvaraoce i uvećanje vrednosti, te neznanje koje promovise nesposobnost, potvrđuju se sa svakom novonastalom krizom, pa i sa ovom pandemijom iz 2020. godine. Uzročno-posledični odnosi na relaciji: pandemija (zdravstveni sistem) – ekonomski sistem – država, zasnovani su. Svako je prinuđen da problemski intervenise sa svog aspekta i svi zajedno kao sistem – celina. Uteha je da krizni događaji brzo prođu, ali ekstrapoliranje ponašanja u odnosu na prethodno može biti pogubno za nastupanje nepredvidivih događaja u budućnosti. Spremnost sistema mora biti u „reakciji pre činjenice.“ (Todosijević, 1986) Monopol nad štampanjem dolara bliži se kraju. Milijarde evra, skoro beskatatno, koje Evropska centralna banka upumpava u ekonomiju Evropske unije, sledi primer (imitaciju) dolara. Prva petina 21. veka pokazuje da šavovi pucaju. Neprofesionalizam (struka u zapečku) glavni je razlog remetilačkih dešavanja u ekonomiji i društvu, pa i u prirodi. Narušena je evolutivnost, a svi društveno-ekonomski algoritmi, od preduzeća do robotike i veštačke inteligencije, slede u kibernetičkom miljeu biološku algoritimizaciju. „Kao nauka o upravljanju i vezi u živom organizmu i mašinama, kibernetika se bavi ne samo utvrđivanjem analogije između tehničkih i bioloških sistema, već i pitanjima uzajamne veze ovih sistema.“ (Parin i Bajevski, 1986) Biosenzor odavno postoji, biočip je, samo zasad, udaljenija budućnost. Koliko dugo? Ovog trenutka to ne znamo. Zaostajanje u promociji inovativnih promena ili odsustvo sposobnosti prilagođavanja razlozi su zbog kojih kompanije, ekonomije i društva postaju nesolventni i produkuju krizu. Matematičke discipline jesu temelji kibernetike. (Viner, 1987) U ekonomskim naukama razvio se menadžment kao generička suma znanja za upravljanje poslovnim sistemima. Kvantitativna procena ma kojih procesa i sistema, bez obzira na stepen njihove složenosti, koji za posledicu očekuju „rezultat“, karakteriše kibernetičko prilaženje istraživanju unutrašnjeg i spoljašnjeg okruženja. Jedan od načina na koji se može ići u korak sa krizom u smislu njenog prevazilaženja može biti podsticanje inkrementalnog pristupa u cilju generisanja maksimalnog broja mogućih ideja za njeno prevazilaženje. Drugi pravac jeste intrapreduzetništvo, sa ciljem da se implementiraju nove ideje unutar postojećih preduzeća. Komplementarni pravac predstavljao bi eksperimentisanje sa novim načinima organizovanja jedinica za fundamentalna istraživanja. Pokazuje se da je naučna savršenost

ključna filozofija uspeha. Pokretačka snaga inovativnih proboja može biti tehnološka promena, i to naročito na područjima gde postoji rastući diskontinuitet. Industrija 4.0. i digitalizacija deluju delimitirajuće u raspolaganju određenim vrstama resursa, tako da se ovaj hendikep i ova zavisnost prevazilaze tehnološkom savremenosti i konkurentskom dominacijom. (Todosijević R i Todosijević L.S., 2019)

U kriznim situacijama, podsticanjem tražnje, kako bi se stimulisala ponuda, jeftinim ali neobezbeđenim kreditima, može se na kratak rok i kao jedini način prolongirati postojanje keš modela (kriza 2007–2008). Takav model je neodrživ zbog činjenice da novac nije stigao u realni sektor. Špekulativni pristup hartijama od vrednosti koje generišu mnogo veće prihode nego investicije u realni sektor, stvorio je od banaka svet za sebe. Kreditni prihodi su usmeravani u finasijsku sferu, tako je došlo do odsustva novca za podsticanje razvoja ekonomije. Fiktivni rast uvek traži sve više novca. U smislu traženja rešenja za prikrivanje kriza, „ratovi za demokratiju“, kao i „obojene revolucije“, i dalje će biti izazivane, sa učinkom kao i do sada. Razgradnja, vazalstvo, korupcija i krađa i prekrađa resursa (Libija, Irak, Sirija) tražiće nova područja i promovisati propagande šansi.

Još veća opasnost po budućnost sveta može zapretiti od moćnika, koji bi, ne daj bože, pre zavadili i upalili svet nego da priznaju poraz liberalizma. Strah od nemačko-ruske alijanse odavno je prisutan „s one strane bare“. Percepcije o pogoršanju svetske systemske krize ne izostaju. Krize, sankcije, izolacije, karantini, dovode do prekida uspostavljenih trgovinskih i ekonomskih veza, što dovodi do promena načina reagovanja mnogih nacionalnih i regionalnih ekonomija, uzimajući u obzir i mogućnosti parcijalne ili totalne autarhije (Iščenko, 2020). Pokazuje se da krizu najlakše premoste oni koji poseduju „samodovoljnu ekonomiju“, sposobnu za opstanak u stanju totalne autarhije. I nedovoljno razvijene ekonomije dobijaju povoljnije šanse za uspeh u procesima savladavanja kriza.

2.4. Istorijska perspektiva ili buđenje lažne nade

Do danas je svaki istorijski stadijum bio samo prolazno stanje, ma koliko se ono savremenicima činilo trajnim, poželjnim i vrednim da to stanje brane. Nema opipljivih dokaza za to da će današnje strukture biti trajnije od svih ranijih. Neposredno na ovaj prvi razlog nadovezuje se jedan drugi, koji govori u prilog relevantnosti jedne evolucione perspektive. Upravo zato što moramo stalno živeti sa strukturnim promenama i jer pritom rukovođenje preduzećem igra posve odlučujuću ulogu, čini se važnim da donosioci odluka postanu svesni svojih sadašnjih i budućih akcija u okviru jednog sociokulturnog evolucionog procesa koji se kreće u jednom nepoznatom pravcu sa nepoznatim ishodom. Ova evolucija se, pre svega, odnosi na okvirni red privrednog delovanja i, nažalost, ne može se predvideti. Sa aspekta politike reda, propuštene su šanse za uzlet sopstvenih baza privređivanja. Dokazujemo da svojstvo sposobnosti prilagođavanja nije u svim istorijskim periodama od iste važnosti. U vremenima stabilnih privrednih situacija, akcenat može pre biti na drugim faktorima, a to posve može dovesti do jednostrane specijalizacije u službi ekonomske efikasnosti, koja može da se pokaže kao egzistencijalno ugrožavajuće čim nestanu pretpostavke koje su dovele do ovog razvoja, npr. dugotrajna ekonomska stabilnost (Von Hayek, 2012). Tek tada se pokazuje da je sposobnost prilagođavanja najvažnija osobina preduzeća. Slučajevi nesolventnosti poslednjih godina to na zabrinjavajući način ilustruju (Von Hayek, 1998). Radi se o funkcionalnoj efikasnosti različitih ekonomskih sistema, pravno utemeljenih. Bez obzira na to, evolutivnost nam nalaže potrebu i procese samoorganizovanja, kao vida uklapanja u ukupnu ambijentalnu strukturu.

U slučaju kriza koje mogu ugroziti egzistenciju, pa i opstanak preduzeća, kao i u slučaju uočavanja verovatnoće da kriza može

a crisis. New debts to repay debts are gradually increasing. The chances for development are mostly in the national environment. There are no compensatory debt shocks for citizens. States and banks equate them. The real economy is the area where viruses are created, developed and spread. It is often left to itself through the system of self-preservation, while the basic activity is almost always „saving the financial sector“. The country, which is the world's largest net debtor, is still in the lead, simply due to the fact that it can still print the dollar as the world's reserve currency. We hope that understanding is on the horizon.

2.3. Survival and endurance

Globalization seeks an answer to two basic questions: why has memory left us and why has continuity been broken? Throughout history, it has been proven that economic empires, but also states, can suddenly or gradually collapse and disappear. It took a long time for the Roman Empire to disappear. The Russian Empire disappeared in 1917, the Soviet Union in 2000. What will happen to the United States and its vassals, Great Britain, Canada, Australia, New Zealand, Japan, South Korea? The European Union has begun to dismantle. Cohesion forces are weakening, individual interests are growing, inequalities are manifesting and showing dissatisfaction. Certain preconditions favor the disintegration of the system: acute crises (causes may be different) that the system did not anticipate, came as a surprise, there is no adequate response based on own resources, regardless of the strength of the system (empire) and second, unpreparedness corresponding to institutional system structure for undertaking the necessary changes in order to reorganize the system through adaptation. The larger and more complex the system, the stronger the consequences of the crisis and the more pronounced the entropy. Entropy does not suffer empty. The hole must be filled with an affirmative, not a devaluing reaction. It is obvious that the world imperial network is in a systemic crisis. The greed of the owners of capital, the unequal distribution of value in relation to the creators and the increase in value, and the ignorance that promotes incompetence, are confirmed with each new crisis, even with this pandemic from 2020. Causal-consequential relations in the relations: pandemic (health system) - economic system - state, are based. Everyone is forced to intervene problematically from their own aspect and all together as a system - a whole. The consolation is that crisis events pass quickly, but extrapolating behavior from the previous one can be disastrous for the occurrence of unpredictable events in the future. The readiness of the system must be in »reaction before the fact: (Todosijević, 1986) The monopoly on printing dollars is coming to an end. Billions of euros, almost interest-free, which the European Central Bank pumps into the economy of the European Union, are followed by an example (imitation) of dollars. The first fifth of the twenty-first century shows that the stitches are cracking. Unprofessionalism (profession in the corner) is the main reason for disruptive events in the economy and society, as well as in nature. Evolution has been disrupted and all socio-economic algorithms from enterprise to robotics and artificial intelligence follow biological algorithmization in the cyber milieu. „As a science of control and communication in living organisms and machines, cybernetics deals not only with establishing an analogy between technical and biological systems, but also with questions of the interconnection of these systems.“ (Parin i Bajevski, 1986). The bio sensor has been around for a long time, the bio chip is just a distant future for now! How long? We don't know that at the moment. Lagging behind in the promotion of innovative change or lack of adaptability are the reasons why companies, economies and societies become insolvent and produce a crisis. Mathematical disciplines are the foundations of cybernetics (Viner, 1987). In economics, management has developed

as a generic sum of knowledge for managing business systems. Quantitative assessment of any processes and systems, regardless of the degree of their complexity, which as a consequence expect a „result“, is characterized by a cybernetic approach to the research of the internal and external environment. One way to keep up with the crisis in terms of overcoming it can be to encourage an incremental approach in order to generate the maximum number of possible ideas for overcoming it. The other direction is intra-entrepreneurship with the aim of implementing new ideas within existing companies. A complementary direction would be to experiment with new ways of organizing units for fundamental research. Scientific perfection is proving to be the key philosophy of success. The driving force of innovative breakthroughs can be technological change, especially in areas where there is a growing discontinuity. Industry 4.0. and digitalization have a delimiting effect on the disposal of certain types of resources, so that this handicap and this dependence are overcome by technological modernity and competitive dominance (Todosijević R i Todosijević L.S., 2019).

In crisis situations, by stimulating demand, in order to stimulate supply, with cheap but unsecured loans, the existence of a cash model can be prolonged in the short term and as the only way (crisis 2007-2008). Such a model is unsustainable due to the fact that the money did not reach the real sector. The speculative approach to securities that generate much higher income than investments in the real sector, has created a world of banks for itself. Credit revenues were directed to the financial sphere, so there was a lack of money to stimulate the development of the economy. Fictitious growth is always looking for more and more money. In terms of seeking solutions to cover up the crisis, „wars for democracy“ as well as „colored revolutions“ will continue to be provoked, with the same effect as before. Decommissioning, vassalship, corruption, theft and theft of resources (Libya, Iraq, Syria) will seek new areas and promote opportunities propaganda.

An even greater danger to the future of the world may come from the powerful, who, God forbid, would rather quarrel and ignite the world than acknowledge the defeat of liberalism. Fear of the German-Russian alliance has long been present „on the other side of the pond“. Perceptions of the worsening of the global systemic crisis are not lacking. Crises, sanctions, isolations, quarantines, lead to the severance of established trade and economic ties, which leads to changes in the way many national and regional economies react, taking into account the possibilities of partial or total autarchy (Iščenko, 2020). It turns out that the crisis is most easily overcome by those who have a „self-sufficient economy“, capable of surviving in a state of total autarchy. And underdeveloped economies also get a better chance of success in crisis management processes.

2.4. A historical perspective or the awakening of false hope

To this day, every historical stage has been only a transitory state, no matter how permanent, desirable and valuable it may seem to contemporaries to defend that state. There is no tangible evidence that today's structures will be more durable than all previous ones. This first reason is followed directly by another, which speaks in favor of the relevance of an evolutionary perspective. Precisely because we must constantly live with structural changes and because the management of the company plays a completely decisive role, it seems important that decision makers become aware of their current and future actions within a sociocultural evolutionary process moving in an unknown direction with an unknown outcome. This evolution is primarily related to the framework order of economic activity and, unfortunately, cannot be predicted. From the aspect of the politics of order, the chances for the rise of one's own business bases were missed. We prove that the property of adaptability is not

nastupiti, osnovna preporuka koja se može izvesti svodila bi se na identifikovanje ili smanjivanje dejstava kriznih žarišta. Različiti pristupi, poput dodatnih investicija, napuštanje proizvoda, integracije, kooperacije, promene u strukturi menadžmenta, od preduzeća do preduzeća, to omogućavaju. Što je kriza, a i verovatnoća nastupanja veća, utoliko je važnije identifikovanje i uklanjanje kriznih žarišta. To važi kako za probleme manjih razmera, tako i za mere prevencije od potencijalnih katastrofa.

ZAKLJUČAK

Da li će nam se dogoditi trijumfalni ili poražavajući marš novca? Sile tržišta su se osilile, a novac će ukloniti sve što bi mu moglo smetati. Na kraju će i on nestati. Entitetna tržišna hiperimperija je na pomolu, doći će do velikih raslojavanja i, kao što je istorijski dokazano, i ova imperija će se raspasti. Nastupiće svet digitalizacije, opšte povezanosti i umreženosti, i uvod u hiperdemokratiju. Nije moguće kontrolisati globalizaciju i kao takvu je prihvatiti, tržište nije svemoguće i kad-tad će nestati, planetarne dimenzije konkretne demokratije su daleko, težnje ka dominaciji se pojačavaju i sve to sprečava aktivnosti za samostalno razvojno reagovanje. Postavljamo pitanje da li je budućnost ograničena u svim njenim aspektima? Pokazuje se da su nam potrebne superiorne forme organizacije i načina funkcionisanja čovečanstva. Ekonomski rezultati će humanije biti stvarani i pravičnije raspoređivani. Mobilisuća motivacija treba da učini vlasništvo zanemarljivom kategorijom. Konkurencija je dovela do toga da se za vlast nad tržištem i demokratijom bore i koncentrišu pokretne sile kroz vlasnike kapitala i znanja, što dovodi do novih nejednakosti. Mondijalizam finansijskih tržišta, osiguravajuća društva i korporacije pogoduju globalizaciji. Kada imamo hiperimperije, tada je svako svakome rival. U hiperimperiju se ulazi sa legitimacijom sopstvenih vrednosti. Međutim, ekološke, etičke, ekonomske, kulturne i političke izvesnosti treba da omoguće nastanak i razvoj univerzalne inteligencije u funkciji ljudskog humaniorija. Mislimo da će relacionalna i digitalna ekonomija, stvaranjem resursa bez profita, konkurisati tržištu sa ciljem da ga potpuno eliminiše, kao što je svojevremeno tržište eliminisalo feudalizam.

Pravila ponašanja za upravljanje razvojem u kriznim vremenima nisu proizvoljne norme već predstavljaju najvažniji oblik prilagođavanja čoveka na jedno okruženje, o čijim pojedinostima on nikada ne može dovoljno znati da bi svoje ponašanje isključivo mogao usmeriti u skladu sa uzročno-posledničnim vezama i u tom kauzalnom smislu mogao racionalno delati. Ponašanja elemenata sistema ne događaju se slučajno, već ovim ponašanjem upravljaju pravila koja se posve mogu shvatiti analogijom sa pravilima igre. Teorije i pravila koja faktički deluju i koja su u relativno kasnim fazama sociokulturne evolucije bila dopunjena i modifikovana svesno postavljenim ili donesenim pravilima, jedan su od najbitnijih mehanizama stvarne kontrole i regulacije jednog sistema.

Bilo kako bilo – veliko učenje iz evolucione teorije je da smo deo jedne permanentne struje razvoja čiju budućnost ne možemo predvideti, ali čijem pravcu – pa makar samo faktičkom egzi-

stencijom – možemo pomalo doprineti. Kao kreativni ljudi, imamo šansu da na pravac utičemo nešto intenzivnije, pod pretpostavkom da naučimo biti ono što smo zaista: ne maheri i komandanti, već katalizatori i kultivatori jednog samoorganizujućeg sistema u jednom evolvirajućem kontekstu.

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of the same importance in all historical periods. In times of stable economic situations, the emphasis may be on other factors, which can lead to unilateral specialization in the service of economic efficiency, which may prove to be existentially threatening as soon as the assumptions that led to this development disappear, e.g. long-term economic stability (Von Hayek, 2012). Only then is it shown that the ability to adapt is the most important feature of a company (Von Hayek, 1998). Insolvency cases in recent years illustrate this in a worrying way. It is about the functional efficiency of different legally grounded economic systems. Regardless of that, evolution imposes on us the need and processes of self-organization, as a kind of fit into the overall ambient structure.

In the case of crises that may threaten the existence and survival of the company, as well as in the case of perceiving the likelihood that a crisis may occur, the basic recommendation that can be reported would be to identify or reduce the effects of crisis hotspots. Different approaches, such as additional investments, product abandonment, integration, cooperation, changes in the management structure, from company to company, make this possible. The greater the crisis, and the greater the probability of its occurrence, the more important it is to identify and remove crisis hotspots. This applies both to small-scale problems and to measures to prevent potential disasters.¹⁵

CONCLUSION

Will a triumphant or devastating march of money happen to us? Market forces have intensified and the money will remove anything that might bother it. Eventually, it too will disappear. The entity market hyper-empire is on the horizon, there will be great stratification and as it has been historically proven, this empire will fall apart as well. There will be a world of digitalization, general connectivity and networking, and an introduction to hyperdemocracy. It is not possible to control globalization and accept it as such, the market is not omnipotent and will disappear someday, the planetary dimensions of concrete democracy are far away, aspirations for domination are intensifying and all this prevents activities for independent development reaction. We ask the question whether the future is limited in all its aspects? It turns out that we need superior forms of organization and ways of functioning of humanity. Economic results will be more humanely created and distributed more fairly. Mobilizing motivation should make ownership a negligible category. Competition has led mobile forces, through owners of capital and knowledge, to fight and concentrate for power over the market and democracy, leading to new inequalities. The globalism of financial markets, insurance companies and corporations are affecting globalization. When we have hyper-empires, then everyone is everyone's rival. One enters the hyper-empire with the legitimation of one's own values. However, environmental, ethical, economic, cultural and political certainties should enable the emergence and development of universal intelligence in the function of humanity. We think that the relational and digital economy, by creating resources without profit, will compete with the market with the goal of completely eliminating it, just as the market once eliminated feudalism.

Rules of conduct for managing development in times of crisis are not arbitrary norms but represent the most important form of human adaptation to an environment whose details he can never know enough to be able to direct his behavior exclusively in accordance with cause-and-effect relationships and to act rationally in that causal sense. The behaviors of the elements of the system do not happen by chance, but this behavior is governed by rules that can

be completely understood by analogy to the rules of the game. Theories and rules that actually work and which in the relatively late stages of sociocultural evolution were supplemented and modified by consciously set or adopted rules, are one of the most important mechanisms of actual control and regulation of a system.

In any case - the great teaching of evolutionary theory is that we are part of a permanent stream of development whose future we cannot predict, but whose direction - even if only by actual existence - we can contribute a little. As creative people, we have a chance to influence the direction somewhat more intensely, assuming we learn to be what we really are: not hustlers and commanders but catalysts and cultivators of a self-organizing system in an evolving context.

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UDK 330.34:336.7

PREGLEDNI RAD

DOI: 10.7251/FIN2002029R

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Ulaganje u kreditne derivate na tržištima u razvoju

Investment in credit derivatives in developing markets

Rezime

Kreditni derivati su hartije od vrijednosti koje nude zaštitu od kreditnog rizika. Tržište kreditnih derivata brzo raste jer su kreditni derivati stekli široku primjenu. U radu se opisuju karakteristike kreditnih derivata. Takođe, ispituje se doprinos kreditnih derivata u podjeli rizika na tržištima u nastajanju. Problem rada odnosi se na donošenje kvalitetnih investicionih odluka institucionalnih investitora na tržištu u razvoju. Predmet rada odnosi se na ulaganje u kreditne derivate s ciljem smanjivanja i/ili prenosa kreditnog rizika na tržištima u razvoju. Cilj rada jeste naučno objašnjenje i deskripcija procesa praćenja kreditnog rizika i upravljanja njim, te svojstava transfera kreditnog rizika. Osim toga, u radu se definiše model koji će biti u funkciji smanjivanja izloženosti riziku, istovremeno uvažavajući specifičnosti poslovanja i upravljanja na tržištima u razvoju.

Ključne riječi: transfer rizika, upravljanje rizikom, rizici, investiranje.

Abstract

Credit derivatives are securities that offer protection against credit risk. The credit derivatives market is growing rapidly as credit derivatives have gained widespread use. The paper describes the characteristics of credit derivatives. The contribution of credit derivatives in risk sharing in emerging markets is also examined. The problem of this research is making quality investment decisions of institutional investors in the emerging market. The subject matter relates to investing in credit derivatives with the aim of reducing and (or) transferring credit risk in developing markets. The aim of this paper is to provide a scientific explanation and description of the process of monitoring and managing credit risk and the characteristics of credit transfer. In addition, the paper defines a model that will serve to reduce risk exposure while respecting the specifics of business and management in emerging markets.

Key words: risk transfer, risk management, risks, investing

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UVOD

U gotovo svim finansijskim transakcijama postoji izloženost kreditnom riziku. S obzirom na to da se kreditni rizik definiše kao rizik da dužnik ne ispuni dio ili čak čitavu obavezu utvrđenu ugovorom, u zemljama u razvoju se, osim tradicionalnih načina za zaštitu od kreditnog rizika ili za njegov transfer, sve više koriste kreditni derivati. Uprkos širokoj upotrebi, ocjeni rejting agencija i velikom prometu, tržište kreditnih derivata se i dalje smatra novim i nedovoljno istraženim. Osim toga, iako se jačanje finansijske krize iz 2008. godine ne može u potpunosti pripisati upotrebi kreditnih derivata, oni su, bez sumnje, imali značajnu ulogu u širenju krize. Međutim, na tržištima kapitala na našem govornom području još nisu korišteni pravi kreditni derivati. S tim u vezi, ozbiljni autoriteti u oblasti finansijskog menadžmenta zagovaraju upotrebu kreditnih derivata jer se tako mogu značajno smanjiti iznosi gubitaka u slučaju nastanka kreditnog događaja.

1. PREGLED LITERATURE

U finansijskom poslovanju najveća pažnja posvećuje se grupama rizika koji se označavaju kao „tržišni, kreditni, nefinansijski i ostali rizici“ (Heffernan, 2005, 169). Rizik u investiranju može se podijeliti na dvije grupe: na finansijski rizik (koji čine tržišni i kreditni) i poslovni rizik (koji čine kreditni rizik, strateški rizik, zakonski rizik, operativni rizik, robni rizik i rizik vezan za finansijske proizvode). Banke definišu kreditni rizik kao „rizik neispunjenja obaveza klijenata da izvrše obaveze urednog servisiranja svog duga utvrđenog ugovorom“ (Chapman, 2006). Kreditni rizik podrazumijeva mogućnost da emitent hartije od vrijednosti ne izvrši obavezu po osnovu plaćanja glavnice ili kamate koju duguje po obveznici ili mjenici. U skladu s tim, „kreditna analiza je proces određivanja vjerovatnoće da dužnik neće otplaćivati dospelje obaveze, najčešće po osnovu kredita“ (Ross, Westerfield, Jordan, 1995, 611). Kreditni rizik je rizik promjene kreditne sposobnosti klijenta (kupaca ili dužnika), koji može uticati na promjenu vrijednosti finansijske imovine povjerilaca (preduzeća ili banke). Takođe, „kreditni rizik može se definisati kao rizik da otplata odobrenog kredita i pripadajuće kamate bude dovedena u pitanje“ (Đukić, Bjelica, Ristić, 2003, 186). Ukratko, kreditni rizik predstavlja vjerovatnoću da zajmotražilac ili partner u dilerskoj transakciji svoju obavezu neće izvršiti na vrijeme ili da će je ispuniti djelimično. Ovaj rizik zavisi od egzogenih faktora kao što su stanje ekonomije, privredne okolnosti, te i od endogenih faktora kao što je upravljačka politika (Bašić, Mekinjić, 2015). Osnovne karakteristike kreditnog rizika jesu (Bruyere, Copinot, Fery, Jaeck, Spitz, 2006, 4):

- Kreditni rizik je sistemski rizik. Na njega utiče opšta ekonomska klima. Prema tome, radi se o veoma cikličnom riziku – povećava se tokom recesije, a smanjuje se tokom ekspanzije.
- Kreditni rizik je specifičan rizik. Naime, ovaj rizik se mijenja u skladu sa specifičnim događajima koji utiču na korisnike kredita. Na kreditni rizik utiču veličina, korporativna strategija, događaji koji utiču na korporativnu strategiju, promjene u neposrednom ekonomskom okruženju itd.

- U poređenju sa drugim tržišnim rizicima, tijesno je vezan za uspjeh u poslovanju i strukturu kapitala korisnika kredita i ima asimetričnu distribuciju profitabilnosti.

U odnosu na izvore nastanka kreditnog rizika, možemo razlikovati tri tipa (Baker, Powel, 2005, 196): rizik naplativosti (default risk), rizik pogoršanja kreditnog rejtinga i rizik kreditne premije. Prema tome, u osnovne vrste kreditnog rizika spadaju (M. Crouhy et al., 2000, 60):

- Rizik neizvršenja obaveza (default risk) jeste rizik da emitent obveznice ili korisnik kredita neće vratiti potpuni iznos ili dio neizmirenog duga.¹ Najčešći strah u vezi s ovim rizikom je bankrot emitenta hartija od vrijednosti. Međutim, bankrotstvu prethode pogoršanja finansijskih pokazatelja i kašnjenja pri izmirenju obaveza. S tim u vezi, ovakva situacija može se predvidjeti. Osim toga, praksa je da gubitak investitora u obveznice nije jednak gubicima akcionara. Vlasnici obveznica namiruju se tokom stečaja, a vlasnici akcija najčešće izgube sav ulog ako emitent bankrotira.
- Rizik pogoršanja kreditnog rejtinga dužnika (downgrade risk) predstavlja rizik da će rejting agencije smanjiti kreditni rejting emitenta na osnovu izvršene procjene njegove trenutne sposobnosti da otplati dugove u trenutku kada dospijevaju.² Rizik smanjenja kreditnog rejtinga karakterističan je za razvijena finansijska tržišta i instrumente duga na tim tržištima.
- Rizik promjene kreditnog spreda (credit spread risk) predstavlja ostvarenje gubitka ili rezultata koji je gori od očekivanog, kao posljedica povećanja kreditnog spreda. Rizik promjene kreditnog spreda jeste rizik da će se spread iznad referentne kamatne stope povećati za neizmirenu obavezu.³ Kada se kreditni kvalitet pogoršava, kreditni spread se povećava. Kao posljedica toga, budući novčani tok isplata koje generiše obveznica biće diskontovan po većoj diskontnoj stopi. Posljedica toga je smanjenje cijene obveznice i iskazivanje gubitaka kod investitora.

Najjednostavnije, kreditni rizik opisuje se kao mogućnost da zajmoprimac ili druga ugovorna strana banke neće ispuniti svoje obaveze u skladu s ugovorenim uslovima. Dakle, kreditni rizik predstavlja rizik od neispunjenja obaveze dužnika da u vremenski ugovorenim rokovima i u punom iznosu izmiri svoje obaveze prema povjeriocima. To je rizik da u finansijskoj transakciji dužnik neće ispuniti ugovorom preuzetu kreditnu obavezu, zbog čega potraživanje neće biti realizovano na dan dospijeca. Kreditni rizik jedan je od preovlađujućih rizika u finansijama i poslovanju (Bomfim, 2005, 30). „Prisutan je svaki put kada se očekuje plaćanje ili ispunjenje obaveze od druge strane. Prema tome, kreditni rizik i predstavlja vjerovatnoću nastanka gubitka usljed neizvršenja obaveza ili stečaja drugog preduzeća“ (Bruyere, Copinot, Fery, Jaeck, Spitz, 2006, 3).

Kao cilj upravljanja kreditnim rizikom podrazumijeva se težnja za ostvarivanjem što je moguće veće stope povrata zajmodavca koja je usklađena za rizik održavanja izloženosti kreditnom riziku unutar prihvatljivih parametara. Za većinu banaka, najveći izvor kreditnog rizika jesu krediti. Međutim, u okviru poslovanja banaka, postoje i drugi izvori kreditnog rizika, poput rizika u knjizi banke i u knjizi trgovanja, te i po bilansnim i vanbilansnim pozicijama. Osim toga, banke se susreću s kreditnim rizikom (ili rizikom druge ugovorne strane)

¹ Pri mjerenju rizika neizvršenja obaveza koriste se analize izvršene od strane rejting agencija koje obavljaju kreditnu analizu emitovanih hartija od vrijednosti i emitenata i pružaju svoje zaključke u vidu kreditnog rejtinga.

² To je rizik da će kreditni rejting emitenta ili emitovane hartije od vrijednosti biti umanjen, što će dovesti do povećanja kreditnog spreda. Ponekad se sposobnost emitenta da izvrši plaćanja kamate i glavnice značajno i nepredviđeno promijeni kao posljedica nastanka neočekivanih događaja, poput nesrećnih slučajeva, promjena u regulativi i sl.

³ Rizik promjene kreditnog spreda i rizik pogoršanja kreditnog rejtinga dužnika razlikuju se u tome što se rizik pogoršanja kreditnog rejtinga dužnika odnosi na specifičnu, zvaničnu kreditnu ocjenu datu od strane nezavisne rejting agencije, dok se rizik promjene kreditnog spreda odnosi na reakciju finansijskih tržišta na očekivano pogoršanje stanja kredita.

INTRODUCTION

There is credit risk exposure in almost all financial transactions. Since credit risk is defined as the risk that a borrower fails to meet part or even all of the obligations set out in the contract, in developing countries credit derivatives are increasingly being used, in addition to traditional ways for protection from credit risk or credit risk transfer. Despite its widespread use, rating agency estimation, and high turnover, the market for credit derivatives is still considered new and insufficiently researched. In addition, although the intensification of the 2008 financial crisis cannot be fully attributed to the use of credit derivatives, they undoubtedly played a significant role in the spreading of the crisis. However, in the capital markets in our speaking area, real credit derivatives have not yet been used. In this regard, serious authorities in the field of financial management advocate for the use of credit derivatives because it can significantly reduce the number of losses in case of a credit event.

1. LITERATURE REVIEW

In financial operations, the greatest attention is paid to the groups of risks that are referred to as “market, credit, non-financial and other risks” (Heffernan, 2005, 169). Investment risk can be divided into two groups. On financial risk (consisting of market and credit) and business risk (consisting of: credit risk, strategic risk, legal risk, operational risk, commodity risk and risk related to financial products). Banks define credit risk as “default risk of clients to fulfil obligations of regular debt servicing determined by contract” (Chapman, 2006). Credit risk implies the possibility that the issuer of a security does not fulfill the obligation based on the payment of the principal or interest owed on the bond or bill of exchange. Accordingly, “credit analysis is the process of determining the probability that a debtor will not repay overdue liabilities, most often on the basis of credit” (Ross, Westerfield & Jordan 1995, 611). Credit risk is the risk of a change in the client’s creditworthiness (buyer or borrower), which may affect the change in the value of the financial assets of creditors (companies or banks). Also, “credit risk can be defined as the risk that the repayment of the approved loan and the related interest will be brought into question” (Đukić, Bjelica, & Ristić, 2003, 186). In short, credit risk presents the probability that a borrower or a partner in a dealer transaction will not meet his obligation on time or will meet it partially. This risk depends on exogenous factors such as the state of the economy, economic circumstances and also on endogenous factors such as management policy (Bašić & Mekinjić, 2015). The basic characteristics of credit risk are (Bruyere, Copinot, Fery, Jaeck & Spitz, 2006, 4):

- Credit risk is a systemic risk. It is influenced by the general economic climate. Therefore, it is highly cyclical risk - it increases during a recession, and decreases during an expansion;
- Credit risk is a specific risk. Namely, this risk changes depending on specific events affecting the borrowers. Credit risk is affected by size, corporate strategy, events that affect corporate strategy, changes in the immediate economic environment, etc.

- Compared to other market risks, it is closely linked to business success and the capital structure of borrowers and has an asymmetric distribution of profitability.

In relation to the sources of credit risk, we can distinguish three types (Baker, & Powel, 2005, 196): default risk, downgrading risk and credit spread risk. Therefore, the main types of credit risk include the following (M. Crouhy et al., 2000, 60):

- Risk of failure to meet obligations - Default risk - the risk that the bond issuer or the borrower will not repay the full amount or part of the outstanding debt.¹ The most common fear regarding this risk is the bankruptcy of the issuer of securities. However, bankruptcy is preceded by downgrading of financial indicators and delays in settling liabilities. In this regard, such a situation can be predicted. In addition, the practice is that the loss of a bond investor is not equal to the loss of a shareholder. Bondholders are settled during bankruptcy, and stockholders usually lose all investment if the issuer goes bankrupt;
- Risk of the deterioration credit rating of the borrower - Downgrade risk - represents the risk that the rating agencies will downgrade the issuer’s credit rating based on performed assessment of its current ability to repay debts as they fall due.² Downgrade risk of credit rating is characteristic of developed financial markets and debt instruments in those markets;
- Risk of credit spread changing - Credit spread risk - is the realization of a loss or result that is worse than expected as a consequence of widening credit spread. The risk of a change in the credit spread is the risk that the spread above the reference interest rate will widen for the outstanding liability.³ When credit quality deteriorates, the credit spread widens. As a result, the future cash flow of payments generated by the bond will be discounted at a higher discount rate. The consequence is a reduction in the bond price and the reporting of losses to investors.

Simply put, credit risk is described as the possibility that a borrower or other counterparty of a bank will fail to meet its obligations under the agreed terms. Therefore, credit risk represents the risk of non-fulfillment of the borrower’s obligation to settle his obligations to creditors within the timeframe agreed and in full amount. This is the risk that in the financial transaction the borrower will not fulfil the credit obligation assumed by the contract, due to which the receivable will not be realized on the due date. Credit risk is one of the predominant risks in finance and business operations (Bomfim, 2005, 30). “It is present every time when payment or fulfillment of an obligation from the other party is expected. Therefore, credit risk presents the probability of loss due to default or bankruptcy of another company” (Bruyere, Copinot, Fery, Jaeck & Spitz, 2006, 3).

The goal of credit risk management is to strive to achieve the highest possible rate of return of the lender, which is adjusted for the risk by maintaining the exposure to credit risk within acceptable parameters. For most banks, the biggest source of credit risk is loans. However, within the banks’ operations, there are other sources of credit risk, such as risk in the banking book and in the trading book, as well as in on-balance sheet and off-balance sheet positions. In addition, banks face credit risk (or counterparty risk) not only in

¹ When measuring default risk, analyzes performed by rating agencies that perform credit analysis of issued securities and issuers and provide their conclusions in the form of credit rating are used.

² This is the risk that credit rating of the issuer or credit rating of the issued securities will be downgraded, which will lead to increase of the credit spread. Sometimes the ability of the issuer to perform payment of interest and principle is importantly and unpredictably changed as a consequence of continuation of unexpected events such as accidents, changes in regulations and similar.

³ Credit spread risk and downgrade risk of credit rating of a borrower differ in that that credit rating downgrade risk is referring to a specific, official credit estimation given by independent rating agency, while credit spread risk is referring to reaction of financial markets to the expected downgrade of the credit.

ne samo u kreditima već i u drugim finansijskim instrumentima, poput akceptata, međubankarskih transakcija, finansiranja trgovine, deviznih transakcija, finansijskih terminskih ugovora, svopova, obveznica, akcija, opcija, te u preuzimanju obaveza i odobravanju garancija itd. Ovaj rizik je star koliko i samo bankarstvo. Naime, pozajmljivanje novca drugoj ugovorenoj strani sa sobom nosi opasnost da dio iznosa ili sav iznos neće biti vraćen. Dakle, „kreditni rizik kao takav predstavlja osnovni rizik za banku, jer kreditni poslovi predstavljaju osnovne bankarske poslove“ (Barjaktarović, 2012).

Kreditni derivati i drugi instrumenti za prenos rizika koriste se za preraspodjelu kreditnih derivata među bankama, kao i za preusmjeravanje kreditnih derivata na druge sektore, poput osiguravajućih društava i institucionalnih investitora (Ashraf, Altunbas, Goddard, 2007). U skladu s radom Ašrafa i saradnika (2007), Mahieu i Xu (2007), Minton, Stulz i Williamson (2009) i Gonzalez, Gil, Lopez i Bua (2012) izdvojili su faktore koji utiču na upotrebu kreditnih derivata za zaštitu od kreditnog rizika. To su veličina, troškovi nastanka kreditnog događaja, korištenje drugih izvedenih finansijskih instrumenata i drugih instrumenata upravljanja rizikom, kao što su sekjuritizacija i prodaja kredita, količina depozita, realizacija trgovanja ovim proizvodima i, naravno, izloženost riziku.

U skladu s navedenim, testirano sljedeću hipotezu: „Uprkos određenim nedostacima i rizicima, novi instrument za transfer kreditnog rizika donose velike prednosti na mala tržišta.“

2. KARAKTERISTIKE I FUNKCIONISANJE KREDITNIH DERIVATA

Tradicionalni instrumenti i tehnike transfera kreditnog rizika jesu osiguranje obveznica, garancije, kolateral, rani raskid, prenos prava i obaveza, neting, put opcije, sindicirani krediti, racioniranje kredita, diversifikacija, kreditni limiti i posredovanje. „Novi instrumenti i tehnike upravljanja kreditnim rizikom jesu sekjuritizacija i kreditni

derivati“ (Mihaljek, Packer, 2010).

Sekjuritizacija podrazumijeva pretvaranje bankarskih kredita u hartije od vrijednosti, transformacija bankarskih kredita u obveznice emitovane na bazi tih kredita unapređenje tradicionalnog bankarstva (grafikon 1). Pritom, jedan od modela podrazumijeva kreiranje posebne pravnog lica preko kojeg se provodi sekjuritizacija (Special Purpose Vehicle – SPV). Često se javlja i treći subjekat kao organizator sekjuritizacije. Taj subjekat će obaviti sve potrebne radnje, od izolovanja određene imovine, preko strukturiranja hartija od vrijednosti koje će se emitovati na osnovu te imovine, pa do samog provođenja emisije i upravljanja procesom servisiranja sekjuritizacijom oblikovanih hartija od vrijednosti. SPV je najčešće legalni entitet u vlasništvu sponzora sekjuritizacije, a može biti i sa nekom složenijom vlasničkom strukturom. Njegova je jedina imovina homogenizovani portfolio potraživanja. Kako je riječ o kvalitetnijoj, odnosno sigurnijoj imovini od ukupne aktive sponzora, SPV je sposoban da na osnovu te imovine emituje nove dužničke hartije od vrijednosti uz niže kamatne stope od samog sponzora sekjuritizacije. Upravo se preko SPV-a osiguravaju dvije osnovne prednosti sekjuritizacije. To su intenziviranje upotrebe poluge i izolacija dijela imovine od ukupnog rizika sponzora. U sekjuritizaciji se zadužuje SPV, a ne sponzor. Sponzor sekjuritizacije prodaje svoju imovinu SPV-u, čime dolazi do dodatnog novca za svoju osnovnu djelatnost, a ta se prodaja ne odvija pod prisilom, kao što je najčešći slučaj kada društva potreban novac pribavljaju na osnovu prodaje dijela svoje imovine. S obzirom na to da je SPV dio ukupnog poslovnog sistema sponzora sekjuritizacije, dolazi do povećanja iznosa duga za vrijednost emisije izvedenih dužničkih hartija od vrijednosti, bez direktnog uticaja na povećanje zaduženosti samog sponzora. Povećanje stepena korištenja poluge podržava izolacija dijela imovine od ukupnog rizika sponzora. Kako je izolovana imovina kvalitetnija za zaduživanje od ukupne imovine sponzora emisijom izvedenih hartija, postižu se bolji uslovi i niži troškovi duga prema onima koji bi nastali emisijom obveznica sponzora koje su osigurane njegovom ukupnom aktivom.

Grafikon 1. Šematski prikaz sekjuritizacije



Izvor: prikaz autora

Dakle, emisija novih izvedenih hartija od vrijednosti odvija se putem SPV-a. Te hartije od vrijednosti nazivaju se ABS – Asset Backed Securities – hartije od vrijednosti osigurane imovinom, odnosno strukturirani zapisi. Strukturirani zapisi zasnivaju se na novčanim tokovima inicijalnog portfelja imovine. Zbog toga i novčani tokovi tako emitovanih instrumenata slijede novčane tokove inicijalnog portfelja. Na primjer, hipotekarni krediti su sekjuritizovani „hipotekama“, koje predstavljaju dužničke hartije od vrijednosti s mjesečnom amortizacijom, dakle, s amortizacijom identičnom kao kod hipotekarnih kredita.

Kreditni derivati „izoluju i odvajaju kreditni rizik od drugih vrsta rizika, kao što su tržišni i operativni rizik. S obzirom na to da su omogućili efikasan, fleksibilan i jednostavan način transfera kreditnog rizika, smatra se da su kreditni derivati veoma moćni instrumenti“ (Spasojević, 2013, 116). Kreditni derivati su uvedeni s ciljem da se otklone nedostaci tradicionalnih instrumenata za transfer kreditnog rizika. Drugim riječima, javila se potreba da se investitori poput velikih investicionih banaka, investicionih i penzijskih fondova, te osiguravajućih društava zaštite od gubitaka koji nastaju kao posljedica neizvršenja dijela ili obaveza pojedinih

loans but also in other financial instruments such as acceptances, interbank transactions, trade finance, foreign exchange transactions, financial futures contracts, swaps, bonds, shares, options and in assuming obligations and approving guarantees, etc. This risk is as old as banking itself. Namely, lending money to another contracting party carries with itself the danger that part or all of the amount will not be returned. Thus, “credit risk as such represents the basic risk for the bank, because credit operations represent basic banking operations” (Barjaktarović, 2012).

Credit derivatives and other risk transfer instruments are used to redistribute credit derivatives among banks, as well as to redirect credit derivatives to other sectors such as insurance companies and institutional investors (Ashraf, Altunbas, & Goddard, 2007). In line with the work of Ashraf et al. (2007), Mahieu and Xu (2007), Minton, Stulz and Williamson (2009) and Gonzalez, Gil, Lopez and Bua (2012) identified factors influencing the use of credit derivatives for protection from credit risk. These are the size, costs of the credit event, the use of other derivative financial instruments and other risk management instruments such as securitization and sale of loans, the amount of deposits, the realization of trading in these products and, of course, risk exposure.

In accordance with the above mentioned, we are going to test the following hypothesis: Despite certain shortcomings and risks, new instruments for credit risk transfer bring great advantages to small markets.

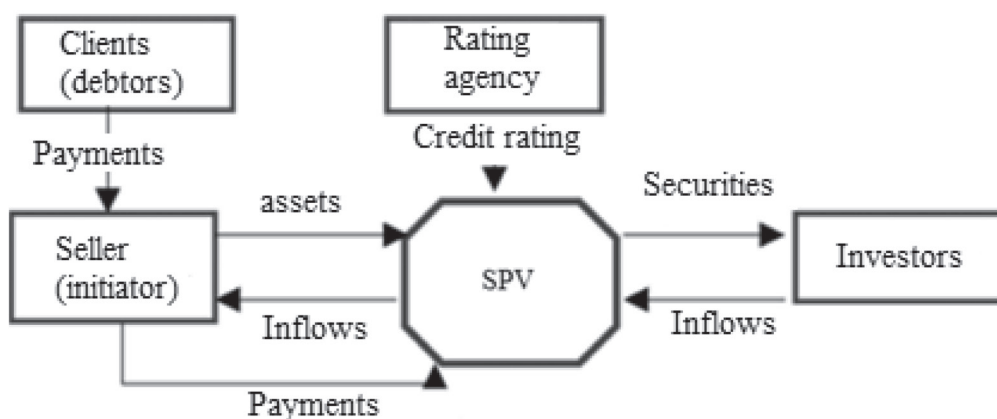
2. CHARACTERISTICS AND FUNCTIONING OF THE CREDIT DERIVATIVES

Traditional instruments and techniques of credit risk transfer are bond insurance, guarantees, collateral, early termination, transfer of rights and obligations, netting, put options, syndicated loans, loan rationing, diversification, credit limits and intermediation. “New instruments and

techniques for credit risk management are securitization and credit derivatives” (Mihaljek and Packer, 2010).

Securitization implies the conversion of bank loans into securities, transformations of bank loans into bonds issued on the basis of these loans, improvement of traditional banking (Chart 1). Thereby, one of the models involves the creation of a special legal entity through which securitization is carried out (Special Purpose Vehicle - SPV). A third entity often appears as the organizer of the securitization. That entity will perform all necessary actions from the isolation of certain assets, through the structuring of securities that will be issued on the basis of those assets to the implementation of the issuance and management of the process of servicing the securities shaped by securitization. The SPV is usually a legal entity owned by the securitization sponsor and it can also be with a more complex ownership structure. Its only assets are a homogenized portfolio of receivables. As these are higher quality, i.e. safer assets than the total assets of the sponsor, the SPV is able to issue new debt securities on the basis of these assets at lower interest rates than the securitization sponsor itself. It is through the SPV that the two basic benefits of securitization are provided. These are intensifying the use of leverage and isolating part of the property from the total risk of the sponsor. In securitization, the SPV is indebted, not the sponsor. The securitization sponsor sells its assets to the SPV, which provides additional money for its core business, and this sale does not take place under duress, as is most often the case when companies obtain the necessary money through the sale of part of their assets. Given that the SPV is part of the overall business system of the securitization sponsor, there is an increase in the amount of debt for the value of the issuance of derivative debt securities without a direct impact on increasing the indebtedness of the sponsor. Increasing the level of leverage use is supported by isolating part of the assets from the total risk of the sponsor. As the isolated assets are of better quality for borrowing than the total assets of the sponsor, by issuing derivative securities, better conditions and lower debt costs are achieved compared to those that would arise from the issuance of sponsor bonds secured by its total assets.

Chart 1 – Schematic overview of securitization



Source: Overview of the author

Therefore, the issuance of new derivative securities takes place through the SPV. These securities are called ABS - Asset Backed Securities, i.e. structured records. Structured records are based on the cash flows of the initial asset portfolio. That is why, the cash flows of such issued instruments follow the cash flows of the initial portfolio. For example, mortgage loans are securitized by “mortgages”, which are debt securities with monthly amortization, i.e. with amortization identical to that of mortgage loans.

Credit derivatives “isolate and separate credit risk from other types of risks such as market and operational risk. Given that they have

enabled an efficient, flexible and simple way of credit risk transfer, it is considered that credit derivatives are very powerful instruments” (Spasojević, 2013, 116). Credit derivatives were introduced with the aim of eliminating the shortcomings of traditional credit risk transfer instruments. In other words, a need appeared for investors such as large investment banks, investment and pension funds and insurance companies to be protected from losses arising as a result of non-performance of part or obligations of individual issuers of securities. They arose in response to the requests of the mentioned investors to find an instrument for hedging and diversification of

emitenata hartija od vrijednosti. Nastali su kao reakcija na zahtjeve navedenih investitora za “pronalaženjem instrumenta za hedžing i diversifikaciju kreditnog rizika, sličnih onima koji se već primjenjuju kod kamatnih i valutnih rizika” (Spasojević, 2013, 116).

2.1. Karakteristike kreditnih derivata

Dramatičan rast instrumenata za transfer kreditnog rizika u svijetu promijenio je osnove bankarskog poslovanja. Tržište kreditnih derivata nastalo je početkom posljednje decenije prošlog vijeka i brzo se razvijalo i raslo (Duffee, C. Zhou, 2001, 25).

Kad se govori o kreditnim derivatima, praktičari najčešće ističu dvije karakteristike koje ih razlikuju od drugih instrumenata na sekundarnim tržištima. Prvo, bankari ističu lakoću s kojom se može trgovati kreditnim derivatima, što im omogućava da lako upravljaju rizikom u svojim portfolijima (Consiglio, Lotfi, Zenios, 2018). Dakle, korištenje kreditnih derivata od strane banaka motivisano je „željom da se poboljša diversifikacija portfolija i poboljša upravljanje kreditnim rizikom“ (Das, 1998, 10). Kao posljedica toga, krediti nastali od banaka jesu nova klasa imovine kojom se aktivno trguje, a mnogi takvi krediti više nisu u posjedu banaka (Masters, Bryson, 1999).

Druga važna karakteristika trgovine kreditnim derivatima jeste činjenica da zajmoprimci najčešće nisu obaviješteni da je njihov kredit referentna imovina za transakcije (Consiglio, Lotfi, Zenios, 2018). Ne postoji razlog zašto bi referentni entitet ili bilo koja treća strana trebalo da postane svjesna postojanja trgovine. Iz tog razloga, OTC ugovori često zahtijevaju činjenice da je trgovina u suštini povjerljiva (Jakeways, 1999, 58). Korisnici kredita obično ne žele da im se dug proda. Banke se boje da, ako one prodaju kredit, mogu izgubiti priliku za buduće poslovanje s dužnikom (Caouette, Altman, Narayanan, 1998, 305).

Kreditni derivati su dizajnirani da bi se „prenio rizik sa jedne stranke na drugu“ (Credit Derivatives Glossary, 2009, 3). Isplata derivata zavisi od kreditne sposobnosti organizacije ili grupe organizacija (Wiley Online Library, 2010, 243). Dakle, kreditni derivat podrazumijeva transakciju u kojoj dvije stranke ulaze u ugovor, pri čemu jedna strana (kupac zaštite) plaća drugoj strani (prodavcu zaštite) periodične uplate tokom navedenog trajanja ugovora (Markit Credit Indices Primer, 2014, 28). Prodavač zaštite ne plaća ništa, osim ako dođe do kreditnog događaja koji se odnosi na unaprijed određenu referentnu imovinu. Ako se dogodi takav događaj, on aktivira obavezu podmirjenja zaštite prodavača zaštite, koja je najčešće u novcu. Najčešće se za ovakav vid zaštite odlučuju banke i druge finansijske institucije, s ciljem zaštite od neplaćanja obaveza svojih dužnika. Dakle, kreditni derivati nastali su kao težnja za „izolovanjem ili smanjenjem stepena izloženosti kreditnom riziku finansijskih institucija, uglavnom banaka“ (Bielecki, Rutkowski, 2013, 3).

Od uvođenja kreditnih derivata na tržišta 1993. godine, banke, druge finansijske institucije i korporacije mogle su efikasnije da upravljaju kreditnim rizikom (Anson, Fabozzi, Choudhry, Chen, 2004, 57). Bez sumnje, kreditni derivati izdvajaju i neutrališu kreditni rizik od drugih vidova rizika.

Bez obzira na to o kojem derivatu se radi, zajedničke karakteristike odnose se na zajedničke karakteristike, kao što su: referentni subjekat, referentne obaveze ili referentna aktiva, kupac zaštite (Markit Credit Indices Primer, 2014).

Termin “referentni subjekat ili entitet” odnosi se na emitenta (ili više njih) čija neizvršenja obaveza dovode do nastanka kreditnog događaja (Markit Credit Indices Primer, 2014, 34). Referentni subjekat može biti bilo koja forma pravnog subjekta koji je emitent ili garant (Markit Credit Indices Primer, 2014, 34). Prema tome, može biti privredno društvo ili država.

Pod terminom “referentne obaveze ili referentna aktiva” misli se na aktivu emitovanu od strane referentnog subjekta (Spasojević, 2013, 116–120; Simetić, 2018, 98). Najčešće se primjenjuju krediti i obveznice (Markit Credit Indices Primer, 2014, 34). Referentne obaveze ugovaraju se pri ugovaranju kreditnog događaja i obračuna nadoknade. Mogu da se odnose na konkretno navedene finansijske obaveze referentnog subjekta ili na posebnu korpu finansijskih instrumenata.

Kupac zaštite ili prodavac rizika jeste entitet ili subjekat koji zahtijeva zaštitu od rizika neizvršenja referentne obaveze (Markit Credit Indices Primer, 2014, 34). Najčešći kupci zaštite su banke i finansijske institucije koje su izložene kreditnom riziku. Kupovina zaštite razlikuje se od prodaje kredita najviše u tome što referentna aktiva ostaje kod kupca zaštite (Bielecki, Rutkowski, 2013, 18).

Prodavac zaštite ili kupac rizika za premiju od prodavca rizika prihvata rizik i izlaže se kreditnom riziku referentnog subjekta (Markit Credit Indices Primer, 2014, 33). Dakle, on ne posjeduje referentnu aktivu. Najčešći kupci rizika su osiguravajuća društva, ali i hedž fondovi i investicione banke.

Teorijska vrijednost ili teorijski raspon predstavlja ugovorenu vrijednost za zaštitu koju plaća kupac i iznos isplata u slučaju kreditnog događaja (Markit Credit Indices Primer, 2014, 35).

Kreditni događaj je tačno određen događaj nastanka neizvršenja, najčešće definisan u odnosu na referentni subjekat ili na referentnu obavezu (Markit Credit Indices Primer, 2014, 33). Kreditni događaj podrazumijeva situaciju okončanja kreditno-derivatnog ugovora, što znači da se realizuje ugovorna isplata od strane prodavca zaštite prema kupcu zaštite.

Kreditni događaj može biti stečaj subjekta od kojeg se potražuje, neplaćanje duga i, u nekim ugovorima, restrukturiranje duga ili smanjenje kreditnog rejtinga (Bolton i Oehmke, 2011, 2618). Kreditni događaji su određeni i objašnjeni od strane Međunarodnog udruženja za svopove i derivate (International Swaps and Derivatives Association – ISDA).

Na primjer, CDS se aktivira kada dođe do kreditnog događaja. U SAD se kao kreditni događaj najčešće smatra neplaćanje, moratorijum na plaćanje i restrukturiranje.⁴ Kod standardnih kreditnih derivata postoji nekoliko osnovnih kreditnih događaja.⁵

Do stečaja⁶ referentnog subjekta dolazi kada taj subjekat ili entitet postane nesolventan⁷ ili je u nemogućnosti da otplati dug. Događaj podrazumijeva objavljivanje dokumenta, odluke, izjave ili pokretanje postupka koji potvrđuje da referentni subjekat nije u stanju da ispunji svoje obaveze. S tim u vezi je i neplaćanje. „Neplaćanje” nastaje onda kada referentni subjekat „ne obavi jedno plaćanje po jednoj od svojih obaveza, kao što su obveznica ili kredit” (Spasojević, 2013, 118). Pod moratorijumom ili repudijacijom podrazumijeva se situacija u kojoj referentni subjekat ili država objave moratorijum

⁴ <https://www2.isda.org/asset-classes/credit-derivatives/>

⁵ <https://www2.isda.org/asset-classes/credit-derivatives/>

⁶ Termin “stečaj” nastao je prema njemačkoj riječi *Konkurs*. Naime, termin je skovan doslovnim prevođenjem: *kon* kao “s, sa” i *kurs* kao “tečaj, kurs”. Njemački termin ima korijen u latinskom *concursum*, što znači “strka, sukob”. Tačnije, dolazi od sintagme *concursum creditorum*, čiji je doslovan prevod “strka povjerilaca”. Ova metafora slikovito opisuje položaj i situaciju u kojoj se nalaze dužnik i njegovi povjerioci – nastaje metež, povjerioci jure dužnika, a dužnik je u neugodnoj situaciji (Sajter, Hudeček, 2010)

⁷ Termin “insolventnost” takođe dolazi iz latinskog jezika i složen je od *in* (negacija) i *solvo-solvere-solventem*, što znači “ispuniti obavezu, izvršiti, ispoštovati, uzvratiti”.

credit risk, similar to those already applied to interest rate and currency risks” (Spasojević, 2013, 116).

2.1. Characteristics of credit derivatives

The dramatic growth of credit risk transfer instruments in the world has changed the basis of banking operations. The credit derivatives market emerged at the beginning of the last decade of the last century and it has developed and grew rapidly (Duffee and C. Zhou, 2001, 25).

When it comes to credit derivatives, practitioners most often point out two characteristics that distinguish them from other instruments in secondary markets. First, bankers emphasize the ease with which credit derivatives can be traded, which allows them to easily manage risk in their portfolios (Consiglio, Lotfi, & Zenios, 2018). Therefore, the use of credit derivatives by banks is motivated by “the desire to improve diversification of portfolio and to improve credit risk management” (Das, 1998, 10). As a consequence of that, loans coming from banks are a new class of assets that are actively traded, and a lot of such loans are no longer owned by banks (Masters & Bryson, 1999).

Another important feature of credit derivatives trading is the fact that borrowers are most often not informed that their credit is a reference asset for transactions (Consiglio, Lotfi, & Zenios, 2018). There is no reason why a reference entity or any third party should become aware of the existence of a trade. For this reason, OTC contracts often require the fact that trade is essentially confidential (Jakeways, 1999, 58). Borrowers usually do not want their debt sold. Banks fear that if they sell a loan, they may lose the opportunity for future business with the borrower (Caouette, Altman, & Narayanan, 1998, 305).

Credit derivatives are designed to “transfer the risk from one party to another” (Credit Derivatives Glossary, 2009, 3). The payment of derivatives depends on the creditworthiness of the organization or group of organizations (Wiley Online Library, 2010, 243). Therefore, a credit derivative implies a transaction in which two parties enter into an agreement, whereby one party (the protection buyer) pays the other party (the protection seller) periodic payments for the specified life of the agreement (Markit Credit Indices Primer, 2014, 28). The protection seller makes no payment unless a credit event relating to a predetermined reference asset occurs. If such an event occurs, it triggers the protection seller’s settlement obligation, which is usually in cash. Banks and other financial institutions usually decide for this type of protection with the aim of protection against non-payment of obligations of their debtors. Therefore, credit derivatives emerged as a desire “to isolate or reduce the degree of credit risk exposure of financial institutions, mainly banks” (Bielecki, & Rutkowski, 2013, 3).

Since the introduction of credit derivatives on the markets in 1993, banks, other financial institutions and corporations have been able to manage credit risk more efficiently (Anson, Fabozzi, Choudhry & Chen, 2004, 57). Undoubtedly, credit derivatives isolate and neutralize credit risk from other types of risk.

Regardless of which derivative it is, common characteristics are relating to common characteristics, such as: reference entity,

reference liabilities or reference assets, protection buyer (Markit Credit Indices Primer, 2014).

Reference entity - refers to the issuer (or more of them) whose non-performance of obligations leads to the occurrence of a credit event (Markit Credit Indices Primer, 2014, 34). The reference entity can be any form of a legal entity that is the issuer or the guarantor of the debt (Markit Credit Indices Primer, 2014, 34). Therefore, it can be a company or a state.

The term reference obligation or reference asset refers to an asset issued by a reference entity (Spasojević, 2013, 116-120; Simezić, 2018, 98). Loans and bonds are most commonly used (Markit Credit Indices Primer, 2014, 34). Reference obligations are contracted when contracting a credit event and calculating the fee. They may relate to the specified financial obligations of the reference entity or to a specific basket of financial instruments.

The protection buyer or the risk seller is the entity that requires protection in case of default of the reference obligation (Markit Credit Indices Primer, 2014, 34). The most common buyers of protection are banks and financial institutions that are exposed to credit risk. Buying the protection differs from the sale of credit mostly in that the reference asset remains with the protection buyer (Bielecki, & Rutkowski, 2013, 18).

The protection seller or the risk buyer for the premium from the risk seller accepts the risk and is exposed to the credit risk of the reference entity (Markit Credit Indices Primer, 2014, 33). Therefore, he does not own a reference asset. The most common risk buyers are insurance companies, but also hedge funds and investment banks.

The theoretical value or theoretical spread represents the contracted value for protection paid by the buyer and the amount of payments in case of a credit event (Markit Credit Indices Primer, 2014, 35).

Credit event - is a precisely defined event of default, most often defined in relation to a reference entity or a reference obligation (Markit Credit Indices Primer, 2014, 33). A credit event implies a situation of termination of a credit-derivative contract, which means that a contractual payment is made by the protection seller to the protection buyer.

A credit event may be the bankruptcy of the claimed entity, failure to pay the debt and, in some contracts, debt restructuring or credit rating downgrade (Bolton and Oehmke, 2011, 2618). Credit events are determined and explained by the International Swaps and Derivatives Association (ISDA).

For example, CDS is activated when a credit event occurs. In the United States, failure to pay, a moratorium on payments, and restructuring are most commonly considered as credit events.⁴ There are several basic credit events with standard credit derivatives.⁵

Bankruptcy⁶ of the reference entity happens when that entity becomes insolvent⁷ or he is unable to repay the debt. An event involves the publication of a document, decision, statement or the initiation of proceedings confirming that the reference entity is unable to meet its obligations. Failure to pay is related to this. “Failure to pay” occurs when the reference entity “does not make one payment under one of its obligations, such as a bond or a

⁴ <https://www2.isda.org/asset-classes/credit-derivatives/>

⁵ <https://www2.isda.org/asset-classes/credit-derivatives/>.

⁶ The term bankruptcy (in Serbian language “stečaj”) originated from the German word Konkurs. Namely, the term is coined by a literal translation: kon as “s, sa” in Serbian (in English “with”) and kurs as “tečaj, kurs” in Serbian (in English “course”). The German term has its root in Latin concursus, which means “rush, conflict”. More precisely, it comes from the syntagma concursus creditorum, whose literal translation is “creditors’ race”. This metaphor vividly describes the position and situation in which the debtor and his creditors find themselves - there is a commotion, creditors chase the debtor, and the debtor is in an awkward situation (Sajter, Hudeček. 2010).

⁷ The term insolvency also comes from Latin and is composed of in (negation) and solvo / solvere / solventem, which means “to fulfil an obligation, to execute, to honour, to reciprocate”.

nad obavezom referentnog subjekta. Dalje, pod restrukturiranjem se podrazumijeva mogućnost, tj. rizik da će referentni subjekat dio ili sve svoje dugove restrukturirati. Ovaj potez olakšava otplatu dugova referentnom subjektu, ali uglavnom vodi i smanjenju njegovog kreditnog rejtinga.

Prilikom ugovaranja, ugovorne strane mogu da kao kreditni događaj odrede jedan ili više događaja. To znači da, ako i ne upotrebljavaju dokumente i termine koji nisu skladu sa definicijama ISDA, mogu da ugovorom odrede nastanak kreditnog događaja. S tim u vezi, uz iznos premija i trajanje ugovora, ugovara se način obavještanja o nastanku kreditnog događaja, tj. način na koji se potvrđuje nastupanje kreditnog događaja, period trajanja ugovora.

Plaćanje zaštite nije svaki put u vezi sa stvarno nastalim gubicima koje podnese kupac zaštite. Najčešće, plaćanje zaštite predstavlja:

- zbir teorijske vrijednosti i narasle kamate koja se izračunava na teorijsku vrijednost referentne aktive (kod fizičkog saldiranja) ili
- razliku između teorijske vrijednosti i narasle kamate i tržišne vrijednosti referentne aktive nakon nastupanja kreditnog događaja (kod novčanog saldiranja).

Kreditni derivati javljaju se u različitim oblicima, i postoji „više načina na koji mogu da se grupišu u različite kategorije“ (Spasojević, 2013, 116). Tri osnovna načina njihovog grupisanja jesu kreditni derivati koji (Spasojević, 2013, 116):

- glase na jedno ime i kreditni derivati koji glase na više imena,
- su pisani za korporativne referentne subjekte i kreditni derivati pisani za državne referentne subjekte,
- zahtijevaju finansiranje i kreditni derivati koji ne zahtijevaju finansiranje

Dugi način klasifikovanja kreditnih derivata je u tri osnovne kategorije u zavisnosti od njihovih mehanizama rada i primjene (Spasojević, 2013, 124):

- derivati koji u osnovi imaju mogućnost neizvršenja,
- derivati koji u osnovi imaju kreditni spread i
- proizvodi koji omogućavaju sintetičku replikaciju performansi bazne aktive.

2.2. Prednosti kreditnih derivata

Kao najveća prednost kreditnih derivata naglašava se razdvajanje tržišnog i kreditnog rizika i prenos kreditnog rizika na druge učesnike na tržištu. Dakle, kreditni derivati omogućavaju upravljanje i hedžing kreditnim rizikom zasebno od drugih vrsta rizika vezanih za aktivu u osnovi. Kao rezultat toga, ovi derivati omogućavaju investitorima da bolje usklade stvarnu i željenu odnosno očekivanu izloženost riziku.

Sljedeća prednost kreditnih derivata, koja proizlazi iz već opisane, jeste činjenica da mogu da „izdvoje kreditni rizik dužničkog finansijskog instrumenta i transferišu ga trećoj strani“ (Anson, Fabozzi, Choudhry, Chen 2004). Kreditni derivati omogućavaju transfer kreditnog rizika uz istovremeno zadržavanje vlasništva nad aktivom. Oni investitorima ili finansijskim organizacijama omogućavaju da razdvoje kreditni rizik od rizika finansiranja. Prema tome, omogućavaju prenos rizika od investitora koji su previše izloženi kreditnom riziku ka onima koji su spremni da preuzmu taj rizik (Bomfim, 2005). Opisani proces može se tumačiti i kao hedžing kreditnog rizika, ali on i povećava likvidnost kreditnog tržišta na kojem se trguje dužničkim instrumentima. Naime, zahvaljujući kreditnim derivatima, investitorima je omogućen pristup drugim ugovornim stranama ili tržištima koja ranije nisu bila javno dostupna (Bruyere, Cont, Copinot, Fery, Jaeck, Spite, 2006).

Osim opisanih prednosti, investicione banke rado ulažu u kreditne derivate zbog tri razloga: toga što su im niži transakcioni troškovi usklađivanja rizika i strukture portfelja – jedna transakcija vezana za kreditne derivate može da zamijeni više transakcija na berzi. Takođe, lakše im je usklađivanje zahtijevane stope kapitala potrebne za poslovanje – usklađivanje iznosa kapitala koji služi za pokrivanje neočekivanih gubitaka koji su rezultat kreditnog rizika.

2.3. Funkcionisanje kreditnih derivata na primjeru svopova ukupnog prinosa (Total Return Swap – TRS)

Svop ukupnog prinosa (Total Return Swap – TRS) ili svop ukupne stope prinosa (Total Rate of Return Swaps – TRORS) predstavlja kreditni derivat koji glasi na jedno ime, a koji ne zahtijeva finansiranje i pripada proizvodima koji omogućavaju sintetičku replikaciju performansi bazne aktive (Choudhry, 2012, 30; Spasojević, 2013, 140). Svop ukupnog prinosa jedan je od važnih instrumenata koji upotrebljavaju banke, investicioni fondovi i ostale finansijske institucije pri upravljanju izloženosti prema kreditnom riziku. Svop ukupnog prinosa je u suštini bilateralan finansijski ugovor. On predstavlja transakciju u kojoj se strane – učesnice u ugovoru usaglašavaju da će mijenjati ukupan prinos određene vrste aktive ili definisane korpe raznih aktiva u zamjenu za periodične novčane tokove zasnovane na nekoj referentnoj kamatnoj stopi (najčešće LIBOR) i odgovarajućem rasponu iznad nje, kao i garanciju za bilo kakve kapitalne gubitke (Bomfim, 2015, 85; Barjaktarović, 2012, 96). Za razliku od običnog svopa, gdje se zamjenjuju samo novčani tokovi (Tavakoli, 2008, 33), kod svopova ukupnog prinosa zamjenjuje se ukupan prinos. Dakle, mijenjaju se novčani tokovi uvećani za kapitalnu apresijaciju ili za depresijaciju (Spasojević, 2013, 140).

Novčani tokovi svopova ukupnog prinosa nisu vezani samo za nastajanje definisanog kreditnog događaja, već se ugovorom između ugovornih strana prenosi i rizik od promjena kamatnih stopa. Ovaj instrument olakšava prijem ukupnih novčanih tokova od obveznice, što ga čini sintetičkim obvezničkim proizvodom, odnosno kreditnim derivatom (Abid, Naifar, 2006, 26).

Rok dospijeca TRS nije uvijek isti kao što je rok dospijeca referentne aktive. Ovi derivati uglavnom imaju rok dospijeca od šest do 24 mjeseca, ali se mogu ugovoriti i na duži vremenski period (Bomfim, 2015, 85–86).

Referentna aktiva koja može postati predmet TRS može podrazumijevati sljedeće (Spasojević, 2013, 140):

- obveznice (sa izraženim kreditnim rizikom);
- kredite;
- referentni portfelj, koji se sastoji od selektovanih obveznica i kredita;
- tržišni indeks, koji predstavlja segment tržišta obveznica;
- tržišni indeks akcija.

TRS je drugačiji u poređenju sa drugim kreditnim derivatima zato što plaćanja između ugovornih strana zavise direktno od tržišne vrijednosti referentne aktive, kao i od promjena koje su rezultat nastanka kreditnog događaja. Kod TRS, ugovorne strane ne prenose vlasništvo nad predmetnom aktivom, što smanjuje transakcione troškove i omogućava veću fleksibilnost kod svih strana u ugovoru (Barjaktarović, 2012, 96). Navedene osobine TRS čine poželjnim za korištenje upotrebe finansijske poluge.

Osnovna razlika između TRS i CDS je u tome što CDS obezbjeđuje zaštitu od specifičnih kreditnih događaja. S druge strane, TRS daje zaštitu od gubitka vrijednosti nezavisno od uzroka, bez obzira na to da li je uzrok neizvršenje, povećanje kreditnog raspona ili neki drugi uzrok. Dakle, TRS razdvaja i kreditni rizik i tržišni rizik.

loan” (Spasojević, 2013, 118). A moratorium or repudiation is a situation in which the reference entity or the state announces a moratorium on the obligation of the reference entity. Furthermore, restructuring implies the possibility, i.e. the risk, that the reference entity will restructure part or all of its debts. This move facilitates the repayment of debts to the reference entity, but it mainly leads to a downgrade of its credit rating.

When contracting, the contracting parties may designate one or more events as a credit event. This means that, even if they do not use documents and terms that do not comply with the definitions of the ISDA, they can contractually determine the occurrence of a credit event. In this regard, in addition to the amount of premiums and the duration of the contract, the manner of notifying the occurrence of a credit event is agreed, i.e. the manner in which the occurrence of the credit event is confirmed, the duration of the contract.

Payment of protection is not always related to the actual losses incurred by the protection buyer. Most often, the payment of protection is:

- the sum of the theoretical value and the increased interest calculated on the theoretical value of the reference asset (in the case of physical settlement), or
- the difference between the theoretical value and the increased interest and the market value of the reference asset after the occurrence of the credit event (in the case of cash settlement).

Credit derivatives appear in different forms, and there are “several ways in which they can be grouped into different categories” (Spasojević, 2013, 116). The three main ways of grouping the credit derivatives (Spasojević, 2013, 116):

- Single-name credit derivatives and multi-name credit derivatives.
- Credit derivatives written on corporate reference entities and credit derivatives written on government reference entities.
- Credit derivatives that require financing and credit derivatives that do not require financing.

The long way of classifying credit derivatives is in three basic categories, depending on their mechanisms of operation and application (Spasojević, 2013, 124):

- Derivatives that basically have the possibility of non-execution;
- Derivatives that basically have a credit spread and
- Products that enable synthetic replication of base asset performance.

2.2. Advantages of credit derivatives

The greatest underlined advantage of credit derivatives is the separation of market and credit risk and the transfer of credit risk to other market participants. Therefore, credit derivatives also enable the management and hedging credit risk separately from other types of risks related to the asset in the base. As a result, these derivatives allow investors to better match actual and desired i.e. expected risk exposure.

Another advantage of credit derivatives, which derives from the one already described, is the fact that they can “separate the credit risk of a debt financial instrument and transfer it to a third party” (Anson, Fabozzi, Choudhry & Chen 2004). Credit derivatives enable the transfer of credit risk while retaining ownership of the asset. They allow investors or financial organizations to separate credit risk from financing risk. Therefore, they enable the transfer of risk from investors who are too exposed to credit risk to those who are willing to take that risk (Bomfim, 2005). The described

process can also be interpreted as hedging credit risk, but it also increases the liquidity of the credit market in which debt instruments are traded. Namely, thanks to credit derivatives, investors are able to have access to other contracting parties or markets that were not previously publicly available (Bruyere, Cont, Copinot, Fery, Jaeck, Spite, 2006).

In addition to the described advantages, investment banks are happy to invest in credit derivatives for three reasons because they have lower transaction costs of adjusting risk and portfolio structure - one transaction related to credit derivatives can replace more transactions on the stock exchange. It is also easier for them to adjust the required capital ratio required for business - adjusting the amount of capital used to cover unexpected losses resulting from credit risk.

2.3. Functioning of the credit derivatives based on the example of Total Return Swap - TRS

Total return swap (TRS) or total rate of return swaps (TRORS) is a single-name credit derivative that does not require financing and it belongs to products that allow synthetic replication of the performance of asset base (Choudhry, 2012, 30; Spasojević, 2013, 140). The total return swap is one of the important instruments used by banks, investment funds and other financial institutions in managing credit risk exposure. The total return swap is essentially a bilateral financial agreement. It represents a transaction in which the parties – participants of the contract agree to change the total return on a particular type of asset or defined basket of various assets in exchange for periodic cash flows based on some reference interest rate (usually LIBOR) and appropriate range above it, as a guarantee for any capital losses (Bomfim, 2015, 85; Barjaktarović, 2012, 96). Unlike the ordinary swap where only cash flows are replaced (Tavakoli, 2008, 33), total return swaps replace the total return. Therefore, cash flows increased by capital appreciation or depreciation change (Spasojević, 2013, 140).

The cash flows of total return swaps are not only related to the occurrence of a defined credit event, but also the risk of changes in interest rates is transferred by agreement between the parties. This instrument facilitates the receipt of total cash flows from the bonds, which makes it a synthetic bond product, i.e. a credit derivative (Abid, & Naifar, 2006, 26).

The maturity of a TRS is not always the same as the maturity of the reference asset. These derivatives generally have a maturity of six to 24 months, but can also be contracted for a longer period of time (Bomfim, 2015, 85-86).

Reference assets that can become the subject of TRS may include the following (Spasojević, 2013, 140):

- bonds (with expressed credit risk),
- loans,
- reference portfolio, consisting of selected bonds and loans,
- market index, which represents a segment of the bond market,
- market index of shares.

TRS is different compared to other credit derivatives because payments between counterparties depend directly on the market value of the reference asset, as well as on the changes that result from the occurrence of a credit event. In TRS, the parties do not transfer ownership of the asset in question, which reduces transaction costs and allows greater flexibility for all contractual parties (Barjaktarović, 2012, 96). These features make TRS desirable for the use of financial leverage.

The main difference between TRS and CDS is that CDS provides protection against specific credit events. On the other hand, TRS provides

2.4. Rizici kreditnih derivata

Uprkos činjenici da kreditni derivati omogućavaju transfer kreditnog rizika, primjena ovih instrumenata nosi i određene rizike koji su „uglavnom vezani za činjenicu da je tržište kreditnih derivata novo i nedovoljno istraženo“ (Spasojević, 2013, 130). Najvažniji od njih su: rizik informacione asimetrije, operativni rizik, rizik da druga strana neće ispuniti obavezu, rizik likvidnosti, rizik modela i rizik određivanja cijena, rizik rejting agencije i zakonski rizik.

Rizik informacione asimetrije nastaje kao posljedica asimetričnosti informacija, a ostvaruje se kada korisnik kredita kreditoru učini dostupnom privilegovanu informaciju o cijeni.

Operativni rizik nastaje kao posljedica propusta u poštovanju procedura – najčešće kao posljedica u radu zaposlenih. Na primjer, može doći do značajne „izloženosti kreditnom riziku, a da to ne bude prikazano na bilansu stanja“ (Spasojević, 2013, 132).

Rizik da druga strana neće ispuniti obavezu bio bi „kreditni rizik kreditnog rizika“. Nastaje ako kupac rizika, tj. prodavac zaštite, ne ispuni svoje ugovorne obaveze.

Uprkos velikom rastu ovih ugovora, kreditni derivati predstavljaju ugovore između samo dvije strane, kojima se trguje vanberzanski. Prema tome, **rizik likvidnosti** nije zanemariv rizik.

Pronalaženje druge strane za „okončanje ili saldiranje postojeće transakcije može biti komplikovano“ (Spasojević, 2013, 132). **Rizik modela i rizik određivanja cijena** proizlaze iz toga da složeni kreditni derivati podrazumijevaju primjenu kompleksnih modela za vrednovanje i hedžing, što često može biti veliki izazov za investicione menadžere i analitičare.

S obzirom na sve navedeno, analitičari i investitori se uglavnom oslanjaju na (pr)ocjene rejting agencija. Kriza iz 2008. pokazala je da su ove ocjene često bile nepouzdana, što čini značajnim **rizik rejting agencije**.

Zakonski sistemi razlikuju se od zemlje do zemlje. S ciljem prevazilaženja određenih zakonskih pojmova i praksi te omogućavanja standardizacije i razvoja tržišta kreditnih derivata, preporučuje se uvođenje standardizovane dokumentacije da bi se **zakonski rizik** smanjio na što je moguće manju mjeru.

3. STANJE I PERSPEKTIVE NA TRŽIŠTIMA U RAZVOJU

Pojam „tržište u razvoju“ obuhvata zemlje koje karakteriše „institucionalna turbulencija i nizak nivo ekonomskog razvoja u odnosu

na razvijene zemlje“ (Welsh et al., 2006, 130–149). U skladu s tim, tržište u razvoju može predstavljati zemlju odnosno tržište na kojem je u toku tranzicija političkog ili ekonomskog sistema i ekonomski razvoj veći od jednocifrenog procenta na godišnjem nivou (Fan, 2008, 353–358). Pojam „tržište u razvoju“ obuhvata državu odnosno tržišta koja karakteriše institucionalna turbulencija i nizak stepen razvoja ekonomije u odnosu na razvijene zemlje. Hoskisson i saradnici (Hoskisson et al., 2000, 249–267) sve zemlje Zapadnog Balkana svrstavaju u kategoriju tržišta u razvoju. Tržište u nastajanju je tržište koje ima neke karakteristike razvijenog tržišta, ali ne ispunjava u potpunosti sve standarde.

Julien Vercueil nedavno je predložio pragmatičnu definiciju „ekonomija u nastajanju“, koja se razlikuje od „tržišta u nastajanju“, skovanog pristupom pod velikim uticajem finansijskih kriterijuma. Prema njegovoj definiciji, ekonomija u nastajanju pokazuje sljedeće karakteristike (Julien, 2011):

- prelazni prihod: njen GDP PPP (bruto domaći proizvod po glavi stanovnika – gross domestic product purchasing power parity) kreće se između 10% i 75% prosječnog dohotka po glavi stanovnika u EU;
- obnavljajući rast: tokom najmanje posljednje decenije doživjela je snažan ekonomski rast koji je smanjio jaz između prihoda i naprednih ekonomija;
- institucionalne transformacije i otvaranje privrede: u istom periodu preduzela je duboke institucionalne transformacije koje su doprinijele njenom integrisanju u svjetsku ekonomiju.

Početak 2010-ih, više od 50 zemalja, koje predstavljaju 60% svjetske populacije i 45% njenog BDP-a, podudaralo se sa ovim kriterijumima. Stoga se čini da su ekonomije u nastajanju nusproizvod trenutne globalizacije. Izraz „ekonomije koje se brzo razvijaju“ koristi se za označavanje tržišta u nastajanju kao što su Ujedinjeni Arapski Emirati, Čile i Malezija, koji doživljavaju brzi rast. Posljednjih godina pojavili su se novi pojmovi koji opisuju najveće zemlje u razvoju, poput BRIC, što predstavlja Brazil, Rusiju, Indiju i Kinu (Farah, 2006), zajedno sa BRICET (BRIC + Istočna Evropa i Turska), BRICS (BRIC + Južna Afrika), BRICM (BRIC + Meksiko), MINT (Meksiko, Indonezija, Nigerija i Turska), NEXT 11 (Bangladeš, Egipat, Indonezija, Iran, Meksiko, Nigerija, Pakistan, Filipini, Južna Koreja, Turska i Vijetnam) i CIVETI (Kolumbija, Indonezija, Vijetnam, Egipat, Turska i Južna Afrika (tabela 1)). Ove zemlje ne odlikuje mnogo istih osobina, ali veliki broj autora vjeruje da uživaju „sve veću ulogu u svjetskoj ekonomiji i na političkim platformama“ (Guegan, Hassani, Zhao, 2013).

Tabela 1. Prikaz zemalja u razvoju po različitim izvorima i klasifikacijama

Zemlja	MMF	BRICS + Next Eleven	S&P	EM bond index	Columbia University EMGP
Argentina	+			+	+
Bangladeš	+	+		+	
Brazil	+		+	+	+
Bugarska	+				
Čile	+		+	+	+
Kina	+		+	+	+
Kolumbija	+		+	+	+
Češka			+	+	
Egipat		+	+	+	+
Grčka			+		
Mađarska	+		+	+	+

protection against loss of value regardless of the cause, regardless of whether the cause is default, an increase in the credit spread or some other cause. Therefore, TRS separates both credit risk and market risk.

2.4. Risks of credit derivatives

Despite the fact that credit derivatives enable the transfer of the credit risk, the application of these instruments also carries certain risks that are “mainly related to the fact that the credit derivatives market is new and insufficiently researched” (Spasojević, 2013, 130). The most important of these are: information asymmetry risk, operational risk, risk that the other party will not fulfil the obligation, liquidity risk, model risk and pricing risk, rating agency risk and legal risk.

Information asymmetry risk arises as a consequence of information asymmetry and is realized when the borrower makes available privileged information about the price to the creditor. Operational risk arises as a result of failure to comply with procedures - most often as a result of the work of employees. For example, there may be a significant “exposure to credit risk without it being shown on the balance sheet” (Spasojević, 2013, 132). Risk that the other party will not fulfil the obligation would be the credit risk of “credit risk”. It occurs if the risk buyer, i.e. the protection seller fails to fulfil its contractual obligations. Despite the large growth of these contracts, credit derivatives represent contracts between only two parties that are traded over the counter. Therefore, liquidity risk is not a negligible risk. Finding another party to “complete or settle an existing transaction can be complicated” (Spasojević, 2013, 132). Model risk and pricing risk arise from the fact that complex credit derivatives involve the application of complex valuation and hedging models which can often be a major challenge for investment managers and analysts. Given all the above, analysts and investors mostly rely on (re) estimations of rating agencies. The crisis of 2008 showed that these ratings were often unreliable, which makes the rating agency’s risk significant.

Legal systems vary from country to country. In order to overcome certain legal concepts and practices and enable standardization and development of the credit derivatives market, it is recommended to introduce standardized documentation in order to reduce legal risk to a minimum.

3. THE STATE AND PERSPECTIVES IN THE EMERGING MARKETS

The term “emerging market” encompasses countries characterized by “institutional turbulence and low levels of economic development

relative to developed countries” (Welsh et al., 2006, 130-149). Accordingly, an emerging market can represent a country or a market in which the transition of a political or economic system and economic development is higher than a single-digit percentage per year (Fan, 2008: 353-358). The term “emerging market” includes countries or markets characterized by institutional turbulence and a low level of economic development in relation to developed countries. Hoskisson et al. (Hoskisson et al, 2000, 249-267) classify all Western Balkan countries as emerging markets. An emerging market is a market that has some characteristics of a developed market, but does not fully meet its standards.

Julien Vercueil recently proposed a pragmatic definition of an “emerging economy,” which differs from an “emerging market” created by an approach heavily influenced by financial criteria. According to his definition, an emerging economy shows the following characteristics (Julien, 2011):

- Transitional income: Its GDP PPP (gross domestic product purchasing power parity) ranges between 10% and 75% of the average per capita income in the EU.
- Renewing growth: Over the last decade or so, it has experienced strong economic growth that has narrowed the gap between income and advanced economies.
- Institutional transformations and opening of the economy: in the same period he undertook deep institutional transformations which contributed to its integration into the world economy.

In the early 2010s, more than 50 countries, representing 60% of the world’s population and 45% of its GDP, met these criteria. Therefore, emerging economies seem to be a by-product of current globalization. The term “fast-growing economies” is used to mark emerging markets, such as the United Arab Emirates, Chile and Malaysia, which are experiencing rapid growth. In the last few years, new terms have emerged to describe the largest developing countries, such as the BRIC, representing Brazil, Russia, India, and China, (Farah, 2006), along with BRICET (BRIC + Eastern Europe and Turkey), BRICS (BRIC + South Africa), BRICM (BRIC + Mexico), MINT (Mexico, Indonesia, Nigeria and Turkey), NEXT 11 (Bangladesh, Egypt, Indonesia, Iran, Mexico, Nigeria, Pakistan, Philippines, South Korea, Turkey and Vietnam) and CIVETI (Colombia, Indonesia, Vietnam, Egypt, Turkey and South Africa) (Table 1) These countries do not have a lot of same characteristics, but many authors believe to enjoy “an increasing role in the world economy and on political platforms” (Guegan, Hassani, & Zhao, 2013).

Table 1 – Overview of developing countries by different sources and classifications

Country	IMF	BRICS+Next Eleven	S&P	EM bond index	Columbia University EMGP
Argentina	+			+	+
Bangladesh	+	+		+	
Brazil	+		+	+	+
Bulgaria	+				
Chile	+		+	+	+
China	+		+	+	+
Columbia	+		+	+	+
Czech Republic			+	+	
Egypt		+	+	+	+
Greece			+		
Hungary	+		+	+	+

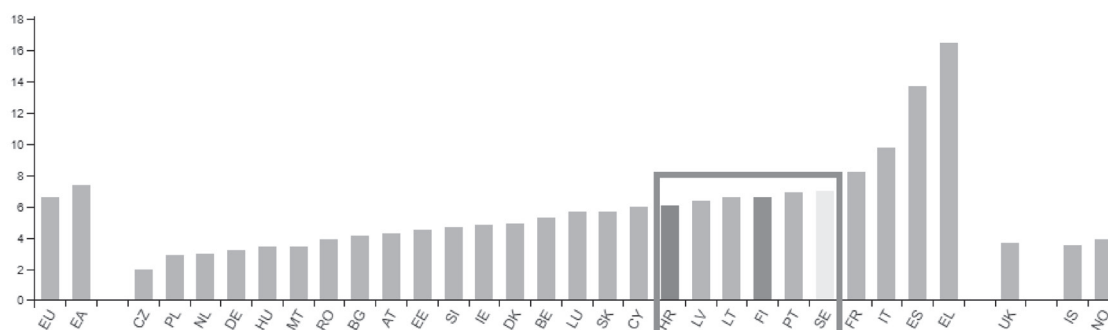
Indija	+		+	+	+
Indonezija	+	+	+	+	
Iran		+			
Izrael				+	+
Malezija	+		+		+
Mauricijus					+
Meksiko	+	+	+	+	+
Maroko	+	+	+	+	+
Nigerija				+	
Oman				+	
Pakistan	+	+	+	+	
Peru	+		+	+	
Filipini	+	+	+	+	+
Poljska	+			+	
Katar			+	+	
Rumunija	+			+	
Rusija	+	+	+	+	+
Južna Afrika	+	+	+	+	+
Južna Koreja		+			+
Tajvan			+	+	+
Tajland	+		+	+	+
Turska	+	+	+	+	+
Ukrajina	+			+	
UAE			+	+	+
Venecuela	+			+	
Vijetnam		+		+	

Izvor: International Monetary Fund (2020). *World Economic Outlook Reports. World Economic Outlook, January 2020*; S&P Dow Jones Indices (2018). *Country Classification Consultation*; J. P. Morgan (2016). *Emerging Markets Bond Index Monitor March 2016*. J. P. Morgan; Columbia Center on Sustainable Investment (CCSI) (2020). <http://ccsi.columbia.edu/publications/emgp/>

Može se reći da ove zemlje odlikuju institucionalne turbulencije i niži nivo korporativnog upravljanja i ekonomskog razvoja u odnosu na razvijene zemlje (Grujić, 2019, 54–55). Osim toga, ove zemlje karakteriše rast zaposlenih u oblastima koje se finansiraju iz budžeta: u administraciji, javnoj upravi, obrazovanju i umjetnosti, a očigledno smanjenje zaposlenih u prerađivačkoj industriji. Na

primjer, prema podacima Eurostata od kraja 2019. godine, Hrvatska ima stopu nezaposlenosti od 6,1%, što je znatno manje od Švedske (7%) i Finske (6,6%) (grafikon 2). Međutim, u ovoj zemlji su krajem 2019. godine bili predsjednički izbori i zabilježen je rast zaposlenih u oblastima koje se finansiraju iz državnog budžeta.⁸

Grafikon 2. Nezaposlenost u Evropi u januaru 2020. u %



Izvor: prikaz autora

U poređenju sa visokorazvijenim zemljama (SAD, Australija, UK, Italija, Njemačka, Francuska i Kanada), tržišta u razvoju odlikuju visok

nivo korupcije, posljedice (post)socijalističkog sistema (Kowalczyk-Hoyer, et al., 2016), ali i slab razvoj finansijskog tržišta (grafikon 3).

⁸ Više na: https://ec.europa.eu/eurostat/statistics-explained/index.php/Unemployment_statistics

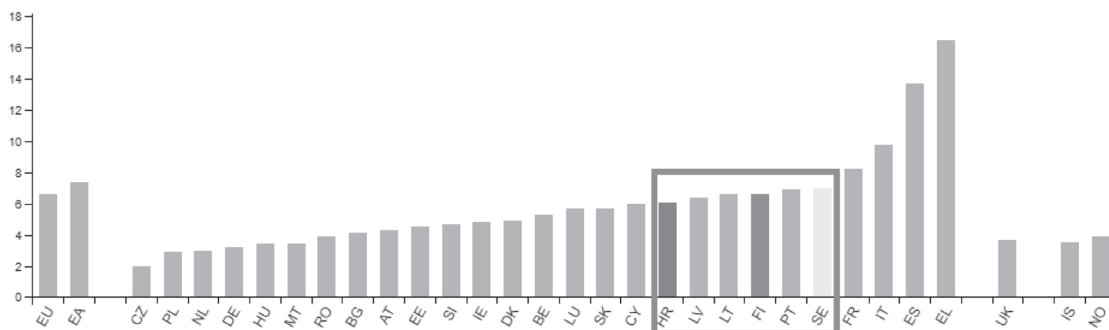
India	+		+	+	+
Indonesia	+	+	+	+	
Iran		+			
Israel				+	+
Malesia	+		+		+
Mauritius					+
Mexico	+	+	+	+	+
Morocco	+	+	+	+	+
Nigeria				+	
Oman				+	
Pakistan	+	+	+	+	
Peru	+		+	+	
Philippines	+	+	+	+	+
Poland	+			+	
Qatar			+	+	
Rumania	+			+	
Russia	+	+	+	+	+
South Africa	+	+	+	+	+
South Korea		+			+
Taiwan			+	+	+
Thailand	+		+	+	+
Turkey	+	+	+	+	+
Ukraine	+			+	
UAE			+	+	+
Venezuela	+			+	
Vietnam		+		+	

Source: International Monetary Fund. (2020). *World Economic Outlook Reports. World Economic Outlook, January 2020*; S&P Dow Jones Indices. (2018). *Country Classification Consultation*; J.P. Morgan (2016). *Emerging Markets Bond Index Monitor March 2016*. J.P. Morgan; Columbia Center on Sustainable Investment (CCSI). (2020). <http://ccsi.columbia.edu/publications/emgp/>

It can be said that these countries are characterized by, as common characteristics, institutional turbulence and a lower level of corporate governance and economic development compared to developed countries (Grujić, 2019, p. 54-55). In addition, these countries are characterized by an increase in employees in areas financed from the budget: in administration, public administration, education and the arts, and an obvious decrease in employees in the manufacturing

industry. For example, according to Eurostat data at the end of 2019, Croatia had an unemployment rate of 6.1%, which is significantly lower than Sweden (7%) and Finland (6.6) (Chart 2). However, in this country, at the end of 2019, there were presidential elections and there was an increase in the number of employees in areas financed from the state budget.⁸

Chart 2 – Unemployment in Europe in January 2020 in %



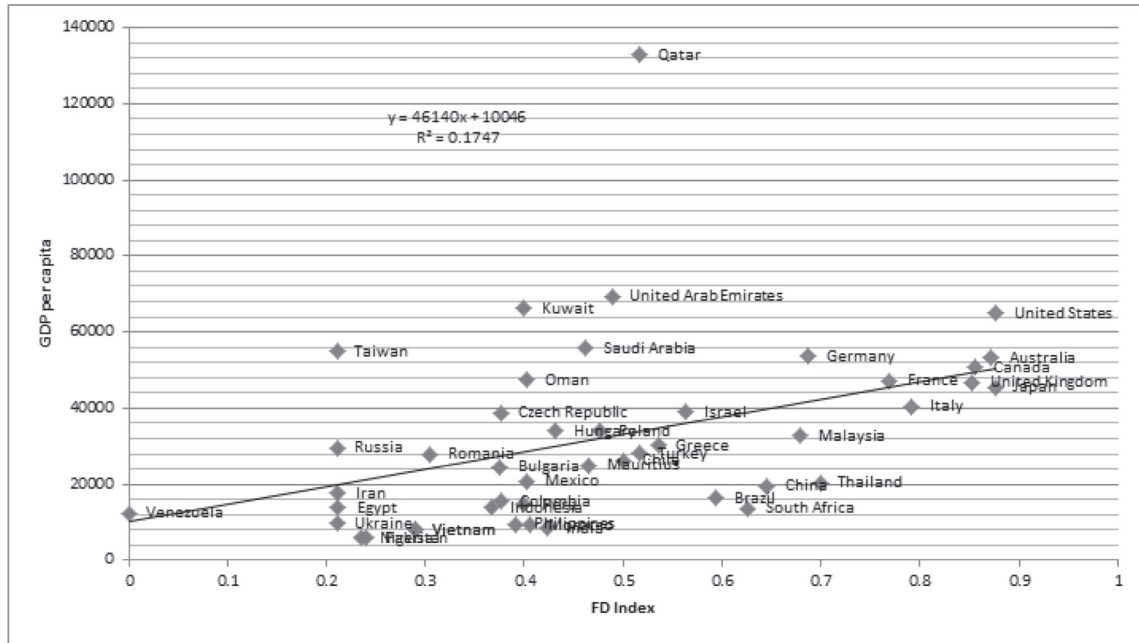
Source: Overview of the author

In comparison to highly developed countries (USA, Australia, UK, Italy, Germany, France and Canada), developing markets are characterized by a high level of corruption as a consequence of the

(post) socialist system (Kowalczyk-Hoyer, et. Al., 2016) but also weak financial market development (Chart 3).

⁸ More available at: https://ec.europa.eu/eurostat/statistics-explained/index.php/Unemployment_statistics

Grafikon 3. Razvijenost finansijskog tržišta i BDP per capita po zemljama



Izvor: Podaci Svjetske banke preuzeti sa <https://data.imf.org/?sk=F8032E80-B36C-43B1-AC26-493C5B1CD33B>

Posmatrajući trgovinu kreditnim derivatima po zemljama u razvoju, možemo reći da se oko 85% ovih ugovora odnosi na CDS, 10% na CLN, a 5% na trgovinu ostalim ugovorima (Ranciere, R., 2002), a 85% svih transakcija denominovane su u dolarima (Mihaljek, Packer, 2010, 47).

mjenju finansijskih derivata, ali je ova oblast nedovoljno regulisana. Osim toga, banke nisu realizovale sekjuritizaciju jer je ona preskupa. Samo odobrenje prospekta za emisiju hartija od vrijednosti košta 0,15% od vrijednosti emisije. Dalje, uprkos raznim agencijama za iskazivanje boniteta privrednih društava, na ovim prostorima ne postoji relevantna rejting agencija. Od svih emitenata obveznica u BiH samo su entiteti i država dobili kreditni rejting. Pored toga, osim davanja klasičnih garancija, i to isključivo za municipalne obveznice, još nije bilo drugih vidova osiguranja hartija od vrijednosti.

ZAKLJUČAK

Na primjeru sekjuritizacije i kreditnih derivata kao novih instrumenata za transfer kreditnog rizika pokazali smo da kreditni derivati izoluju i odvajaju kreditni rizik od drugih vrsta rizika, kao što su tržišni i operativni rizik. Osim toga, oni mogu da izdvoje kreditni rizik dužničkog finansijskog instrumenta i transferišu ga trećoj strani. Dakle, omogućavaju prenos rizika od investitora koji su previše izloženi kreditnom riziku ka onima koji su spremni da preuzmu taj rizik. Uprkos činjenici da kreditni derivati omogućavaju transfer kreditnog rizika, primjena ovih instrumenata nosi i određene rizike, koji su uglavnom vezani za činjenicu da je tržište kreditnih derivata novo i nedovoljno istraženo. Najvažniji od njih su: rizik informacione asimetrije, operativni rizik, rizik da druga strana neće ispuniti obavezu, rizik likvidnosti, rizik modela i rizik određivanja cijena, rizik rejting agencije i zakonski rizik.

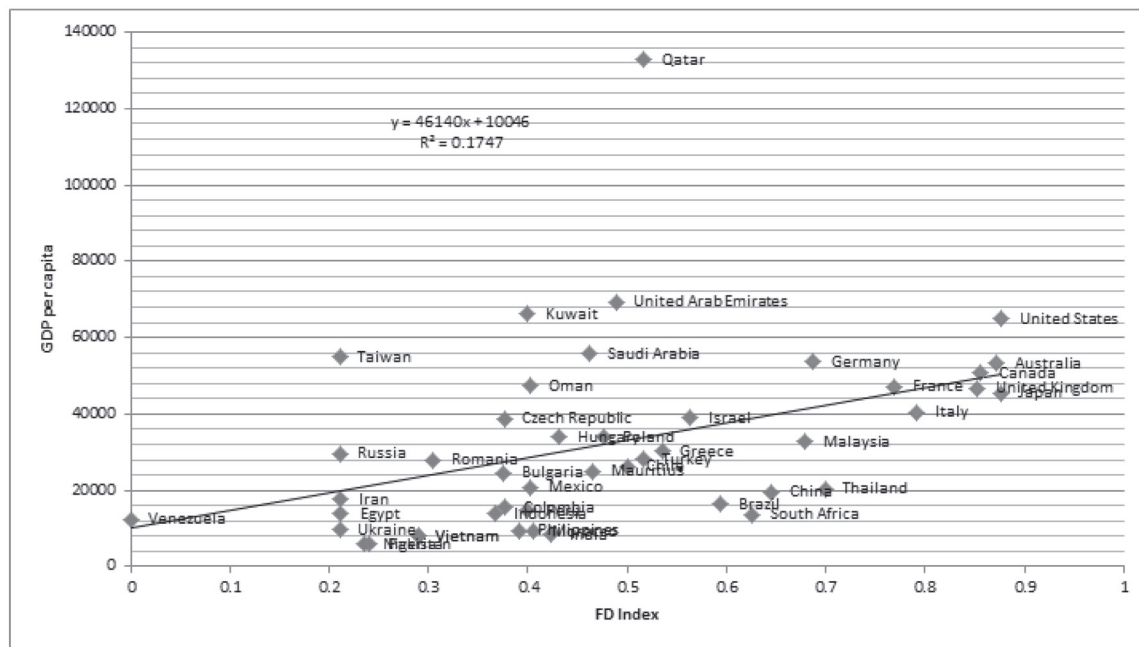
Na malim i nedovoljno razvijenim tržištima, banke i druge finansijske institucije upotrebljavaju tradicionalne instrumente i tehnike transfera kreditnog rizika, kao što su osiguranje obveznica, garancije, kolateral, rani raskid, prenos prava i obaveza, neting, put opcije, sindicirani krediti, racioniranje kredita, diversifikacija, kreditni limiti i posredovanje. Međutim, još postoji otpor prema tehnikama upravljanja kreditnim rizikom kao što su sekjuritizacija i kreditni derivati.

Kao prvi od zaključaka za nepostojanje kreditnih derivata na malim tržištima nameće se potreba za unapređenjem regulative. Prije svega, u Republici Srpskoj je potrebna izmjena Zakona o tržištu hartija od vrijednosti jer svaki konkretan slučaj baca novo svjetlo na neku pravnu normu. Jedna od preporuka je da banke slobodnije idu u korak sa savremenim trendovima. S tim u vezi, poželjno je i moguće da se napravi sekjuritizacija kredita. Sadašnji zakon predviđa pri-

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Chart 3 – Development of financial markets and GDP per capita in countries



Source: Data of the World Bank taken from <https://data.imf.org/?sk=F8032E80-B36C-43B1-AC26-493C5B1CD33B>

Looking at trade in credit derivatives by developing countries, it can be said that about 85% of these contracts relate to CDS, 10% to CLN and 5% to trade in other contracts (Ranciere, R. 2002) and 85% of all transactions are denominated in dollars (Mihaljek and Packer, 2010, 47).

CONCLUSION

On the example of securitization and credit derivatives as new instruments for credit risk transfer, we have shown that credit derivatives isolate and separate credit risk from other types of risks such as market and operational risk. In addition, they may separate the credit risk of a debt financial instrument and transfer it to a third party. Therefore, they enable the transfer of risk from investors who are too exposed to credit risk to those who are willing to take that risk. Despite the fact that credit derivatives enable the transfer of credit risk, the application of these instruments also carries certain risks, which are mainly related to the fact that the credit derivatives market is new and insufficiently researched. The most important of these are: information asymmetry risk, operational risk, risk that the other party will not fulfil the obligation, liquidity risk, model risk and pricing risk, rating agency risk and legal risk.

In small and insufficiently developed markets, banks and other financial institutions use traditional instruments and techniques of credit risk transfer such as bond insurance, guarantees, collateral, early termination, transfer of rights and obligations, netting, put options, syndicated loans, loan rationing, diversification, credit limits and intermediation. However, there is still resistance to credit risk management techniques such as securitization and credit derivatives.

The first of the conclusions for the non-existence of credit derivatives in small markets is the need to improve regulations. First of all, in Republika Srpska, changes to the Law on the Securities Market are needed, because each specific case sheds a new light on a legal norm. One of the recommendations is that banks should be more free to keep up with modern trends. In this regard, it is desirable and possible to make a securitization of the loan. The current

Law foresees the application of financial derivatives, but this area is insufficiently regulated. In addition, banks did not implement securitization because it is too expensive. Only the prospectus approval for the issuance of securities costs 0.15% of the issuance value. Furthermore, despite various agencies for expressing the creditworthiness of companies, there is no relevant rating agency in this area. Out of all bond issuers in BiH, only the entities and the state received a credit rating. In addition, apart from the provision of classic guarantees, exclusively for municipal bonds, there have been no other forms of insurance for securities.

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UDK 338.48:658(497.11)
DOI: 10.7251/FIN2002047B
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PREGLEDNI RAD

Opravdanost postojanja potvrde o putovanju i njen značaj pri formiranju paušalne cijene kod ugovora o organizovanju putovanja u Republici Srbiji

Justification of the travel certificate and its importance in the formation of a lump sum price in the contract for travel in the Republic of Serbia

Rezime

Potvrda o putovanju kod ugovora o organizovanju putovanja je, s jedne strane, zamišljena da služi kao dokaz da je zaključen ugovor o organizovanju putovanja, a s druge strane, kao dokument iz kojeg putnik saznaje svoja prava, obaveze i odgovornosti, čime mu se obezbeđuje adekvatna zaštita. Pored toga, u potvrdi o putovanju se navodi i minimalan broj putnika koji je neophodno sakupiti prije otpočinjanja putovanja, što ima ključnu ulogu u određivanju ukupne (paušalne) cijene putovanja, budući da on predstavlja osnov za njeno formiranje. Prije donošenja Zakona o zaštiti potrošača, ugovor o organizovanju putovanja bio je ugovor za koji se nije zahtijevala posebna forma, čime je potvrda o putovanju zaista služila namijenjenoj svrsi. Međutim, njegovim stupanjem na snagu, odstupljeno je od principa neformalnosti, te su propisani posebni formalni uslovi za zaključenje ugovora, čime je potvrda o putovanju postala suvišan institut. Međutim, i pored toga, izdavanje potvrde o putovanju, koje je isključivo predviđeno Zakonom o obligacionim odnosima, i dalje postoji ne samo kao zastarjeli i prevaziđeni institut, već i kao obaveza organizatora putovanja, bez čijeg se ispunjenja može dovesti u pitanje pravna valjanost i pravno dejstvo ugovora o organizovanju putovanja.

Ključne riječi: potvrda o putovanju, ugovor o organizovanju putovanja, minimalan broj putnika, paušalna cijena, Zakon o zaštiti potrošača, Zakon o obligacionim odnosima.

Abstract

A travel certificate with a contract for travel is, on the one hand, intended to serve as proof that the contract for travel has been concluded, and on the other hand, as a document where the traveler learns his/her rights, obligations and responsibilities, thus being provided with an adequate protection. Moreover, the travel certificate indicates the minimum number of travelers which must be gathered before the start of the travel, which plays a key role in determination of the total (lump sum) price of the travel, it being the basis for its formation. Prior to the enactment of the Law on Consumer Protection, a contract for travel was a contract which required no special form, whereby the travel certificate actually served its intended purpose. However, with the entry into force of the said law, the principle of informality has been deviated from, and special formal requirements for the conclusion of a contract have been prescribed, which made the travel certificate a superfluous institute. However, despite this, the issuance of a travel certificate, which is exclusively provided by the Law on Contractual Relations, still exists not only as an outdated and obsolete institution, but also as a requirement of the travel organizers, the fulfillment of which may question the legal validity and legal effect of the contract for travel.

Keywords: travel certificate, contract for travel, minimum number of travelers, lump-sum price, Law on Consumer Protection, Law on Contractual Relations.

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UVOD

Organizovano putovanje predstavlja skup složenih aktivnosti koje su inkorporisane u jednu cjelinu u skladu sa zakonom, ugovorom i dobrim poslovnim običajima profesije. Zbog toga se za ugovor o organizovanju putovanja u srpskom pravu može reći da je, iako mješovit, u širem smislu, jedan jedinstven, odnosno nedjeljiv. Između svih prestacija koje čine organizovano putovanje postoji subjektivna i funkcionalna veza. Subjektivna veza odnosi se na ugovorne strane i druga lica koja učestvuju u realizaciji putovanja, a funkcionalna se odnosi na integrisanje brojnih usluga uz pomoć prethodne organizacije, što sve čini cjelinu koja obuhvata skup složenih, međusobno uslovljenih prestacija. Dakle, ugovor o organizovanju putovanja čini skup usluga koje ne predstavljaju samo zbir pojedinačnih usluga. Taj skup je rezultat njihovog smišljenog rasporeda i sinhronizovanog uzajamnog odnosa koji konačno dovodi do nove suštine: organizovanog putovanja, za koje putnik plaća jednu ukupnu (paušalnu) cijenu (Blagojević i Krulj, 1980). Upravo je osnovna obaveza organizatora putovanja da pruži ugovoreni skup usluga, i to na način kako je opisano u ugovoru o organizovanju putovanja, programu putovanja¹ ili potvrdi o putovanju.

Sve neujednačenija sudska praksa i različitost opštih uslova putovanja turističkih agencija, kao i potreba zaštite interesa putnika kroz jasno definisanje prava i obaveza ugovornih strana, doveli su do pojave zakonskog regulisanja ugovora o organizovanju putovanja, najprije u Španiji, Argentini, Meksiku, Francuskoj i drugim zemljama (Vujisić i Mihajlović, 2014). U Republici Srbiji, ugovor o organizovanju putovanja je po prvi put regulisan zakonskim tekstom još 1978. godine, i to u Zakonu o obligacionim odnosima (Zakon o obligacionim odnosima, 29/78), da bi kasnije paralelno bio uređen i u Zakonu o zaštiti potrošača (Zakon o zaštiti potrošača, 62/14).² Kao i Radović (2013), tvrdimo da Zakon o zaštiti potrošača, kao noviji i poseban zakon, ima primat u primjeni u odnosu na Zakon o obligacionim odnosima. Na slučajeve koji nisu regulisani u Zakonu o zaštiti potrošača supsidijarno će se primjenjivati pravila Zakona o obligacionim odnosima.

S tim u vezi, pojavljuje se i problem zakonodavnog regulisanja ove oblasti jer, s jedne strane, u odredbama Zakona o zaštiti potrošača, kao novijeg zakona, ne predviđa se obaveza izdavanja potvrde o putovanju, dok se, s druge strane, propisuje obavezna pismena forma ugovora o organizovanju putovanja, čime se dovodi u pitanje opravdanost postojanja potvrde o putovanju. Nastavak rada posvetićemo detaljnijem analiziranju navedenog u cilju ispitivanja osnovanosti postojanja potvrde o putovanju u važećoj zakonodavnoj regulativi Republike Srbije.

1. PREGLED LITERATURE

Ugovor o organizovanju putovanja rezultat je poslovne prakse i izraz razvoja specifične aktivnosti putničke agencije, odnosno organizatora putovanja, što je dovelo do toga da ugovor ima složenu sadržinu i karakteristike koje ga odvajaju od dosad poznatih, imenovanih ugovora. Specifičnost ovog ugovora proizlazi iz samog zakonskog teksta, posebno u dijelu koji se tiče odnosa između

ugovora i potvrde o putovanju.

Prilikom zaključenja ugovora o organizovanju putovanja, organizator putovanja dužan je da putniku izda potvrdu o putovanju, čija je osnovna funkcija zaštita interesa putnika, budući da on iz nje saznaje svoja prava i obaveze, i koja, prima facie, stvara oborivu pretpostavku da je precizno, tačno i istinito napisano sve ono što je u njoj navedeno. Drugim riječima, potvrda je predviđena kao sredstvo zaštite putnika, kojom se korisniku usluga garantuje mogućnost da sazna sve uslove i rokove organizovanja putovanja, i sva prava i obaveze koji proizlaze iz ugovora.³

Potvrda o putovanju, koja je predviđena samo u Zakonu o obligacionim odnosima, poseban je dokument koji sadrži niz obaveznih podataka (mjesto i datum izdavanja, oznaku organizatora putovanja, ime putnika, mjesto i datum početka i završetka putovanja, najmanji broj potrebnih putnika i sl.) i fakultativnih podataka (svi drugi podaci za koje se smatra da je korisno da budu sadržani u potvrdi). Međutim, od ovog pravila postoji izuzetak u slučaju kada je izdavanju potvrde prethodila predaja programa putovanja putniku, koji već sadrži ove podatke. Tada se potvrdom o putovanju može jednostavno uputiti na program putovanja. Na ovaj način, program putovanja (katalog ili brošura) postaje sastavni dio ugovora o organizovanju putovanja.

Kao i Šmid (1988), tvrdimo da potvrda o putovanju, kao i program putovanja, nisu ni legitimacioni papiri, ni legitimacioni znaci, niti isprave pomoću kojih bi se mogao dokazati obligacioni odnos putnika i davaoca usluge, i organizatora putovanja, jer ni potvrda ni program ne sadrže naznake o davaocu usluga ili ga označavaju samo generično i neodređeno. Takođe, potvrda o putovanju nema konstitutivan karakter i nije uslov nastanka ugovora o organizovanju putovanja, odnosno postojanje i punovažnost ugovora nisu uslovljeni postojanjem potvrde o putovanju niti njenom sadržinom.

1.1. Odnos ugovora o organizovanju putovanja i potvrde o putovanju

Za razumijevanje potvrde o putovanju, odnosno značaja i razloga njenog postojanja, bitno je utvrditi suštinu pravnog odnosa između ugovora o organizovanju putovanja i potvrde o putovanju. Ukoliko se prihvati ustaljeno mišljenje da se potvrdom o putovanju „otkriva“ i dokazuje postojanje ugovora o organizovanju putovanja, njegove sadržine, kao i ugovornog odnosa između organizatora putovanja i putnika, i dalje ostaje nejasno zašto se postojanje ugovora dokazuje potvrdom o putovanju i zbog čega sam ugovor, koji su saglasno potpisale obje ugovorne strane, ne bi mogao biti dokaz svoga postojanja. Činjenica je da je za realizaciju samog ugovora, odnosno neposredno pružanje usluge od davaoca usluge, bitno dokazati postojanje ugovornog odnosa između organizatora putovanja i putnika. Međutim, na osnovu same potvrde, putnik ne može tražiti od davaoca usluge (prevoznika, hotelijera i dr.) da mu pruži usluge koje su navedene u potvrdi (Perović, 1995), iz razloga što između putnika i davaoca usluge ne postoji nikakav ugovorni odnos budući da se putnik u ovom slučaju javlja kao korisnik usluga koje je organizator putovanja zaključenjem posebnih ugovora sa davaocima usluga⁴ pribavio za putnika. Istina je i to da je ugovor o organizovanju putovanja, koji uređuje Zakon o obligacionim odnosima, ugovor za koji se ne zahtijeva posebna forma, odnosno neformalni ugovor, i da bi se ta činjenica mogla prihvatiti kao opravdan razlog za

¹ Sastavljanje programa putovanja predstavlja bitan korak ka organizovanju samog putovanja jer su njime na jednom mjestu prikupljene usluge koje predstavljaju cjelinu i kojima se stvara interesovanje putnika za putovanje.

² Njegovo uporedno regulisanje u dva zakona bilo je predmet oštih kritika mnogih pravnih stručnjaka.

³ Razlog zbog kojeg se pravila vezana za ugovor o organizovanju putovanja i potvrdu o putovanju uglavnom tumače u korist putnika proizlazi iz potrebe da se ovom ugovornoj strani pruži adekvatna zaštita, imajući u vidu da je ona ranjivija i slabija ugovorna strana u pomenutom ugovoru.

INTRODUCTION

An organized travel represents a set of complex activities which are incorporated into one whole in accordance with the law, the contract and the good business practices of the profession. Therefore, we may state that the contract for travel in Serbian law, although mixed, in a broader sense, is singular, i.e. indivisible. There is a subjective and functional connection between all the considerations constituting an organized travel. The subjective connection refers to the contracting parties and other persons participating in the realization of the travel, and the functional one refers to the integration of numerous services with the assistance of the previous organization, all of which makes a whole including a set of complex, mutually conditioned considerations. Therefore, a contract for travel is a set of services which do not represent only a sum of individual services. This set is the result of their thoughtful arrangement and synchronized mutual relationship which finally brings us to a new essence: an organized travel, for which the traveler pays one total (lump sum) price (Blagojević and Krulj, 1980). It is precisely the basic obligation of the travel organizer to provide the agreed set of services, in the manner described in the contract for travel, travel plan¹ or the travel certificate.

Increasingly uneven case law and the diversity of general travel conditions of travel agencies, as well as the need to protect the interests of travelers through a clear definition of the rights and obligations of the contracting parties, have led to legal regulation of contracts for travel, first in Spain and then Argentina, Mexico, France and other countries (Vujsić and Mihajlović, 2014). The contract for travel was regulated for the first time in the Republic of Serbia by a legal text in 1978, namely in the Law on Contractual Relations (Law on Contractual Relations, 29/78), only to be regulated in parallel later in the Law on Consumer Protection (Law on Consumer Protection, 62/14).² Just like Radović (2013), we claim that the Law on Consumer Protection as a newer and special law has primacy in implementation in relation to the Law on Contractual Relations. The rules of the Law on Contractual Relations will be implemented in a subsidiary manner in cases which are not regulated by the Law on Consumer Protection.

In this regard, there is a problem of legislative regulation of this field because, on the one hand, the provisions of the Law on Consumer Protection as a newer law does not provide for the obligation to issue a travel certificate, while on the other hand it prescribes mandatory written form of the contract for travel which questions the justification of a travel certificate. We will dedicate the continuation of this paper to a more detailed analysis of the above in order to examine the validity of a travel certificate in the current legislation of the Republic of Serbia.

1. LITERATURE REVIEW

The contract for travel is the result of commercial practice and a manifestation of the development of a specific activity of the travel agency, i.e. the travel organizer, which led to the contract having a complex content and characteristics which divide it from previously known, identified contracts. The specificity of this contract

stems from the legal text itself, especially in the part concerning the relationship between the contract and the travel certificate.

Upon conclusion of a contract for travel, the travel organizer is required to issue the traveler a travel certificate, the main purpose of which is to protect the interests of travelers, since he/she learns his rights and obligations thereof, and which, *prima facie*, creates a rebuttable presumption that its entire contents is precisely, correctly and truthfully written. In other words, the certificate is intended as a means of traveler protection, which guarantees the service user the opportunity to learn all the conditions and deadlines for the organized travel, and all the rights and obligations arising from the contract.²

The travel certificate, which is provided for only in the Law on Contractual Relations, is a special document containing variety of mandatory (place and date of issue, designation of the travel organizer, name of the traveler, place and date of commencement and end of the trip, minimum number of required travelers, etc.) and optional data (all other data considered useful to be included in the certificate). However, there is an exception to this rule in the case when the issuance of the certificate was preceded by the handover of the travel plan to the traveler, which already contains this information. Then the travel certificate may easily be referred to the travel plan. Accordingly, the travel plan (catalog or brochure) becomes an integral part of the contract for travel.

Much like Šmid (1988), we claim that the travel certificate, as well as the travel plan, are neither identification papers, nor identification marks, nor documents which could prove the contractual relationship between the traveler and the service provider, the travel organizer, because neither the certificate nor the plan contain the indications on the service provider or just label it generically and indeterminately. Moreover, the travel certificate does not have a constitutive nature and it is not a prerequisite to draft a contract for travel, i.e. the existence and validity of the contract are not stipulated by the existence of the travel certificate or its content.

1.1. Relationship between the contract for travel and the travel certificate

Understanding the travel certificate, i.e. the meaning and reasons for its existence, is important to determine the essence of the legal relationship between the contract for travel and the travel certificate. Should the established opinion be accepted that the travel certificate “reveals” and proves the existence of the contract for travel, its content, as well as the contractual relationship between the travel organizer and the traveler, it would still remain unclear why the existence of the contract is proved by the travel certificate and why a contract signed by both parties in agreement could not be the proof of its existence. The fact of the matter is, implementation of the contract itself, i.e. direct provision of the service by the service provider, is important to prove the existence of a contractual relationship between the travel organizer and the traveler. However, based on the certificate itself, the traveler may not request from the service provider (carrier, hotelier, etc.) to provide him with the services listed in the certificate (Perović, 1995), because there is no contractual relationship between the traveler and the service provider, since, in this case, the traveler acts as a user of services which the travel organizer has acquired for the

¹ Compilation of a travel plan represents an important step toward organization of the travel itself, because it gathers services representing a whole in one place, thus creating travelers' interest to travel.

² Its comparative regulation in the two laws has been the subject of sharp criticism by many legal experts.

³ The reason why the rules pertaining to the contract for travel and the travel certificate are mainly interpreted in favor of the traveler stems from the need to provide this contracting party with adequate protection, bearing in mind that it is a more vulnerable and inferior contracting party in the said contract.

postojanje potvrde o putovanju. Međutim, pomenuta opravdanost imala bi smisla samo ukoliko bi se zaštita putnika kod ugovora o organizovanju putovanja ostvarivala isključivo prema odredbama Zakona o obligacionim odnosima, ali to nije slučaj u domaćem zakonodavstvu. Ako se prisjetimo ranije zauzetog stanovišta, prema kome Zakon o zaštiti potrošača, kao noviji i poseban zakon, ima primat u primjeni u odnosu na Zakon o obligacionim odnosima, i tome dodamo formalne uslove za zaključenje ugovora o organizovanju putovanju koji se u Zakonu o zaštiti potrošača propisuju (ugovor o organizovanju putovanja mora biti u pisanoj formi), ponovo se nameće potreba postavljanja pitanja opravdanosti postojanja potvrde o putovanju. Čak i sam Perović (1995) tvrdi da u opštim uslovima putovanja, po pravilu, organizator putovanja ne pominje izdavanje potvrde o putovanju, već sam ugovor često „shvata“ kao potvrdu o putovanju. Kada se tome doda nepredviđanje potvrde o putovanju u Zakonu o zaštiti potrošača, te njeno neregulisanje u većini drugih, uređenijih zakonodavstava, potvrđuje se opravdanost postavljanja našeg pitanja.

2. REZULTATI I DISKUSIJA

Potvrda o putovanju je poseban dokument kojim se, između ostalog, predviđa i minimalan broj putnika koji je neophodno sakupiti kako bi se ugovor o organizovanju putovanja uopšte mogao realizovati. S tim u vezi, važno je naglasiti da minimalan broj putnika, kao jedan od obaveznih elemenata potvrde o putovanju, predstavlja osnov za formiranje paušalne cijene putovanja.

2.1. Putnikova obaveza plaćanja paušalne cijene putovanja

Osnovna obaveza putnika u ugovoru o organizovanju putovanja jeste plaćanje ugovorene cijene za putovanje na način i u vrijeme kako je to ugovoreno odnosno uobičajeno. Međutim, putnik, po pravilu, kupuje skup usluga, a ne pojedinačnu uslugu, zbog čega plaća ukupnu (paušalnu) cijenu. Preciznije, ugovorena cijena u ugovoru o organizovanju putovanja je fiksna (paušalna) cijena jer u sebi obuhvata ne samo nagradu organizatoru putovanja za realizaciju ugovorenog putovanja u skladu sa ugovorom, potvrdom o putovanju i programom putovanja, nego i cijenu usluge trećih lica koja organizator putovanja angažuje u cilju organizovanja putovanja (Veselinović i Ignjatijević, 2013). Dakle, tom cijenom obuhvaćene su vrijednosti svih usluga (prevoz, smještaj, provizije koje se plaćaju putničkim agencijama, troškovi administracije, dobit organizatora putovanja), pri čemu putnik najčešće i ne zna koji se dijelovi cijene odnose na koje usluge (Vujisić i Mićović, 2016).

2.2. Vrijeme dospjeća putnikove obaveze za plaćanje paušalne cijene putovanja

Kada je u pitanju vrijeme dospelosti putnikove obaveze za isplatu cijene, u Zakonu o obligacionim odnosima ostavljaju se dvije mogućnosti. Ukoliko je u samom ugovoru o organizovanju putovanja regulisano vrijeme dospjeća navedene putnikove obaveze, onda je relevantno ono što je njime propisano. Međutim, ukoliko to nije slučaj, primjenjuje se takozvano dopunsko pravno pravilo, gdje će primat imati vrijeme predviđeno opštim uslovima putovanja organizatora putovanja. Budući da putnici često ne raspolažu potrebnim finansijskim sredstvima, u savremenoj poslovnoj praksi se dešava da organizatori putovanja, u cilju privlačenja što većeg

broja putnika, dozvoljavaju različite oblike odloživog plaćanja. To uključuje i plaćanje ne samo poslije zaključenja ugovora već i poslije realizacije putovanja. Na taj način, odnos između organizatora putovanja i putnika dobija i obilježja ugovora o kreditu (Vujisić i Mićović, 2016). Ipak, u većini slučajeva, putnik je dužan da dio cijene (20%–50%) plati prilikom zaključenja ugovora. Razlog za to je obaveza organizatora putovanja da davaocima usluga s kojima je zaključio ugovore plati dio cijene, ili čak cjelokupan iznos, zbog čega je neophodno da se on avansno namiri iz novčanih sredstava putnika. Ukoliko putnik ne ispunji ovu obavezu, organizator putovanja će imati pravo da traži njeno ispunjenje ili raskid ugovora, kao i naknadu štete (Vujisić i Mićović, 2016).

ZAKLJUČAK

Kod potvrde o putovanju i, uopšte, ugovora o organizovanju putovanja, primjetni su razni problemi u zakonodavnom regulisanju. Kao jedan od najizrazitijih javlja se problem nedovoljne jasnosti, nepovezanosti i neujednačenosti pojedinih zakonskih rješenja, te postojanje multinormativnog pristupa koji je zastupljen u više relevantnih pravnih propisa koji se paralelno primjenjuju, čime se samo dodatno usložnjava pozitivnopravna regulativa. Iz takve pravne regulative proizlaze, u najmanju ruku rečeno, „nespretna“ zakonska rješenja. Pri dokazivanju navedene tvrdnje dovoljno je da se osvrnemo na komplikacije koje proizlaze iz uporednog regulisanja instituta potvrde o putovanju u dva različita pravna izvora (Zakon o obligacionim odnosima i Zakon o zaštiti potrošača). Naime, paralelno regulisanje potvrde o putovanju u dva zakonska teksta za posljedicu je imalo da njen značaj i razlog postojanja budu dovedeni u pitanje. I pored obaveze poštovanja formalnih uslova za zaključenje ugovora koji su predviđeni u Zakonu o zaštiti potrošača (od kojih je, svakako, najbitniji da se ugovor sačinjava u pismenoj formi) zbog paralelne primjene dva zakona (Zakona o obligacionim odnosima i Zakona o zaštiti potrošača) te načina na koji je regulisana predmetna oblast, ugovor o organizovanju putovanja se i dalje u praksi zaključuje isključivo uz izdavanje potvrde o putovanju. Iako se tom radnjom nastoje zaštititi interesi putnika, stvara se kontraefekat, budući da je njeno postojanje sasvim nepotrebno iz razloga što putnik dobija već sačinjen ugovor sa svim onim podacima koje sadrži potvrda o putovanju. Zbog toga je postojanje potvrde o putovanju kod ugovora o organizovanju putovanja ne samo upitno nego je njeno i dalje prisustvo kao relikv prošlog vremena kontraproduktivno, kako za organizatora putovanja, kome se dodatno usložnjavaju obaveze oko organizovanja putovanja, tako i za putnika, koji dobija jedan suvišan dokument koji je u novoj zakonodavnoj regulativi izgubio svoju svrhu postojanja. Zbog svega navedenog, smatramo da je neophodno učiniti izmjene u Zakonu o obligacionim odnosima i ukinuti obavezu izdavanja potvrde o putovanju od strane organizatora putovanja prilikom zaključenja ugovora o organizovanju putovanja.

IZVORI

1. Blagojević, B., i Krulj, V. (1980). *Komentar Zakona o obligacionim odnosima*, Savremena administracija, Beograd.

⁴ Primjera radi, organizator putovanja zaključuje sa davaocem usluga ugovor o alotmanu, ugovor o ugostiteljskim uslugama, ugovor o usluživanju hrane i točenju pića i sl., bez kojih, po pravilu, ugovor o organizovanju putovanja ne bi mogao biti sproveden.

traveler by concluding special contracts with the service providers⁴. Also, the truth is that the contract for travel, which is governed by the Law on Contractual Relations, is a contract which requires no particular form, i.e. an informal contract, and that this fact could be accepted as a justifiable reason for the existence of a travel certificate. However, this justification would make sense only if the protection of travelers in the contract for travel would be realized exclusively according to the provisions of the Law on Contractual Relations, but that is not the case in the domestic legislation.

If we recall earlier the position taken according to which the Law on Consumer Protection as a newer and special law has primacy in implementation in relation to the Law on Contractual Relations, and add to that the formal conditions for conclusion of a contract for travel provided for by the Law on Consumer Protection (the contract for travel must be in writing), there is still necessity to raise the question of justifying the travel certificate. Even Perović (1995) himself claims that, in the general travel conditions, as a rule, the travel organizer does not mention the issuance of a travel certificate, but often “deems” the contract itself as a travel certificate. The justification to raise our question is confirmed when we add the failure to foresee the travel certificate in the Law on Consumer Protection and its non-regulation in most other, more regulated legislations.

2. RESULTS AND DISCUSSION

The travel certificate is a special document which, among other things, envisages the minimum number of travelers which should be gathered in order for the contract for travel to be implemented in the first place. In this regard, it is important to emphasize that the minimum number of travelers, as one of the mandatory elements of the travel certificate, represents the basis for the formation of lump sum travel price.

2.1. Requirement of the traveler to pay for the lump sum travel price

The basic requirement of the traveler in the contract for travel is to pay the agreed price for the travel in the manner and at the period agreed or which is customary. However, the traveler, as a rule, purchases a set of services, and not an individual service, which is why he pays the total (lump sum) price. More precisely, the agreed price in the contract for travel is a fixed (lump sum) price because it includes not only the reward to the travel organizer for the realization of the agreed travel in accordance with the contract, travel certificate and travel plan, but also the price of third party services hired by the travel organizer, in order to organize the travel (Veselinović and Ignjatijević, 2013). Therefore, this price includes the values of all services (transportation, accommodation, commissions paid to travel agencies, administration costs, profits of travel organizers), where the traveler is usually unaware which parts of the price refer to which services (Vujisić and Mićović, 2016).

2.2. The maturity of the traveler's requirement to pay the lump sum travel price

Concerning the maturity of the traveler's requirement to make the payment, the Law on Contractual Relations leaves two possibilities. If the contract for travel itself regulates the maturity of the

stated traveler's requirement, then what the contract prescribes is actually relevant. However, if this is not the case, the so-called supplementary legal rule applies, where the period provided for in the general travel conditions of the travel organizer will take precedence. Since the travelers often do not have the necessary financial resources, what happens in modern commercial practice is that the travel organizers, in order to attract as many travelers as possible, allow various forms of deferred payment. This includes payment not only following the conclusion of the contract but also after the completion of the travel. Thereby, the relationship between the travel organizer and the traveler attains the characteristics of a loan agreement (Vujisić and Mićović, 2016). Nevertheless, in most cases, the traveler is obliged to pay part of the price (20-50%) upon conclusion of the contract. The reason for this is the requirement of the travel organizer to pay part of the price, or even the entire amount, to the service providers with whom he has concluded contracts, which is why it is necessary for him to be paid in advance from the travelers' funds. Should the traveler fail to fulfill this requirement, the travel organizer will be entitled to request its fulfillment or termination of the contract, as well as compensation for damages (Vujisić and Mićović, 2016).

CONCLUSION

Various problems in legislative regulation are noticeable in regards to the travel certificates and contracts for travel in general. Among the most distinctive problems there are insufficient clarity, incoherence and inconsistency of individual legal solutions, and the existence of a multi-normative approach which is represented in several relevant legal regulations implemented in parallel, which only further complicates the positive legal regulations. Such legal regulations render, to say the least, “awkward” legal solutions. In proving this claim, it is sufficient to refer to the complications arising from the comparative regulation of the institution of the travel certificate in two different legal sources (the Law on Contractual Relations and the Law on Consumer Protection). In particular, the parallel regulation of the travel certificate in the two legal texts resulted in its significance and the reason for its existence being questioned. Despite the requirement to comply with the formal conditions to conclude contracts provided for in the Law on Consumer Protection (of which the most important is that the contract is made in writing) due to the parallel implementation of the two laws (the Law on Contractual Relations and the Law on Consumer Protection), as well as the manner in which the subject field is regulated, the contract for travel is still concluded in practice exclusively with the issuance of the travel certificate. Although this action seeks to protect the interests of travelers, a counter-effect is created, since its existence is completely unnecessary due to the fact that the traveler receives an already made contract with all the information contained in the travel certificate. Therefore, the existence of a travel certificate in a contract for travel is not only questionable, but its continued presence as a relic of the past is counterproductive, both for the travel organizer whose requirements regarding the organized travel are further complicated, as well as for the traveler who receives one redundant document which has lost its purpose in the new legislation. Given all the above, we believe it is necessary to make

⁴ For example, the travel organizer concludes an allotment contract with the service provider, a contract for catering services, a contract for serving food and drinks, etc. without which, as a rule, the contract for travel could not be implemented. For example, the travel organizer concludes an allotment contract with the service provider, a contract for catering services, a contract for serving food and drinks, etc. without which, as a rule, the contract for travel could not be implemented.

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the necessary amendments to the Law on Contractual Relations and repeal the requirement to issue a travel certificate by the travel organizer upon conclusion of the contract for travel.

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UDK 336.763.33:330.322(497.6 RS)

PREGLEDNI RAD

DOI: 10.7251/FIN2001055G

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Analiza prinosa ulaganja u obveznice na tržištu kapitala Republike Srpske

Yield analysis of investments in bonds in the capital market of the Republic of Srpska

Rezime

Tržišta obveznica nekada su bila izuzetno mirno područje za investitore koji nisu skloni riziku i koji žele sigurne investicije sa skromnim, ali sigurnim prinosisima. Međutim, danas ova tržišta i nisu toliko mirna područja za investitore. U prilog tome govori i činjenica da je godišnji obim trgovanja državnim obveznicama u SAD više od deset puta veći od ukupnog iznosa državnog duga.

Aktivnije trgovanje obveznicama na tržištima kapitala nije jedini razlog što je analiza prinosa ulaganja u obveznice postala zanimljivija za investitore, nego i činjenica da ova tržišta više nisu u potpunosti oslobođena rizika. Nakon globalne ekonomske i finansijske krize 2008. godine, volatilnost prinosa prilikom ulaganja u obveznice izuzetno je visoka, a to znači da investitori imaju veliku šansu da ostvare dobit, ali i gubitke. Kolebljivost prinosa prilikom ulaganja u obveznice danas je mnogo veća nego što bi neko mogao i da zamisli 1965. godine.

Stoga, u svrhu sveobuhvatne elaboracije, uradili smo analizu prinosa prilikom ulaganja u obveznice na tržištu kapitala Republike Srpske. Shodno tome, sigurni smo da će tvrdnje, činjenice i dokazi prikazani u ovom radu biti od koristi kako studentima, akademskim istraživačima, teoretičarima, tako i investitorima na prostoru Republike Srpske.

Ključne riječi: državne obveznice, tekući prinos, prinos do dospeljeća i tržište kapitala.

Abstract

Bond markets used to be an extremely quiet area for risk-averse investors who want safe investments with modest but safe returns. However, today these markets are not so quiet areas for investors. This is supported by the fact that the annual volume of trading in government bonds in the United States is more than ten times higher than the total amount of government debt.

More active bond trading in capital markets is not the only reason why the analysis of bond investment returns has become more interesting for investors, but also the fact that these markets are no longer completely risk-free. After the global economic and financial crisis in 2008, the yield volatility when investing in bonds is extremely high, which means that investors have a great chance to make a profit, but also a loss. The yield volatility when investing in bonds is much greater today than one might have imagined in 1965.

Therefore, for the purpose of a comprehensive elaboration, we have done a yield analysis when investing in bonds in the capital market of Republic of Srpska. Accordingly, we are confident that the claims, facts and evidence presented in this paper will be of benefit to students, academic researchers, theorists, and investors in the Republic of Srpska.

Keywords: government bonds, current yield, yield to maturity and capital market.

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UVOD

Investicije u nove tehnologije, novo postrojenje, opremu i slično često zahtijevaju mnogo novca, koje entitet treba da obezbijedi. U nekim slučajevima, može se uštedjeti novac od zarada iz prethodnog perioda da bi se izvršila dodatna ulaganja, ali vrlo često se on mora nabaviti od investitora, bilo da se radi o institucionalnom ili individualnom investitoru. Generalno posmatrajući, novac koji je neophodan za finansiranje projekata entitet može da obezbijedi na dva načina: pozajmljivanjem gotovine ili emitovanjem novih akcija. Naime, investicije u nove tehnologije, postrojenje, građevinske objekte, opremu i slično imaju dugoročan karakter (dugoročno vezana imovina), te shodno važećim pravilima finansiranja, a da se ne bi ugrozila finansijska stabilnost entiteta, zahtijevaju i dugoročne izvore finansiranja. Kako bi obezbijedila dugoročne izvore finansiranja za dugoročno vezanu imovinu, entiteti često vrše emisiju obveznica sa dužim rokom dospeljeća, ne ugrožavajući time finansijsku stabilnost u dugom roku.

Naime, ako je entitetu potreban dodatni izvor finansiranja na kratak rok, on ga može pozajmiti od banke, ali ako ima potrebu za dugoročnom investicijom, obično se emituju obveznice, kao povoljniji izvor finansiranja od bankarskih kredita. Kada entiteti vrše emisiju obveznica, oni su dužni plaćati fiksnu kamatu do roka dospeljeća, a na kraju perioda izvršiti i otplatu samog duga (nominalnu vrijednost obveznice). Na taj način, određivanje vrijednosti obveznice uključuje jednostavan obračun vremenske vrijednosti novca.

Emisiju obveznica ne vrše samo entiteti, već prikupljati novčana sredstva, koja su neophodna za finansiranje kapitalnih projekata, putem emisije obveznica, mogu i centralna i lokalne vlasti. Razlika između obveznica koje emituju entiteti i centralne ili lokalne vlasti jeste prevashodno u visini rizika, jer u praksi uvijek postoji odgovarajući nivo opasnosti da neki entitet neće biti u mogućnosti da isplati obveznice vlasnicima. Međutim, investitori koji kupuju obveznice koje emituje zvanično ministarstvo finansija države ili neka lokalna zajednica mogu biti mnogo sigurniji da će oni izvršiti obećano plaćanje.

Iako je tržište kapitala Republike Srpske relativno malo u odnosu na razvijena finansijska tržišta, može se reći da ono ipak zauzima svoje mjesto u poslovanju i ulaganju entiteta sa ovog podneblja. Stoga, u okviru empirijskog dijela rada i istraživanja tržišta kapitala Republike Srpske, izvršena je analiza:

1. prinosa prilikom ulaganja u obveznice,
2. načina određivanja cijena obveznica zavisno od kamatnih stopa,
3. uticaja promjene kamatnih stopa na cijene obveznica.

1. METODE

Da bi se adekvatno izvršila analiza prinosa prilikom ulaganja u obveznice na tržištu kapitala Republike Srpske, u okviru teorijskog dijela istraživanja sagledani su relevantni stavovi autora iz domaće i strane literature. Tom prilikom prikupljeni su podaci o stanju na razvijenim finansijskim tržištima, kao i o mogućnostima primjene novih saznanja na finansijsko tržište u Republici Srpskoj.

Zatim, u empirijskom dijelu rada su metodološki prikupljeni, obrađeni i analizirani primarni i sekundarni podaci sa finansijskog tržišta u Republici Srpskoj. Kao ulazne informacije korišteni su

podaci o kretanju Indeksa obveznica Republike Srpske (u nastavku teksta: ORS). Naime, ORS predstavlja ponderisani cjenovni indeks koji mjeri ukupne performanse, a metodološki je definisan u maju 2011. godine. Početna vrijednost ovog indeksa iznosila je 1.000 indeksnih poena, a u njegov sastav ulaze obveznice čije dospeljeće nije u narednih 18 mjeseci, u odnosu na kraj mjeseca revizije indeksa. Pored njih, u sastav ORS-a ulaze i obveznice kod kojih je odnos broja dana kada je obveznicom trgovano i broja mogućih dana trgovanja najmanje 30%, posmatrajući šestomjesečni period koji se završava posljednjeg dana mjeseca, tj. koji prethodi reviziji indeksa. Prema zvaničnim podacima Banjalučke berze, indeks ORS na dan 31. 5. 2020. godine sačinjavaju obveznice devet emitenata, koji ispunjavaju opšte uslove uvrštavanja. Opšti uslovi, koje svaki emitent treba kumulativno da ispunjava kako bi obveznice bile uključene u ORS jesu sljedeći (Banjalučka berza, 2020):

- a) emitent obveznice je Republika Srpska,
- b) obveznica je uvrštena na službeno berzansko tržište Banjalučke berze,
- c) nominalna vrijednost emisije veća je ili jednaka 10.000.000 KM,
- d) obveznica ima fiksnu nominalnu kamatnu stopu.

Ono što se može zaključiti jeste da su opšti uslovi uvrštavanja obveznica u indeks ORS utvrđeni tako da indeks u najvećoj mjeri pokazuje ukupno kretanje prinosa obveznica Republike Srpske.

Pored toga, u svrhu kompletne i detaljne analize prinosa prilikom ulaganja u obveznice na tržištu kapitala Republike Srpske, izvršen je proračun kuponskog prinosa, tekućeg prinosa i prinosa do dospeljeća za svaku obveznicu koja ulazi u sastav ORS-a. Na taj način, u procesu naučnog istraživanja, a da bi se mogli upoređivati dobijeni rezultati analize, korištene su metode komparacije i klasifikacije, te metode analize i sinteze.

Na kraju, u okviru ovog rada neophodno je metodološki utvrditi prinos prilikom ulaganja u obveznice na tržištu kapitala Republike Srpske, odnosno tražiti odgovor na pitanje na kom nivou efikasnosti funkcioniše tržište Banjalučke berze.

2. PREGLED LITERATURE

2.1. Pojam i vrste obveznica

Hartije od vrijednosti, u osnovi, predstavljaju dokument koji dokazuje neki dug ili vlasništvo, tj. određena potraživanja (Šoškić, 2006). Prema tome, hartije od vrijednosti mogu se podijeliti na dužničke i vlasničke. Obveznice su dužnički finansijski instrument, kojim se emitent kao dužnik (zajmoprimac) obavezuje da će vratiti zajmodavcu (investitoru) pozajmljeni novac i platiti kamatu za određeni vremenski period (Živković i Šoškić, 2007, str. 241). Koriste se kao pogodna forma da se dugoročne potrebe za kapitalom razbiju na manje iznose, što omogućava da se njihovom prodajom prikupi znatno veća suma novca nego što bi se moglo dobiti iz samo jednog kreditnog izvora (Ivanišević, 2012, str. 20). To znači da je, u skladu sa Ugovorom o pozajmljenim sredstvima, dužnik (emitent obveznice) obavezan da vlasniku obveznice isplaćuje dogovorene iznose na određene datume. Tako, na primjer, kuponska obveznica obavezuje emitenta da vlasniku isplaćuje polugodišnju ili godišnju kamatu, a na dan njenog dospeljeća isplati i nominalnu vrijednost.¹ Te isplate, koje je emitent obveznice dužan da isplaćuje vlasniku, nazivaju

¹ U finansijskim sistemima, pored kuponskih obveznica, postoje i instrumenti sa nultim kuponom (engl. Zero Coupon), poznatiji pod nazivom „diskontne obveznice“, kod kojih se i glavnica i kamata isplaćuju na dan dospeljeća. Instrumente sa nultim kuponom investitori kupuju po cijeni koja je manja od nominalne cijene obveznice, a na dan dospeljeća se isplaćuje u nominalnom iznosu.

INTRODUCTION

Investments in new technologies, new plant, equipment and the like, often require a lot of money, which the entity needs to provide. In some cases, it is possible to save money from earnings from the previous period in order to make additional investments, but very often they must be obtained from the investor, whether it is an institutional or individual investor. In general, the money needed to finance projects can be provided by the entity in two ways: by borrowing cash or by issuing new shares. Namely, investments in new technologies, plant, construction facilities, equipment, etc. have a long-term character (long-term tied assets), and in accordance with the valid financing rules, and in order not to jeopardize the financial stability of the entity, require long-term sources of financing. In order to provide long-term financing for long-term tied assets, entities often issue bonds with longer maturities, without compromising long-term financial stability.

Namely, if the entity needs an additional source of the short-term financing, it can take a loan from a bank, but if it wants to make a long-term investment, bonds are usually issued as a more favorable source of financing than bank loans. When the entities issue bonds, they are obliged to pay a fixed interest until the maturity date, and at the end of the period to repay the debt itself (nominal value of the bond). Thus, determining the value of a bond involves a simple calculation of the time value of money.

The issue of bonds is not only done by the entities, but also by the central and local authorities, which can be used to raise funds, which are necessary for financing capital projects. The difference between bonds issued by entities and central or local governments differ primarily in the amount of risk, because in practice there is always an appropriate level of risk that an entity will not be able to pay the bonds to the owners. However, investors who buy bonds issued by the official Ministry of Finance of the state or a local community can be much more certain that they will make the promised payment.

Although the capital market of the Republic of Srpska is relatively small compared to the developed financial markets in other countries in the world, it can be said that it still takes its place in the business and investment of entities from this region. Therefore, within the empirical part of this paper and the research of the capital market of the Republic of Srpska, the following was performed:

1. Yield analysis when investing in bonds,
2. Manner of determining bond prices depending on interest rates,
3. The impact of interest rate changes on bond prices.

1. METHODS

In order to adequately analyze the yield when investing in bonds in the capital market of the Republic of Srpska, within the theoretical part of the research, the relevant views of authors from domestic and foreign literature were considered. On that occasion, data were collected on the situation in developed financial markets, as well as on the possibilities of applying new knowledge to the financial market in the Republic of Srpska.

Then, in the empirical part of the paper, primary and secondary data from the financial market in the Republic of Srpska are methodologically collected, processed and analyzed. Data on the movement of the Index of the Republic of Srpska Bonds (hereinafter: ORS) were used as input information. Namely, ORS is a weighted price

index that measures overall performance, and was methodologically defined in May 2011. The initial value of this index was 1,000 index points, and it includes bonds whose maturity is not in the next 18 months, compared to the end of the month of revision of the index. In addition, the ORS also includes bonds for which the ratio of the number of days when the bond was traded and the number of possible trading days is at least 30%, observing the six-month period ending on the last day of the month, ie. which precedes the revision of the index. According to the official data of the Banja Luka Stock Exchange, the ORS index as of May 31, 2020 consists of bonds of nine issuers, which meet the general listing conditions. The general conditions that each issuer must meet cumulatively in order for bonds to be included in the ORS are the following (Banja Luka Stock Exchange, 2020):

- a) The issuer of the bond is the Republic of Srpska,
- b) The bond is listed on the official stock exchange market of the Banja Luka Stock Exchange,
- c) Nominal value of the issue greater than or equal to 10,000,000 KM,
- d) The bond has a fixed nominal interest rate.

What can be concluded is that the general conditions for the inclusion of bonds in the ORS index are determined so that the index largely shows the overall movement of the Republic of Srpska bonds yield.

In addition, for the purpose of a complete and detailed yield analysis when investing in bonds in the capital market of the Republic of Srpska, the calculation of coupon yield, current yield and yield to maturity was performed for each bond that is part of the ORS. In that way, in the process of scientific research, and in order to be able to compare the obtained results of the analysis, the methods of comparison and classification were used, then the methods of analysis and synthesis.

Finally, within this paper, it is necessary to methodologically determine the yield when investing in bonds in the capital market of the Republic of Srpska, ie to seek an answer to the question of the level of efficiency of the Banja Luka Stock Exchange market.

2. LITERATURE OVERVIEW

2.1. The concept and types of bonds

Securities are basically a document that proves a debt or ownership, ie. certain receivables (Soskic, 2006). Therefore, securities can be divided into debt and equity. Bonds are a debt financial instrument, by which the issuer as a debtor (borrower) undertakes to return the borrowed money to the lender (investor) and pay interest for a certain period of time (Zivkovic and Soskic, 2007, p. 241). They are used as a convenient form to break down long-term capital needs into smaller amounts, which enables their sale to raise a significantly larger amount of money than could be obtained from just one loan source (Ivanisevic, 20 p. 2012). This means that in accordance with the loan agreement, the debtor (bond issuer) is obliged to pay the agreed amounts to the bondholder on certain dates. Thus, for example, a coupon bond obliges the issuer to pay the owner a semi-annual or annual interest, and on the day of its maturity to pay the nominal value. These payments, which the issuer of the bond is obliged to pay to the owner are called coupon payments, because before the computer age, investors literally cut the coupon as part of the bond and sent it to the issuer to collect interest. In addition, the coupon rate of the bond is used to

se kuponskim isplatama, jer su prije kompjuterske ere investitori bukvalno sjekli kupon kao dio obveznice i slali ga izdavaocu da bi naplatili kamatu. Pored toga, kuponska stopa obveznice služi i za određivanje iznosa kamate, jer je isplata godišnje kamate jednaka prozvodu kuponske stope i nominalne vrijednosti obveznice. Prema tome, u formalnom smislu, obveznica sadrži tri bitna elementa koji su i sastavni dio ugovora između emitenta i vlasnika obveznice, a to su (Živković i Šoškić, 2007, str. 241. i 242):

1. Rok dospeljeća obveznice (engl. Maturity Date) označava broj godišnjih perioda na kraju kojih emitent instrumenta treba da izvrši obećanu isplatu glavnice i pripadajuće kamate. Rok dospeljeća uslovljava novčani tok instrumenta, njen prinos do dospeljeća i cijenu instrumenta.
2. Nominalna ili kuponska kamatna stopa. Kamata koju dužnik plaća imaoocu obveznice u vrijeme perioda dospeljeća (životnog vijeka obveznice) naziva se kupon (engl. Coupon), a kamatna stopa u periodu dospeljeća obveznice naziva se kuponska stopa (engl. Coupon Rate) ili nominalna kamatna stopa.
3. Nominalni iznos duga ili glavnica (engl. Principal Value) jeste nominalni iznos pozajmljene sume.

Međutim, pored prethodno navedenih bitnih elemenata, koji su ključalni prilikom donošenja odluke o emitovanju, ali i ulaganju u obaveznice, postoji i čitav niz drugih podataka koji se nalaze na njima. Ti podaci zavise od pozitivnih zakonskih propisa koji definišu ovu oblast u određenoj državi i obavezujući su za emitenta prilikom emisije. Tako, na obveznicama se mogu naći informacije o emitentu, vrsti obveznice, tipu emisije, rednom broju i datumu emisije i sl. Pored toga, treba naglasiti da se oni mogu razlikovati i od vrste ili kvalifikacije obveznica, jer neki od podataka koji su značajni za jednu kategoriju na drugoj se ne moraju nalaziti. Na taj način, da bi se mogla uočiti razlika između njih, one se moraju i klasifikovati, a prema osnovnim kriterijumima njihova podjela je sljedeća (Živković i Šoškić, 2007, str. 252–264):

1. prema ročnosti, obveznice se mogu klasifikovati na kratkoročne (do jedne godine), srednjoročne (od jedne do pet godina) i dugoročne (preko pet godina);
2. prema tipu amortizacije, obveznice se klasifikuju na kuponske, anuitetne i diskontne;
3. prema denominaciji, obveznice se mogu klasifikovati na nacionalnu valutu, nenacionalnu valutu (Eurobonds) i dualne;
4. prema emitentu, obveznice se klasifikuju na obveznice koje emituje država, državne agencije, lokalni organi vlasti, banke i korporacije (npr. konvertibilne obveznice).

Dakle, ako se sagledaju prethodne klasifikacije, onda se može uočiti da će se, na primjer, razlikovati podaci kod srednjoročnih kuponskih obveznica, izdatih u nacionalnoj valuti, emitovanih od strane države, u odnosu na srednjoročne anuitetne obveznice, izdate u nenacionalnoj valuti, a emitovane od strane banke, jer svaka od njih zavisi od vrste i obaveza koje emitent ima prema pozitivnim zakonskim propisima koji obavezuju njihovog izdavaoca.

2.2. Prinosi prilikom ulaganja u obveznice

Obveznice se mogu posmatrati kao hartije od vrijednosti koje omogućavaju emitentima da prikupe sredstva za finansiranje svojih potreba na kreditnoj osnovi, a koje investitorima obezbjeđuju isplatu kamate i glavnice po unaprijed definisanom redosljedju, u određenom vremenu (Erić, 2003, str. 275). U procesu pribavljanja kapitala, putem emisije i prodaje obveznica, javljaju se dva toka gotovine, a to su neto primanja gotovine od prodaje obveznica, s jedne strane,

te izdavanje gotovine po osnovu kamate, ali i glavnice nakon isteka roka dospeljeća duga, s druge strane (Mikerević, 2018, str. 204). Međutim, kao i druge hartije od vrijednosti, i obveznica svom vlasniku (imaocu obveznice) obezbjeđuje odgovarajući prinos. Shodno tome, prilikom ulaganja u obveznice, svaki investitor mora napraviti razliku između tri vrste prinosa, a to su (Radivojac, 2013, str. 75):

1. nominalni (kuponski) prinos,
2. tekući prinos i
3. prinos do dospeljeća.

Nominalni ili kuponski prinos je prinos koji obveznica obezbjeđuje na osnovu njenog posjedovanja u skladu sa iznosom kuponske stope. On predstavlja iznos godišnje plaćene kamate podijeljen sa nominalnom vrijednošću obveznice (Van Horne, Wachowicz, 2002, str. 69). Kao takav, kuponski prinos se ne mijenja u periodu dospeljeća obveznice i nakon njenog emitovanja nije osjetljiv na tržišne faktore. Prema tome, za investitore, nominalni prinos ima relativno malu analitičku i praktičnu vrijednost.

Tekući prinos je jedna od mjera stvarnog prinosa za investitore prilikom ulaganja u obveznice, a dobije se kao količnik kamatnog prihoda i cijene po kojoj je investitor kupio obveznicu (Brealey, Myers, Marcus, 2007, str. 123). Matematički, on se može prikazati i na sljedeći način:

$$r_t = \frac{C}{P},$$

gdje je: r_t – tekući prinos obveznice, C – vrijednost kamatnog kupona za dati period, i P – cijena obveznice.

Uvidom u prethodnu formulu nameće se zaključak da tekući prinos prilikom ulaganja u obveznicu zavisi od cijene obveznice, koja se određuje na tržištu, i vrijednosti kamatnog kupona. U zavisnosti od tržišnih kretanja, cijena obveznice se mijenja konačno mnogo puta, što znači da je, za razliku od nominalnog prinosa, tekući prinos visoko osjetljiv na tržišne promjene. Naime, on je veći od nominalnog ako je cijena obveznice manja od nominalne vrijednosti (obveznica je kupljena sa diskontom), a ako je njena cijena veća od nominalne vrijednosti, tekući prinos je manji od nominalnog (obveznica je kupljena sa premijom). Shodno tome, može se konstatovati da je tekući prinos izuzetno osjetljiv na promjene tržišne cijene, te je zbog toga veoma dobar indikator trenutne rentabilnosti ulaganja u obveznicu. Sa druge strane, glavni nedostatak tekućeg prinosa je u tome da od svih promjena na tržištu koje utiču na prinos obveznice, on prepoznaje samo jednu, a to je cijena obveznice.

Stoga, prilikom ulaganja u obveznice, investitoru neće biti saopštena obećana stopa prinosa. Na taj način, svaki investitor, da bi donio kvalitetnu odluku prilikom ulaganja u obveznicu, mora izračunati prinos koji nudi obveznica na osnovu podatka o cijeni, datumu dospeljeća i kuponskim isplatama. Shodno tome, investitor treba da definiše koja je to stopa prinosa koja izjednačava sadašnju vrijednost budućih isplata obveznice sa njenom tržišnom cijenom. Diskontna stopa koja izjednačava sadašnju vrijednost gotovinskog toka obveznice (engl. cash flow) i cijenu obveznice naziva se prinos do dospeljeća, a on se matematički može prikazati na sljedeći način (Urošević, 2009, str. 64):

$$P = \frac{C}{1+r} + \frac{C}{(1+r)^2} + \dots + \frac{C}{(1+r)^n} + \frac{N}{(1+r)^n}$$

odnosno u konačnom obliku

$$\sum_{i=1}^{i=\infty} \frac{C}{(1+r)^i} + \frac{N}{(1+r)^n}$$

determine the amount of interest, because the payment of annual interest is equal to the product of the coupon rate and the nominal value of the bond. Therefore, in the formal sense, the bond contains three essential elements that are an integral part of the agreement between the issuer and the owner of the bond, namely (Zivkovic and Soskic, 2007, pp. 241 and 242):

1. The Maturity Date of a bond is the number of annual periods at the end of which the issuer of the instrument is required to make the promised principal and interest payments. The maturity date determines the cash flow of the instrument, its yield to maturity and the price of the instrument.
2. Nominal or Coupon Rate. The interest paid by the debtor to the bondholder during the maturity of the bond is called the coupon, and the interest rate during the maturity of the bond is called the coupon rate or nominal interest rate.
3. The nominal amount of debt or Principal Value is the nominal amount of the borrowed amount.

However, in addition to the previously mentioned important elements, which are crucial when making a decision on issuing, but also investing in bonds, there is a whole range of other data that are on them. These data depend on the positive legal regulations that define this area in a particular country and are binding on the issuer during the issue. Thus, information on the issuer, type of bond, type of issue, ordinal number and date of issue, etc. can be found on the bonds. In addition, it should be emphasized that they may also differ in the type or qualification of the bonds, as some of the data relevant to one category may not be available on another. In this way, in order to be able to notice the difference between them, they must be classified, and according to the basic criteria, their classification is as follows (Zivkovic and Soskic, 2007, pp. 252-264):

1. According to maturity. According to maturity, bonds can be classified into: short-term (up to one year), medium-term (from one to five years) and long-term (over five years).
2. According to the type of depreciation. According to the type of depreciation, bonds are classified into: coupon, annuity and discount.
3. By denomination: By denomination, bonds can be classified into: national currency, non-national currency (Eurobonds) and dual.
4. According to the issuer. According to the issuer, bonds are classified into bonds issued by: the state, government agencies, local authorities, banks and corporations (eg convertible bonds).

Thus, if we look at the previous classifications, then it can be seen that, for example, the data on medium-term coupon bonds issued in national currency by the government will differ from medium-term annuity bonds issued in non-national currency by banks, because each of them depends on the type and obligations that the issuer has according to the positive legal regulations that bind their issuer.

2.2. Bond investment yield

Bonds can be seen as securities that allow issuers to raise funds to finance their needs on a credit basis, and which provide investors with interest and principal payments in a predetermined order, at a certain time (Eric, 2003, p. 275). In the process of raising capital, through the issue and sale of bonds, there are two cash flows, namely net cash receipts from the sale of bonds, on the one hand, and the issuance of cash when paying the interest and principal at the maturity date, on the other (Mikerevic, 2018, p. 204). However, like other securities, the bond provides its owner (bondholder) with an appropriate yield. Consequently, when investing in bonds, each

investor must distinguish between three types of returns, which are (Radivojac, 2013, p. 75):

1. nominal (coupon) yield,
2. current yield and
3. yield to maturity.

Nominal or coupon yield is the yield that the bond provides on the basis of its possession in accordance with the amount of the coupon rate. It represents the amount of annual interest paid divided by the nominal value of the bond (Van Horne, Wachowicz, 2002, p. 69). As such, the coupon yield does not change during the maturity of the bond and is not sensitive to market factors after its issuance. Therefore, for investors, the nominal yield has relatively little analytical and practical value.

Current yield is one of the measures of real return for investors when investing in bonds, and is obtained as a quotient of interest income and the price at which the investor bought the bond (Brealey, Myers, Marcus, 2007, p.123). Mathematically, it can also be represented as follows:

$$r_t = \frac{C}{P},$$

Where: r_t - current bond yield, C - value of interest coupon for a given period and P - bond price.

If we look at the previous formula, we conclude that the current yield when investing in a bond depends on the price of the bond, which is determined on the market and the value of the interest coupon. Depending on market movements, the price of a bond changes many times, which means that unlike the nominal yield, the current yield is highly sensitive to market changes. Namely, it is higher than the nominal value, if the price of the bond is lower than the nominal value (the bond was purchased at a discount), and if its price is higher than the nominal value, the current yield is lower than the nominal value (the bond is purchased with a premium). Consequently, it can be stated that the current yield is extremely sensitive to changes in the market price, and is therefore a very good indicator of the current profitability of a bond investment. On the other hand, the main disadvantage of the current yield is that, of all the changes in the market that affect the bond yield, it recognizes only one, and that is the bond price.

Therefore, when investing in bonds, the investor will not be informed of the promised rate of return. Thus, each investor, in order to make a quality decision when investing in bonds, must calculate the bond yield based on data on price, maturity date and coupon payments. Accordingly, the investor needs to define what is the rate of return that equates the present value of future payments of the bond with its market price. The discount rate that equals the present value of the cash flow of the bond and the price of the bond is called the yield to maturity, and it can be mathematically represented as follows (Urosevic, 2009, p. 64):

$$P = \frac{C}{1+r} + \frac{C}{(1+r)^2} + \dots + \frac{C}{(1+r)^n} + \frac{N}{(1+r)^n}$$

that is in final form:

$$\sum_{i=1}^{i=\infty} \frac{C}{(1+r)^i} + \frac{N}{(1+r)^n}$$

Where: r - yield to maturity, C - the value of the interest coupon for a given period, N - nominal value of the bond, n - period to maturity of the bond and P - bond price.

gdje je: r – prinos do dospijea, C – vrijednost kamatnog kupona za dati period, N – nominalna vrijednost obveznice, n – period do dospijea obveznice, i P – cijena obveznice.

Međutim, u slučaju kada se kupon isplaćuje više puta godišnje, prinos do dospijea može se prikazati sljedećim matematičkim obrascem (Urošević, 2009, str. 65).

$$P = \frac{C}{1 + \frac{r}{m}} + \frac{C}{(1 + \frac{r}{m})^2} + \dots + \frac{C}{(1 + \frac{r}{m})^{nm}} + \frac{N}{(1 + \frac{r}{m})^{nm}}$$

gdje je: r – prinos do dospijea, C – vrijednost kamatnog kupona za dati period, N – nominalna vrijednost obveznice, n – period do dospijea obveznice, m – broj isplata u toku godine, i P – cijena obveznice.

Uvidom u prethodne dvije formule može se konstatovati da je prinos do dospijea interna stopa prinosa koja izjednačava sadašnju vrijednost gotovinskog toka obveznice i cijenu obveznice. U finansijskoj literaturi prinos do dospijea često se tumači kao mjera prosječne stope prinosa koji će se ostvariti, ako se obveznica kupi sada i zadrži do dospijea. Dakle, prinos do dospijea je interna stopa prinosa obveznice koja se računa na osnovu tržišne cijene obveznice, godišnje kamate (kamatnog kupona) i roka dospijea. Stoga, ako dvije iste obveznice imaju istu nominalnu vrijednost i rok dospijea, to ne znači da će im prinos do dospijea biti isti. To upravo zavisi od visine kuponske stope ili tzv. nominalnih prinosa obveznice. Prinosi do dospijea dvije obveznice biće isti samo ako im je ista tržišna cijena obveznica, godišnje kamate (kamatnog kupona) i rok dospijea. Međutim, samo u trenutku emitovanja obveznice, prinos do dospijea jednak je nominalnom ili kuponskom prinosu. Kada se promijeni tržišna kamatna stopa, mijenjaće se i cijena obveznice, odnosno, kada je tržišna kamatna stopa veća od kuponske stope, tada će cijena obveznice biti manja od njene nominalne vrijednosti i obrnuto. Dakle, prinos do dospijea i cijena obveznice su u inverznom odnosu. Duži rok do dospijea podrazumijeva i više mogućih promjena kamatnih stopa. Međutim, kod upotrebe ovih indikatora treba imati u vidu da postoji značajna razlika između promjena cijena kratkoročnih i dugoročnih obveznica, jer za istoprocenatnu

promjenu tržišne kamatne stope, dugoročne obveznice će reagovati većim varijabilitetom cijena od kratkoročnih obveznica (Živković i Šoškić, 2007, str. 244). Ako se na sve prethodno doda i činjenica da je prinos od investicije oporeziv, tj. da podliježe oporezivanju, onda ulaganje u obveznice dobija posve novu dimenziju. Ipak, iako podliježu oporezivanju, različite vrste obveznica nemaju isti poreski tretman.² Stoga, prilikom računanja treba uzeti u obzir i informacije o stopi oporezivanja, a prinos poslije oporezivanja matematički se može prikazati na sljedeći način:

$$r_t = r \times (1 - m_{sp}),$$

gdje je: r_t – prinos poslije oporezivanja, r – prinos, i m_{sp} – marginalna stopa oporezivanja.

Ipak, da bi se prinosi poslije oporezivanja mogli upoređivati, jer se poreske stope razlikuju u različitim poreskim sistemima, koristi se alternativni račun prinosa poslije oporezivanja. Ekvivalentni oporezivi prinos jeste ona stopa prinosa koju emitent isplaćuje investitoru, tako da se poslije oporezivanja ostvari isti prinos kao i da je investirano u neoporezivu obveznicu. Ekvivalentni oporezivi prinos se matematički može prikazati na sljedeći način (Živković i Šoškić, 2007, str. 244):

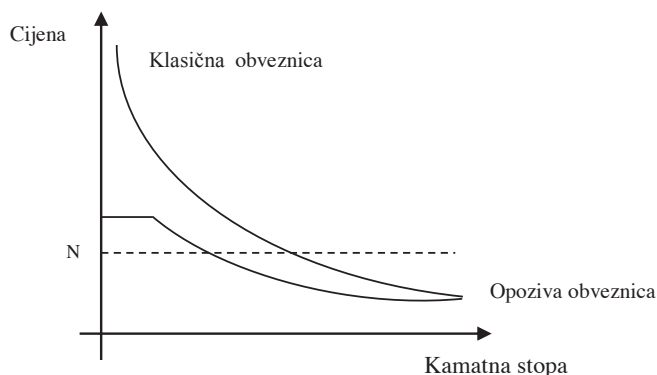
$$EOP = \frac{r_n}{(1 - m_{sp})},$$

gdje je: EOP – ekvivalentni oporezivi prinos, r_n – neoporezivi prinos, i m_{sp} – marginalna stopa oporezivanja.

Uvidom u prethodnu formulu konstatuje se da što je viša marginalna poreska stopa, veći je i ekvivalentni oporezivi prinos. To praktično znači da u uslovima visokih poreskih stopa, da bi se obezbijedila konkurentnost oporezovanih u odnosu na neoporezovane obveznice, one moraju investitorima kompenzovati poreske izdatke.

Međutim, ako se izuzme momenat oporezivanja, neophodno je naglasiti činjenicu da investitori prinos do dospijea računaju pod pretpostavkom da će se obveznica držati do krajnjeg roka. Ali, šta se dešava ako je obveznica opoziva i ako se može isplatiti prije datuma dospijea? Ta situacija se najlakše može grafički prikazati na sljedeći način:

Slika 1. Opoziv obveznica



Izvor: Bodie, Zvi; Kane, Alex; Marcus, J. Alan, Osnovi investicija, šesto izdanje, Beograd: Data Status, 2009, str. 291.

Uvidom u sliku 1. nameće se zaključak da, ako kamatne stope padnu, cijena obveznica koja je jednaka sadašnjoj vrijednosti budućih obećanih isplata može znatno da poraste. Stoga, ako se pođe od pretpostavke da vlasnik posjeduje kuponsku obveznicu, koja se može opozvati po cijeni od 110% nominalne vrijednosti, u tom slučaju, kada kamatne stope padnu na nivo koji obezbjeđuje

cijenu koja će biti veća od opozive cijene (npr. 115% nominalne vrijednosti), klauzula opoziva omogućava emitentu obveznice da otkupi svoju obveznicu po cijeni opoziva, a to je 110% nominalne vrijednosti. To praktično znači da, ako je cijena opoziva niža od sadašnje vrijednosti planiranih isplata, emitent obveznice može opozvati obveznicu na trošak vlasnika obveznice. S druge strane,

² Municipalne obveznice imaju najpovoljniji poreski tretman.

However, in the case where the coupon is paid several times a year, the yield to maturity can be shown by the following mathematical pattern (Urosevic, 2009, p. 65).

$$P = \frac{\frac{C}{m}}{1 + \frac{r}{m}} + \frac{\frac{C}{m}}{(1 + \frac{r}{m})^2} + \dots + \frac{\frac{C}{m}}{(1 + \frac{r}{m})^{nm}} + \frac{N}{(1 + \frac{r}{m})^{nm}}$$

Where: r - yield to maturity, C - the value of the interest coupon for a given period, N - nominal value of the bond, n - period to maturity of the bond, m - number of payments during the year and P - bond price.

If we look at the previous two formulas, it can be stated that the yield to maturity is an internal rate of return that equals the present value of the cash flow of the bond and the price of the bond. In the financial literature, the yield to maturity is often interpreted as a measure of the average rate of return that will be realized if the bond is purchased now and held to maturity. Thus, the yield to maturity is the internal rate of return of the bond, which is calculated based on the market price of the bond, the annual interest rate (interest coupon) and the maturity date. Therefore, if two of the same bonds have the same nominal value and maturity, this does not mean that their yield to maturity will be the same. It depends on the coupon rate or the so-called nominal bond yields. Yields to maturity of two bonds will be the same only if they have the same market price of bonds, annual interest (interest coupon) and maturity. However, only at the time the bond is issued, the yield to maturity is equal to the nominal or coupon yield. When the market interest rate changes, the price of the bond will also change. That is, when the market interest rate is higher than the coupon rate then the price of the bond will be less than its nominal value and vice versa. Thus, the yield to maturity and the price of the bond are inverse. A longer maturity implies more possible changes in interest rates. However, when using these indicators, it should be borne in mind that there is a significant difference between changes in short-term and long-term bond prices, because for the

same percentage change in market interest rate, long-term bonds will respond with greater price variability than short-term bonds (Zivkovic and Soskic, 2007, p. 244). If we add to all the above the fact that the return on investment is taxable, ie. to be taxed, then investing in bonds takes on a whole new dimension. However, although they are subject to taxation, different types of bonds do not have the same tax treatment. Therefore, information on the tax rate should be taken into account when calculating, and the post-tax yield can be mathematically represented as follows:

$$r_t = r \times (1 - m_{sp}),$$

Where: r_t - yield after tax, r - yield m_{sp} - marginal tax rate.

However, in order to be able to compare post-tax returns, because tax rates differ in different tax systems, an alternative post-tax return account is used. Equivalent taxable yield is the rate of return paid by the issuer to the investor, so that after taxation the same yield is realized, as if it were invested in a non-taxable bond. Equivalent taxable yield can be mathematically represented as follows (Zivkovic and Soskic, 2007, p. 244):

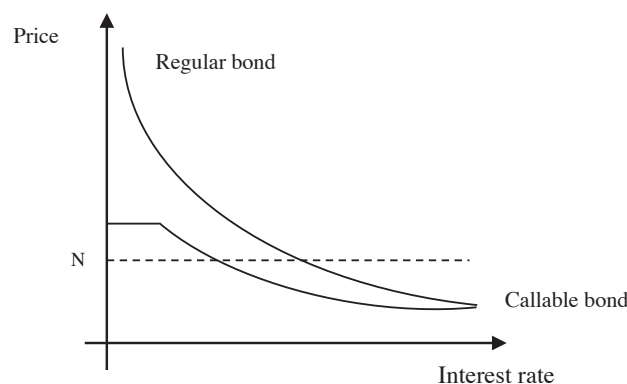
$$EOP = \frac{r_n}{(1 - m_{sp})},$$

Where: EOP - equivalent taxable yield, r_n - non-taxable yield m_{sp} - marginal tax rate.

If we look at the previous formula, it is concluded that the higher the marginal tax rate, the higher the equivalent taxable yield. This practically means that in conditions of high tax rates, in order to ensure the competitiveness of taxable bonds in relation to non-taxed bonds, they must compensate investors for tax expenditures.

However, with the exception of the moment of taxation, it is necessary to emphasize the fact that investors calculate the yield to maturity under the assumption that the bond will be held to maturity. But what happens if the bond is revocable and if it can be repaid before the maturity date. This situation can most easily be graphically represented as follows:

Figure 1 – The redemption of bonds



Source: Bodie, Zvi; Kane, Alex; Marcus, J. Alan, *Osnovi investicija, the sixth edition, Beograd: Data Status, 2009, p. 291.*

If we look at Figure 1, the conclusion is that if interest rates fall, the price of bonds equal to the present value of future promised payments can rise significantly. Therefore, if we assume that the owner owns a coupon bond, which can be redeemed at a price of 110% of the nominal value, in that case when interest rates fall to a level that provides a price that will be higher than the call price (eg 115% of the nominal value), the call provision allows the issuer of the bond to redeem its bond at the call price, which is 110% of

the nominal value. This practically means that if the call price is lower than the present value of the planned payments, the bond issuer can redeem the bond at the expense of the bondholder. On the other hand, when market interest rates are high, the risk of call is negligible, because the present value of planned payments is lower than the call price, and therefore the value of regular and callable bonds converge (Bodie, Kane, Marcus, 2009, p. 292).

kada su tržišne kamatne stope visoke, rizik od opoziva je zanemarljiv, jer je sadašnja vrijednost planiranih isplata niža od cijene opoziva, te zato vrijednost klasične i opozive obveznice konvergiraju (Bodie, Kane, Marcus, 2009, str. 292).

Iz tog razloga, analiza koja je opisana u prethodnom paragrafu ukazuje na to da bi investicioni analitičari danas možda trebalo više da budu zainteresovani za prinos do opoziva nego za prinos do dospeljeća, ali samo ako postoji velika vjerovatnoća opoziva obveznica. Prinos do opoziva računa se isto kao i prinos do dospeljeća, s tim što se u obzir uzima vrijeme do opoziva, a ne vrijeme do dospeljeća, a cijena opoziva zamjenjuje nominalnu vrijednost obveznice. Matematički, to se može predstaviti na sljedeći način:

$$P = \frac{C}{1+r} + \frac{C}{(1+r)^2} + \dots + \frac{C}{(1+r)^n} + \frac{T}{(1+r)^n}$$

odnosno u konačnom obliku

$$\sum_{i=1}^{i=\infty} \frac{C}{(1+r)^i} + \frac{T}{(1+r)^n}$$

gdje je: r – prinos do opoziva, C – vrijednost kamatnog kupona za dati period, P – cijena obveznice, T – cijena opoziva obveznice, i n – vrijeme opoziva.

Prikazani proračun u prethodnom matematičkom obrascu ponekad se označava kao prinos do prvog dospeljeća, jer se pretpostavlja da će obveznica biti opozvana čim to postane moguće.

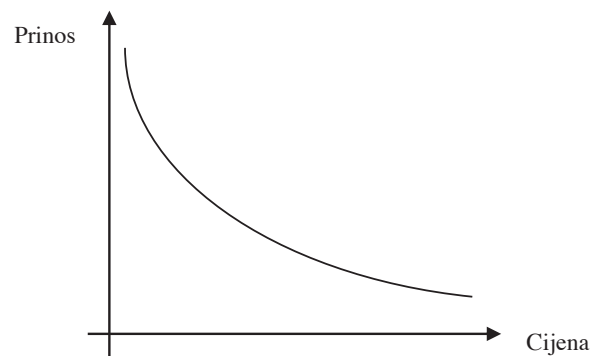
2.3. Odnos cijene i prinosa prilikom ulaganja u obveznice

Još jedna važna determinanta analize prinosa prilikom ulaganja u obveznice jeste odnos između cijene obveznice i prinosa prilikom ulaganja u obveznice. Cijena obveznice je promjenljiva u vremenu, te varijabilnost cijena obveznica utiče na njen prinos, cijenu i rizik. Kada bankovna kamatna stopa raste, izaziva pad cijena obveznica, te kasnije vrši pritisak na rast kamatne stope na obveznice (Mikerević, 2010, str. 135). Dakle, kako se tržišne kamatne stope mijenjaju, tako

će se i tržišna vrijednost obveznice mijenjati (Damodaran, 2007, str. 121). U tom kontekstu, veća varijabilnost utiče na povećavanje rizika prilikom ulaganja u obveznicu, gdje investitori zahtijevaju veći prinos, što u krajnjem kontekstu smanjuje cijenu obveznice. Intenzitet varijacija cijene obveznice determinisan je njenim bazičnim osobinama i osobinama tržišta. Stoga, rizik emitenta koji je iskazan i izmjeren rejtingom utiče na visinu kuponskog prinosa u trenutku emitovanja. Odnosno, veći rizik kod emitovanja obveznica zahtijeva i veći nominalni (kuponski) prinos, a to u suštini znači da su kod analize obveznica rizik emitovanja i kuponski prinos direktno proporcionalni. U kontekstu analize prinosa, prilikom promjene rizika emitovanja, mijenja se i tekući prinos i prinos do dospeljeća. Na osnovu toga može se slobodno konstatovati da inicijalni nivo rizika, preko kuponske stope, utiče na formiranje cijene obveznice, jer svako povećanje rizika emitenta i rizika tržišta podstiče smanjenje cijene i obrnuto (Živković i Šoškić, 2007, str. 267).

Dakle, varijabilnost cijena obveznica podrazumijeva da, iako se cijena svih standardnih obveznica kreće u suprotnom pravcu u odnosu na promjenu zahtijevanog prinosa, relativna promjena nije ista za sve obveznice. Takođe, za svaku veliku promjenu, procenat promjene cijene nije isti pri povećanju i pri smanjenju prinosa. Objašnjenje svih karakteristika cjenovne varijabilnosti leži u konveksnom obliku odnosa cijene i prinosa. U praktičnom smislu, dvije karakteristike obveznice bitne su za varijabilnost njene cijene, a to su: kupon i period dospeljeća. Pri datom roku dospeljeća i početnom prinosu, varijabilnost cijene obveznice je veća što je manja kuponska kamatna stopa i obrnuto. S druge strane, pri datoj kuponskoj stopi i početnom prinosu, što je duži period dospeljeća, veća je i varijabilnost cijene i obrnuto. Stoga, varijabilnost cijena obveznica se zbog izuzetne praktične važnosti kod odlučivanja o ulaganju u obveznice pažljivo mjeri i procjenjuje. Prema tome, ova svojstva obveznica su izuzetno bitna investicionim analitičarima prilikom formiranja portfolija obveznica, a sve u cilju maksimizovanja prinosa. Taj odnos prinosa prilikom ulaganja u obveznice i cijene obveznice može se vidjeti na sljedećoj slici.

Slika 2. Odnos cijene i prinosa prilikom ulaganja u obveznice



Izvor: Bodie, Zvi; Kane, Alex; Marcus, J. Alan, *Osnovi investicija, šesto izdanje, Beograd: Data Status, 2009, str. 286.*

Analizom slike 2. može se konstatovati da između cijene i prinosa prilikom ulaganja u obveznice postoji inverzna veza. Dakle, kada očekivani prinos raste, sadašnja vrijednost budućeg novčanog toka se smanjuje i obrnuto. Stoga, posmatrani odnos se za bilo koju standardnu obveznicu može opisati kao karakteristična konveksna kriva.

Međutim, cijena obveznice je jedina varijabla koja se može mijenjati tako da investitoru obezbijedi promjene zahtijevanog prinosa, jer je aktuelni tržišni prinos promjenljiv. Odnosno, kada zahtijevani prinos poraste iznad kuponskog prinosa u datom trenutku, cijena obveznice se prilagođava tako da investitor može realizovati do-

datni prinos. U slučaju da bi ovo prilagođavanje izostalo, investitor bi ostvario prinos niži od tržišnog. Sa druge strane, tražnja za tom obveznicom bi se smanjila, što će imati za posljedicu pad cijene, a što u krajnjem kontekstu dovodi do rasta prinosa. Shodno tome, osnovni uzrok promjene cijena pojedinačne obveznice jeste tržišni mehanizam uravnoteženja prinosa, odnosno izjednačavanje prinosa pojedinačne obveznice sa prinosom svih i svake uporedive obveznice. Pojednostavljeno, prinos prilikom ulaganja u obveznice sastoji se od kuponskog prinosa i kapitalne dobiti (ili gubitka) prilikom promjena cijena obveznica. Na osnovu toga može se

For this reason, the analysis described in the previous paragraph suggests that investment analysts today may need to be more interested in yield to call than to yield to maturity, but only if there is a high probability of bond call. The yield to call is calculated in the same way as the yield to maturity, except that the period until the call date is taken into account, not the term to maturity, and the call price replaces the nominal value of the bond. Mathematically, this can be represented as follows:

$$P = \frac{C}{1+r} + \frac{C}{(1+r)^2} + \dots + \frac{C}{(1+r)^n} + \frac{T}{(1+r)^n}$$

that is in final form:

$$\sum_{i=1}^{i=\infty} \frac{C}{(1+r)^i} + \frac{T}{(1+r)^n}$$

Where: r – yield to call, C - the value of the interest coupon for a given period and P - the price of the bond, T – call price and n – the period until the call date.

The calculation shown in the previous mathematical form is sometimes referred to as the yield to first maturity, as it is assumed that the bond will be redeemed as soon as possible.

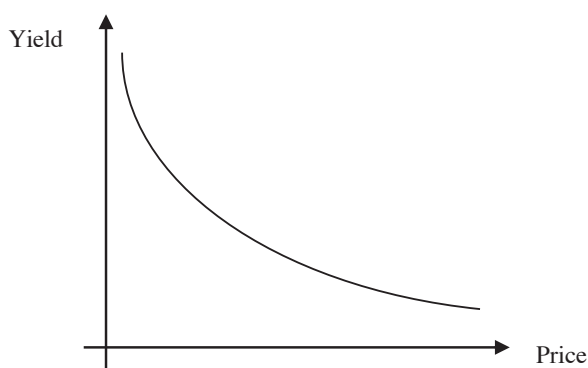
2.3. The Bond Price/Yield Relationship

Another important determinant of bond yield analysis is the relationship between bond price and bond yield. The price of a bond is variable over time, and the variability of bond prices affects its yield, price and risk. When the bank interest rate rises, it causes a decline in bond prices, and later puts pressure on the growth of interest rates on bonds (Mikerevic, 2010, p. 135). Thus, as market interest rates change, so will the market value of a bond. (Damodaran, 2007, p. 121). In this context, greater variability affects the increase in risk when investing in a bond, where investors demand

a higher return, which in the final context reduces the price of the bond. The intensity of bond price variations is determined by its basic characteristics and market characteristics. Therefore, the issuer's risk, which is expressed and measured by the rating, affects the amount of the coupon yield at the time of issuance. That is, higher risk in bond issuance requires higher nominal (coupon) yield, which essentially means that in bond analysis, issuance risk and coupon yield are directly proportional. In the context of yield analysis, when the emission risk changes, both the current yield and the yield to maturity change. Based on that, it can be freely stated that the initial level of risk, through the coupon rate, affects the formation of the bond price, because any increase in issuer risk and market risk encourages price reduction and vice versa (Zivkovic and Soskic, 2007, p. 267).

Thus, bond price variability implies that, although the price of all standard bonds moves opposite to changes in the required yield, the relative change is not the same for all bonds. Also, for every major change, the percentage change in price is not the same with increasing and decreasing yields. The explanation of all the characteristics of price variability lies in the convex form of the price-yield ratio. In practical terms, two characteristics of a bond are essential for the variability of its price, namely: coupon and maturity. With a given maturity and initial yield, the higher the coupon interest rate, the higher the bond price variability and vice versa. On the other hand, at a given coupon rate and initial yield, the longer the maturity period, the greater the price variability and vice versa. Therefore, the variability of bond prices is carefully measured and assessed due to its extreme practical importance when deciding to invest in bonds. Therefore, these properties of bonds are extremely important to investment analysts when forming a bond portfolio, all in order to maximize yields. This relationship between bond yields and bond prices can be seen in the following figure.

Figure 2 – The Bond Price/Yield Relationship



Source: Bodie, Zvi; Kane, Alex; Marcus, J. Alan, *Osnovi investicija, the sixth edition, Beograd: Data Status, 2009, p. 286.*

An analysis of Figure 2 shows that there is an inverse relationship between price and yield when investing in bonds. Thus, when the expected yield grows, the present value of future cash flow decreases and vice versa. Therefore, the observed ratio for any standard bond can be described as a characteristic convex curve.

However, the price of a bond is the only variable that can be changed so as to provide the investor with changes in the required yield, because the current market yield is variable. That is, when the required yield rises above the coupon yield at a given time, the bond price is adjusted so that the investor can realize an additional yield. Should this adjustment be omitted, the investor would achieve a yield that is lower than the market yield. On the other hand, the demand for

this bond would decrease, which will result in a price drop, which in the final context leads to an increase in yield. Consequently, the main cause of the change in the prices of an individual bond is the market mechanism of balancing the yield, ie equalizing the yield of an individual bond with the yield of each and every comparable bond. Simply put, bond yields consist of coupon yields and capital gains (or losses) on bond prices. Based on that, it can be stated that the coupon rate is predefined by the Agreement and it is constant over time, and the only way to adjust the individual bond yield to the new market yield is to change the capital gain (or loss).

Therefore, the main reason for investing in bonds is to achieve an adequate yield. The yield that is generated when investing in

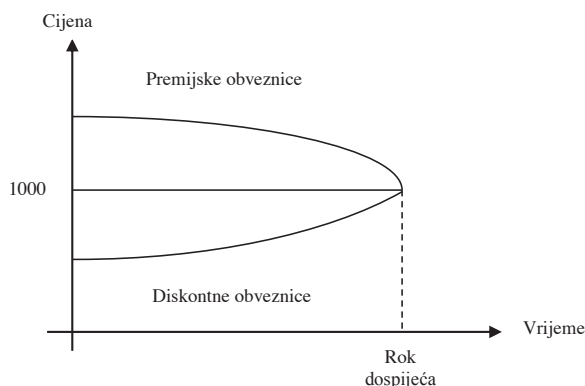
konstatovati da je kuponska stopa unaprijed definisana ugovorom i ona je nepromjenljiva u vremenu, a jedini način da se prinos na pojedinačnu obveznicu uskladi sa novom tržišnom stopom prinosa jeste promjena kapitalnog dobitka (ili gubitka).

Stoga, glavni razlog investiranja u obveznice jeste ostvarivanje odgovarajućeg prinosa. Prinos koji se ostvaruje prilikom ulaganja u obveznice datog roka dospjeća i rizika, a koji je generisan kroz tržište, naziva se zahtijevani prinos. Kada je zahtijevani prinos na tržištu ispod kuponske stope, cijena po kojoj se obveznica prodaje viša je od nominalne vrijednosti same obveznice. Glavni razlog za tu tvrdnju leži u činjenici da povećana tražnja za ovom obveznicom, usljed atraktivnog prinosa, podiže cijenu koja će rasti do

nivoa koji izjednačava prinos date obveznice sa tržištem, odnosno zahtijevanim prinosom.

Iz svega gorenavedenog može se konstatovati da, kada je kuponska stopa veća od zahtijevanog prinosa, tada je cijena obveznica veća od nominalne vrijednosti i tada se radi o premijskoj obveznici. S druge strane, kada je kuponska stopa manja od zahtijevanog prinosa, tada je cijena obveznica manja od nominalne vrijednosti i radi se o diskontnoj obveznici. Konačno, kada je kuponska stopa jednaka zahtijevanom prinosu, tada je cijena obveznice jednaka nominalnoj vrijednosti (pogledati: Brealey, Myers, Marcus, 2007, str. 122). Kretanje cijene premijske i diskontne obveznice može se vidjeti na slici 3.

Slika 3. Premijska i diskontna obveznica



Izvor: Brealey, A. R., Myers, C. S., Marcus, J. A., *Osnove korporativnih finansija*, Mate d.o.o., Zagreb, 2007, str. 128.

Prethodna slika pokazuje kretanje cijena premijskih i diskontnih obveznica u toku njihovog životnog vijeka. Ona navodi na zaključak da svaka obveznica svom investitoru nudi istu ukupnu stopu prinosa. Međutim, ukoliko uporedive obveznice nemaju jednake ukupne stope prinosa, prodaju se one sa niskom stopom prinosa, a njihova cijena će se smanjivati sve dok ukupan prinos ne postane konkurentan.

2.4. Rizici ulaganja u obveznice

Glavni motiv svakog investitora prilikom ulaganja u obveznice jeste ostvarivanje prinosa. U tom kontekstu, svaki prinos može (a ne mora) biti ostvaren na nivou koji je viši ili niži od očekivanog prinosa. Prema tome, obveznice su, kao i druge hartije od vrijednosti, izložene rizicima, a to su sljedeći rizici (opširnije pogledati: Živković i Šoškić, 2007, str. 267):

- Kreditni rizik (engl. credit risk) jeste vjerovatnoća da emitent neće biti sposoban da u roku dospjeća izvrši isplatu po osnovu obveznice. Veći kreditni rizik dovodi do povećavanja kuponske stope obveznice. S druge strane, povećavanje kreditnog rizika tokom trajanja obveznice dovodi do smanjivanja tražnje za samom obveznicom, što naposljetku smanjuje i cijenu obveznice. Kreditni rizik kod kratkoročnih državnih obveznica kojima se trguje na nacionalnom finansijskom tržištu, po konvenciji je jednak nuli.
- Kamatni rizik jeste vjerovatnoća promjene tržišne kamatne stope koja determiniše cijenu obveznica na sekundarnom tržištu. Dakle, promjene kamatnih stopa utiču na promjenu cijena obveznica obrnuto proporcionalno, ali ne i na svaku obveznicu istovjetno. Da bi se dugoročna obveznica prodala na sekundarnom tržištu, njena cijena mora da bude niska, inače, u suprotnom, neće biti interesantna za kupovinu. S druge strane, za one investitore koji obveznicu žele da posjeduju do roka njenog dospjeća, promjene tržišne kamatne stope ne izazivaju gubitke. Shodno tome, problem nastaje kada se obveznica mora

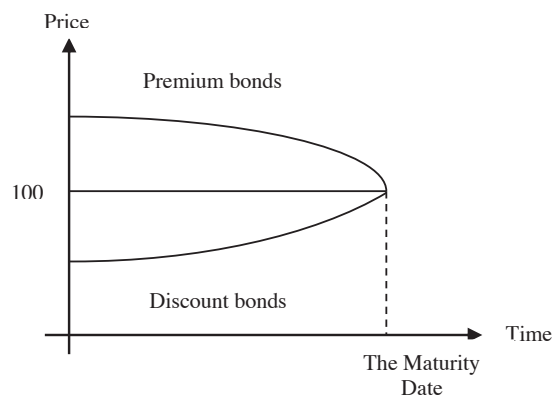
prodati prije roka dospjeća, jer bi povećanje kamatne stope nakon prodaje značilo i kapitalni gubitak.

- Rizik inflacije polazi od toga da će doći do neočekivane promjene brzine inflacije, koja nije bila predviđena u trenutku definisanja fiksne nominalne kamatne stope. Kada se to desi, svi investitori prvo gube kamatni prihod, a kada stopa inflacije preraste kuponsku stopu, onda investitori gube i dio nominalne vrijednosti obveznice i ostvaruju ogromne kapitalne gubitke. U uslovima izrazito visoke stope inflacije, dugoročne i srednjoročne obveznice sa fiksnim kamatnim kuponom prosto ne mogu egzistirati. U slučaju niske stope inflacije, ovaj rizik se može skoro potpuno neutralizovati indeksacijom obveznice, koja može biti izvedena vezivanjem kuponske stope za stopu inflacije i denominacijom glavnice i kupona valuti koja nije izložena obezvređivanju.
- Rizik promjene deviznog kursa javlja se u situaciji kada investitor, koji denominuje svoju imovinu, u jednom trenutku, uloži u obveznicu, čiji se emitent obavezao da će vršiti plaćanje u drugoj valuti. Shodno tome, investitor ne može sa sigurnošću znati kakav će biti kurs jedne i druge valute, što ima za posljedicu i neizvjesnost veličine novčanih tokova date obveznice izražene u drugoj valuti. Rizik promjene deviznog kursa postoji u svim okolnostima kada investitor i emitent pripadaju različitim valutnim zonama.
- Rizik likvidnosti je rizik da se obveznica neće moći prodati odnosno pretvoriti u gotov novac. Rizik likvidnosti postoji kod obveznica izrazito niskog rejtinga. Osnovna mjera rizika likvidnosti je veličina marže između kupovne i prodajne cijene, jer što je veća marža, veći je i rizik likvidnosti i obrnuto. Broj kupaca i prodavaca na tržištu svake obveznice utiče na nivo likvidnosti i, konsekvntno, na veličinu marže između kupovne i prodajne cijene. S druge strane, za one investitore koji obveznicu žele da posjeduju do roka njenog dospjeća, rizik likvidnosti ne postoji.
- Rizik reinvestiranja povezan je s rizikom kamatne stope i on se

bonds of a given maturity and risk, which is generated through the market, is called the required yield. When the required market yield is below the coupon rate, the price at which the bond is sold is higher than the nominal value of the bond itself. The main reason for this claim lies in the fact that the increased demand for this bond, due to the attractive yield, raises the price, which will rise to a level that equates the yield of a given bond with the market, ie the required yield.

From all the above, it can be stated that when the coupon rate is higher than the required yield, then the price of the bonds is higher than the nominal value and then it is a premium bond. On the other hand, when the coupon rate is less than the required yield, then the bond price is less than the nominal value and then it is a discount bond. Finally, when the coupon rate is equal to the required yield, then the bond price is equal to the nominal value (See: Brealey, Myers, Marcus, 2007, p. 122). The movement of the price of premium and discount bonds can be seen in Figure 3.

Figure 3- Premium and Discount Bond



Source: Brealey, A. R; Myers, C. S; Marcus, J. A, *Osnove korporativnih finansija, Mate d.o.o., Zagreb, 2007, p.128.*

The previous figure shows the movement of prices of premium and discount bonds during its lifetime. The figure leads to the conclusion that each bond offers its investor the same total yield rate. However, if comparable bonds do not have the same total yield rates, those with a low yield rate are sold and their price will decrease until the total yield becomes competitive

2.4. Risks of investing in bonds

The main motive of every investor when investing in bonds is to make a yield. In this context, each yield may (and may not) be realized at a level that is higher or lower than the expected yield. Therefore, bonds, like other securities, are exposed to risks, and these are (For more details, see: Zivkovic and Soskic, 2007, p. 267):

- Credit risk is the probability that an issuer will not be able to make a bond payment at maturity. Higher credit risk leads to an increase in the coupon rate of the bond. On the other hand, an increase in credit risk over the life of the bond leads to a decrease in demand for the bond itself, which ultimately reduces the price of the bond. According to the convention, the credit risk in short-term government bonds traded on the national financial market is zero.
- Interest rate risk is the probability of a change in the market interest rate that determines the price of bonds on the secondary market. Thus, changes in interest rates affect the change in bond prices inversely proportionally, but not in every bond equally. In order for a long-term bond to be sold on the secondary market, its price must be low, otherwise it will not be interesting to buy. On the other hand, for those investors who want to hold the bond until its maturity, changes in the market interest rate do not cause losses. Consequently, the problem arises when a bond has to be sold before maturity, because an increase in the interest rate after the sale would also mean a capital loss.
- The risk of inflation starts from the fact that there will be an unexpected change in the rate of inflation, which was not foreseen at the time of defining the fixed nominal interest rate. When this happens, all investors first lose interest income, and

when the inflation rate exceeds the coupon rate, then investors also lose part of the nominal value of the bond and make huge capital losses. In conditions of extremely high inflation rates, long-term and medium-term bonds with a fixed interest rate coupon simply cannot exist. In the case of a low inflation rate, this risk can be almost completely offset by indexing the bond, which can be derived by tying the coupon rate to the inflation rate and denominating the principal and coupon in a currency that is not subject to impairment.

- Exchange rate risk arises when an investor, who denominates his assets at one point, invests in a bond, the issuer of which has undertaken to make payments in another currency. Consequently, the investor cannot know with certainty what the exchange rate of both currencies will be, which results in uncertainty about the size of the cash flows of a given bond denominated in another currency. Exchange rate risk exists in all circumstances when the investor and the issuer belong to different currency zones.
- Liquidity risk is the risk that the bond will not be able to be sold or converted into cash. Liquidity risk exists for extremely low rated bonds. The basic measure of liquidity risk is the size of the margin between the purchase and sale price, because the higher the margin, the higher the liquidity risk and vice versa. The number of buyers and sellers in the market of each bond affects the level of liquidity and consequently the size of the margin between the purchase and sale price. On the other hand, for those investors who want to hold the bond until its maturity, there is no liquidity risk.
- Reinvestment risk is related to interest rate risk and it occurs with long-term coupon bonds. Thus, the risk of reinvestment is the probability that the cash flow generated from the initial investment will be reinvested at a rate of return that is lower than the return on the initial investment. Rising interest rates will reduce the value of bonds purchased with the initial investment. However, the return on that investment, and reinvested in terms of increased interest rates, leads to an increase in the

javlja kod dugoročnih kuponskih obveznica. Dakle, rizik reinvestiranja je vjerovatnoća da će novčani tok ostvaren od inicijalnog ulaganja biti reinvestiran po stopi prinosa koja je niža od prinosa inicijalnog ulaganja. Rast kamatnih stopa će smanjiti vrijednost obveznica koje su kupljene inicijalnim ulaganjem. Međutim, prinos iz tog ulaganja, reinvestiran u uslovima povećanih kamatnih stopa, dovodi do povećanja očekivanog prinosa na to ulaganje. Prema tome, u obrnutom slučaju, pad kamatnih stopa povećava prinostni potencijal inicijalnog ulaganja, ali i vjerovatnoću da će prinos od reinvestiranja biti niži od prinosa inicijalnog ulaganja.

- Rizik opoziva javlja se samo kod onih obveznica koje imaju ugrađenu call ili klauzulu opoziva. Prema tome, jedna od opcija, koja je definisana samim ugovorom, jeste i pravo emitenta da opozove djelimično ili u potpunosti emisiju obveznica prije roka dospijeca. Motiv za emitenta obveznica javlja se u situaciji kada je tržišna kamatna stopa niža od kuponske stope, a tržišna cijena obveznice viša do cijene opoziva. Niže tržišne kamatne stope omogućice novu emisiju obveznica po nižim kamatnim stopama, odnosno stvorice se povoljniji uslovi za refinansiranje duga koji je kreiran emisijom tih obveznica. Međutim, sa aspekta investitora, opcija opoziva ima mnoge nepovoljnosti, kao što su: novčani tok opozive obveznice nije siguran, usljed pada tržišnih kamatnih stopa investitor je izložen riziku reinvestiranja i smanjen je potencijal formiranja kapitalne dobiti.

Stoga, na osnovu činjenica koje su iznesene u ovom podnaslovu, može se konstatovati da se investitor u procesu ostvarivanja prinosa, prilikom ulaganja u obveznice, suočava sa različitim vrstama rizika. Vjerovatnoća da se ne ostvari zadovoljavajući rezultat (prinos) jeste rizik obveznice, te je za svakog investicionog analitičara izuzetno važna temeljna analiza odnosa rizika i prinosa prilikom ulaganja u obveznice.

2.5. Ravnoteža na tržištima obveznica

Uspostavljanje ravnoteže na tržištima obveznica zavisi od ponašanja investitora i emitenata hartija od vrijednosti te njihove efikasnosti (opširnije pogledati: Urošević, 2013, str. 41–96). S druge strane, glavni faktori koji izazivaju neravnotežu jesu: promjene preferencija investitora, promjene preferencija emitenata i promjene nivoa dohotka. Uspostavljanje nove ravnoteže na finansijskom tržištu ostvaruje se kroz dominantne promjene kamatnih stopa, odnosno prinosa na uloženi kapital. Ravnoteža na finansijskom tržištu, na kom se trguje mnoštvom hartija od vrijednosti, mora biti postignuta na cijelom tržištu, jer bi u suprotnom promjena kamatne stope na jednom segmentu tržišta izazvala neravnotežu na drugom segmentu tržišta.

Dakle, vrlo važan indikator efikasnosti finansijskih tržišta jeste i vrijeme potrebno za prilagođavanje ponude i potražnje novonastaloj neravnoteži. Naime, dužina ovog vremenskog intervala zavisi od uslova na konkretnom tržištu, kao i od uzročnika neravnoteže. Prema tome, ukoliko bi vrijeme „adaptacije“ bilo približno jednako nuli, ekonomske jedinice bi posjedovale aktivu i emitovale obaveze u obimu koji maksimizuje njihovu korisnost. Na taj način, i aktiva u bilansima investitora i pasiva u bilansima emitenta trenutno bi se prilagođavale promijenjenim tržišnim uslovima, dominantno promije-

njenoj kamatnoj stopi. U suprotnom, kada postoji kašnjenje aktivnosti ekonomskih jedinica, proces uspostavljanja ravnoteže se komplikuje (Živković i Šoškić, 2007, str. 271). Pored prethodna dva slučaja, u ekstremnim uslovima beskonačno dugog i nedefinisanog kašnjenja reaktivnih aktivnosti ekonomskih jedinica na signal neravnoteže, postojeća finansijska aktiva ne bi bila ni kupljena ni prodana. To znači da bi izostalo prilagođavanje portfolija izmijenjenim uslovima, a preferencije korisnosti po osnovu posjedovanja finansijske aktive bile bi u potpunosti zadovoljene novokreiranim finansijskim instrumentima. Međutim, u praksi, vrijeme potrebno za prilagođavanje uslovima neravnoteže uvijek je između dva navedena ekstrema.

Pored prethodno navedenog, treći faktor efikasnosti mehanizma prilagođavanja na tržištu obveznica je tzv. informacioni pomak ili efikasnost sekundarnog tržišta u užem smislu, jer da bi ekonomska jedinica reagovala na uslove neravnoteže, prvo ih mora prepoznati. To praktično znači da što je veće informaciono kašnjenje, sporije je prilagođavanje i obrnuto. Međutim, još jedan od faktora koji bitno utiče na efikasnost ovog procesa jeste nivo efikasnosti sekundarnog finansijskog tržišta, a prije svega njegova likvidnost i kvalitet informacija koji generiše. U opštem slučaju, efikasno sekundarno finansijsko tržište ubrzava proces prilagođavanja, jer ukoliko sadašnji investitor, kao potencijalni prodavac obveznice na sekundarnom tržištu, mora tragati za kupcem samostalno, on gubi potrebno vrijeme za prilagođavanje novonastalim uslovima. S druge strane, istu vrstu posljedica trpi i emitent obveznica. Stoga, ovdje se može konstatovati da što je veće informaciono kašnjenje berze i manja vjerovatnoća prodaje ili kupovine date obveznice, sporiji je proces prilagođavanja cijene neravnotežnoj situaciji. Na kraju, posljednji faktor u procesu prilagođavanja jesu i transakcioni troškovi, jer treba početi od toga da ukoliko je viši nivo ovih troškova, sporiji je proces prilagođavanja i obrnuto.

3. REZULTATI ISTRAŽIVANJA

U okviru praktičnog dijela rada, primijenjeni su teorijski postulati analize prinosa prilikom ulaganja u obveznice, te na osnovu toga uraditi analiza prinosa prilikom ulaganja u obveznice na tržištu kapitala Republike Srpske. Shodno tome, korišteni su podaci o kretanju Indeksa obveznica Republike Srpske (ORS).³

Kao što je u prethodnom dijelu rada i obrazloženo ORS je ponderisani cjenovni indeks koji mjeri ukupne performanse, te koji je metodološki definisan u maju 2011. godine. Početna vrijednost ORS-a bila je 1.000 indeksnih poena, a u sastav ORS-a ulaze obveznice čije dospijeca nije u narednih 18 mjeseci, u odnosu na kraj mjeseca revizije indeksa. Takođe, u sastav ORS-a ulaze i obveznice kod kojih je odnos broja dana kada je obveznicom trgovano i broja mogućih dana trgovanja najmanje 30%, posmatrajući šestomjesečni period koji završava posljednjeg dana mjeseca koji prethodi reviziji indeksa. Indeks ORS na dan 31. 5. 2020. godine sačinjavaju obveznice devet emitenata. Emitenti koji na dan 31. 5. 2020. godine ulaze u sastav indeksa ORS prikazani su u narednoj tabeli (Banjalučka berza, preuzeto 31. 5. 2020. godine sa veb-adrese: www.blberza.com).

Tabela 1. Sastav ORS-a

REDNI BROJ	OZNAKA EMITENTA	NAZIV EMITENTA	TRŽIŠNA KAPITALIZACIJA (U KM)
1.	RSDS-O-H	Republika Srpska – stara devizna štednja 8	31.713.220
2.	RSRS-O-C	Republika Srpska – izmirenje ratne štete 3	32.079.650
3.	RSRS-O-F	Republika Srpska – izmirenje ratne štete 6	27.336.686

³ Indeks obveznica Republike Srpske na najreprezentativniji način i u najvećoj mjeri pokazuje ukupno kretanje prinosa obveznica Republike Srpske na Banjalučkoj berzi.

expected return on that investment. Therefore, in the opposite case, the fall in interest rates increases the yield potential of the initial investment, but also the probability that the return on reinvestment will be lower than the return on initial investment.

- The risk of bond call occurs only with those bonds that have a built-in call clause. Therefore, one of the options, which is defined by the Agreement itself, is the right of the issuer to partially or completely cancel the issue of bonds before maturity. The motive for the bond issuer arises in a situation when the market interest rate is lower than the coupon rate and the market price of the bond is higher than the call price. Lower market interest rates will enable a new issue of bonds at lower interest rates, ie more favorable conditions will be created for refinancing the debt created by the issue of these bonds. However, from the investor's point of view, the call clause has many disadvantages, such as: the cash flow of the callable bond is uncertain, due to falling market interest rates the investor is exposed to reinvestment risk and the potential for capital gain is reduced.

Therefore, based on the facts presented in this subheading, it can be concluded that the investor in the process of yield realization, when investing in bonds, faces different types of risks. The probability of not achieving a satisfactory result (yield) is the risk of the bond, and for any investment analyst, a thorough analysis of the relationship between risk and yield when investing in bonds is extremely important.

2.5. Equilibrium in bond markets

Establishing equilibrium in bond markets depends on the behavior of investors and issuers of securities and their efficiency (For more details, see: Urosevic, 2013, pp. 41-96). On the other hand, the main factors that cause the imbalance are: changes in investor preferences, changes in issuers' preferences and changes in income levels. The establishment of a new equilibrium on the financial market is achieved through dominant changes in interest rates, ie return on invested capital. Equilibrium in the financial market, where a multitude of securities are traded, must be achieved in the entire market, because otherwise a change in the interest rate in one market segment would cause an imbalance in another market segment.

Therefore, a very important indicator of the efficiency of financial markets is the time needed to adjust supply and demand to the newly emerging imbalance. Namely, the length of this period depends on the conditions on a specific market, as well as on the cause of the imbalance. Therefore, if the "adaptation" time were approximately zero, economic units would own assets and issue liabilities to the extent that maximizes their usefulness. In this way, both the assets in the investors' balance sheets and the liabilities in the issuer's balance sheets would currently be adjusted to the changed market conditions, dominantly, to the changed interest rate. Otherwise, when there is a delay in the activity of economic units, the process of establishing balance is complicated (Zivkovic and Soskic, 2007, p. 271). In addition to the previous two cases, in the extreme conditions of an infinitely long and undefined delay in the reactive activities of economic units to the signal of imbalance,

the existing financial assets would be neither bought nor sold. This means that there would be no adjustment of the portfolio to the changed conditions, and the utility preferences based on the possession of financial assets would be fully met by the newly created financial instruments. In practice, however, the time required to adapt to the conditions of imbalance is always between the two extremes mentioned.

In addition to the above, the third factor in the efficiency of the adjustment mechanism in the bond market is the so-called information shift or the efficiency of the secondary market in the narrower sense, because in order for an economic unit to react to imbalance conditions, it must first recognize them. This practically means that the greater the information delay, the slower the adjustment and vice versa. However, another factor that significantly affects the efficiency of this process is the level of efficiency of the secondary financial market, and above all its liquidity and the quality of information it generates. In general, an efficient secondary financial market speeds up the adjustment process, because if the current investor, as a potential seller of bonds in the secondary market, has to look for a buyer on his own, he loses the necessary time to adjust to the new conditions. On the other hand, the same type of consequences is suffered by the issuer of bonds. Therefore, it can be stated here that the greater the information delay of the stock exchange and the lower the probability of selling or buying a given bond, the slower the process of adjusting the price to the unbalanced situation. Finally, transaction costs are the last factor in the adjustment process, because it should be assumed that the higher the level of these costs, the slower the adjustment process and vice versa.

3. RESEARCH RESULTS

Within the practical part of the paper, the theoretical postulates of yield analysis when investing in bonds are applied, and based on that, the analysis of yield when investing in bonds in the capital market of the Republic of Srpska will be done. Accordingly, data on the movement of the Index of the Republic of Srpska Bonds (ORS) were used.¹

As explained in the previous section, the ORS is a weighted price index that measures overall performance, and which was methodologically defined in May 2011. The initial value of the ORS was 1,000 index points, and the ORS includes bonds whose maturity is not in the next 18 months, compared to the end of the index revision month. Also, the ORS includes bonds for which the ratio of the number of days when the bond was traded and the number of possible trading days is at least 30%, observing the six-month period ending on the last day of the month preceding the index revision. The ORS index as of May 31, 2020 consists of bonds of nine issuers. Issuers that are part of the ORS index on May 31, 2020 are shown in the following table (Banja Luka Stock Exchange, retrieved on May 31, 2020 from the web address: www.blberza.com).

Table 1- Composition of the ORS

No.	Symbol	Securities	Market Capitalization (BAM)
1.	RSDS-O-H	Republika Srpska - frozen savings accounts 8	31.713.220
2.	RSRS-O-C	Republika Srpska - war damage 3	32.079.650
3.	RSRS-O-F	Republika Srpska - war damage 6	27.336.686

¹ The Index of the Republic of Srpska Bonds shows in the most representative way and to the greatest extent the total movement of the Republic of Srpska bond yields on the Banja Luka Stock Exchange

4.	RSRS-O-G	Republika Srpska – izmirenje ratne štete 7	12.776.788
5.	RSRS-O-I	Republika Srpska – izmirenje ratne štete 9	24.975.635
6.	RSRS-O-J	Republika Srpska – izmirenje ratne štete 10	24.975.635
7.	RSRS-O-K	Republika Srpska – izmirenje ratne štete 11	20.272.692
8.	RSRS-O-L	Republika Srpska – izmirenje ratne štete 12	25.049.091
9.	RSRS-O-M	Republika Srpska – izmirenje ratne štete 13	14.089.396
UKUPNO			192.996.101

Izvor: analiza podataka autora

Opšti uslovi za uvrštenje obveznica u sastav ORS-a utvrđeni su tako da indeks u najvećoj mjeri pokazuje ukupno kretanje prinosa obveznica Republike Srpske na Banjalučkoj berzi. Da bi obveznica bila uvrštena u indeks, potrebno je da ispuni sljedeće uslove (Banjalučka berza, preuzeto 31. 5. 2020. godine sa veb-adrese: www.blberza.com):

a) emitent obveznice je Republika Srpska,

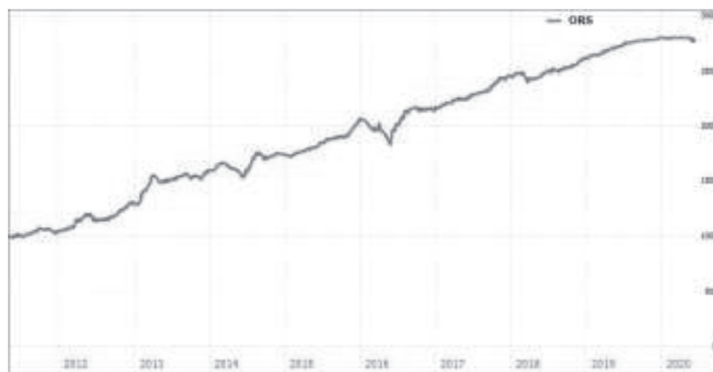
b) obveznica je uvrštena na službeno berzansko tržište Banjalučke berze,

c) nominalna vrijednost emisije veća je ili jednaka 10.000.000 KM,

d) obveznica ima fiksnu nominalnu kamatnu stopu.

Od svog definisanja, indeks ORS imao je svoje kretanje, koje se u periodu od 3. 5. 2011. do 31. 5. 2020. godine može slikovito prikazati na sljedeći način:

Slika 4. Kretanje ORS-a u periodu od 3. 5. 2011. godine do 31. 5. 2020. godine



Izvor: Banjalučka berza (www.blberza.com)

Uvidom u sliku 4. može se konstatovati da se ORS od samog svog osnivanja kreće iznad baznog nivoa od 1.000 indeksnih poena i na dan 31. 5. 2020. godine iznosi 2784,86 indeksnih poena. To praktično znači sljedeće: da je investitor u maju 2011. godine (kada je metodološki definisan ORS) uložio 1.000 KM u portfolio hartija od vrijednosti koji je kreiran na bazi hartija koje ulaze u njegov sastav, vrijednost njegove investicije dana 31. 5. 2020. godine bila bi 2.784,86 KM.

Međutim, u svrhu kompletne i detaljne analize prinosa prilikom ulaganja u obveznice Republike Srpske, potrebno je izračunati tekući prinos i prinos do dospelja za svaku obveznicu koja ulazi u sastav ORS. Na primjer, tekući prinos za obveznice Republike Srpske – izmirenje ratne štete 12 računa se po matematičkom obrascu koji je prikazan u teorijskom dijelu rada.

$$r_t = \frac{C}{P}$$

$$r_{RSRS-OL} = \frac{0,015KM}{0,96KM}$$

$$r_{RSRS-OL} = 1,56\%$$

Takođe, prinos do dospelja za obveznice Republike Srpske – izmirenje ratne štete 12 računa se po matematičkom obrascu koji je prikazan u teorijskom dijelu rada:

$$P = \frac{C}{1+r} + \frac{C}{(1+r)^2} + \dots + \frac{C}{(1+r)^n} + \frac{N}{(1+r)^n}$$

$$r_{rsrs-ol} = 2,20\%$$

Primjenom iste metodologije računanja prinosa, izračunat je tekući prinos i prinos do dospelja za sve obveznice koje se nalaze u sastavu ORS-a. Pregled kuponskog prinosa, tekućeg prinosa i prinosa do dospelja za sve obveznice koje se nalaze u sastavu ORS-a na dan 31. 5. 2020. godine može se vidjeti u tabeli 2.

Tabela 2. Pregled tekućeg prinosa i prinosa do dospelja za sve obveznice koje se nalaze u sastavu ORS-a

REDNI BROJ	OZNAKA EMITENTA	PROSJEČNA CIJENA OBVEZNICE	PREOSTALI DIO NOMINALNE VRIJEDNOSTI	KUPONSKI PRINOS	TEKUĆI PRINOS	PRINOS DO DOSPIJEĆA
1.	RSDS-O-H	100,00%	0,70	1,50%	1,50%	2,51%
2.	RSRS-O-C	99,57%	0,40	1,50%	1,51%	1,73%
3.	RSRS-O-F	98,60%	0,50	1,50%	1,52%	1,99%
4.	RSRS-O-G	97,60%	0,60	1,50%	1,54%	2,33%

4.	RSRS-O-G	Republika Srpska - war damage 7	12.776.788
5.	RSRS-O-I	Republika Srpska - war damage 9	24.975.635
6.	RSRS-O-J	Republika Srpska - war damage 10	24.975.635
7.	RSRS-O-K	Republika Srpska - war damage 11	20.272.692
8.	RSRS-O-L	Republika Srpska - war damage 12	25.049.091
9.	RSRS-O-M	Republika Srpska - war damage 13	14.089.396
TOTAL			192.996.101

Source: Author data analysis

The general conditions for the listing of bonds in the ORS are determined so that the index mostly shows the total movement of bond yields of the Republic of Srpska bonds on the Banja Luka Stock Exchange. In order for the bond to be included in the index, it is necessary to meet the following conditions (Banja Luka Stock Exchange, taken over on May 31, 2020 from the web address: www.blberza.com):

a) The issuer of the bond is the Republic of Srpska,

b) The bond is listed on the official stock exchange market of the Banja Luka Stock Exchange,

c) Nominal value of the issue greater than or equal to 10,000,000 KM,

d) The bond has a fixed nominal interest rate.

Since its definition, the ORS index has had its movement, which in the period from May 3, 2011 to May 31, 2020 can be illustrated as follows:

Figure 4 – Movement of the ORS in the period from May 3, 2011 to May 31, 2020



Source: Banja Luka Stock Exchange (www.blberza.com)

If we look at Figure 4, it can be stated that the ORS has been moving above the base level of 1,000 index points since its inception and as of May 31, 2020 it amounts to 2784.86 index points. This practically means that the investor in May 2011 (when the ORS was methodologically defined) invested BAM 1,000 in a portfolio of securities created on the basis of the securities that are part of it, the value of his investment on May 31, 2020 would be BAM 2.784,86.

However, for the purpose of a complete and detailed analysis of the yield when investing in the Republic of Srpska bonds, it is necessary to calculate the current yield and yield to maturity for each bond that is part of the ORS. For example, the current yield for bonds of the Republic of Srpska - war damage 12 is calculated according to the mathematical form presented in the theoretical part of the paper.

$$r_i = \frac{C}{P}$$

$$r_i = \frac{C}{P}$$

Also, the yield to maturity for bonds of the Republic of Srpska - war damage 12 is calculated according to the mathematical form presented in the theoretical part of the paper.

$$P = \frac{C}{1+r} + \frac{C}{(1+r)^2} + \dots + \frac{C}{(1+r)^n} + \frac{N}{(1+r)^n}$$

$$r_{rsrs-ol} = 2,20\%$$

Applying the same yield calculation methodology, the current yield and yield to maturity were calculated for all bonds that are part of the ORS. Review of coupon yield, current yield and yield to maturity for all bonds that are part of the ORS on May 31, 2020 can be seen in Table 2.

Table 2 - Review of current yield and yield to maturity for all bonds that are part of the ORS

No.	SYMBOL	AVERAGE PRICE	REMAINING PART OF NOMINAL VALUE	COUPON YIELD	CURRENT YIELD	YIELD TO MATURITY
1.	RSDS-O-H	100,00%	0,70	1,50%	1,50%	2,51%
2.	RSRS-O-C	99,57%	0,40	1,50%	1,51%	1,73%
3.	RSRS-O-F	98,60%	0,50	1,50%	1,52%	1,99%
4.	RSRS-O-G	97,60%	0,60	1,50%	1,54%	2,33%
5.	RSRS-O-I	97,00%	0,80	1,50%	1,55%	2,34%

5.	RSRS-O-I	97,00%	0,80	1,50%	1,55%	2,34%
6.	RSRS-O-J	97,00%	0,90	1,50%	1,55%	2,10%
7.	RSRS-O-K	96,00%	1,00	1,50%	1,56%	2,38%
8.	RSRS-O-L	96,00%	1,00	1,50%	1,56%	2,20%
9.	RSRS-O-M	93,15%	1,00	1,50%	1,61%	2,47%

Izvor: analiza podataka autora

Uvidom u prethodnu tabelu konstatuje se da je kuponski prinos obveznica koje ulaze u sastav ORS-a 1,5%, dok je tekući prinos i prinos do dospeljeća u prosjeku 1,54% i 2,23%, respektivno.

4. DISKUSIJA

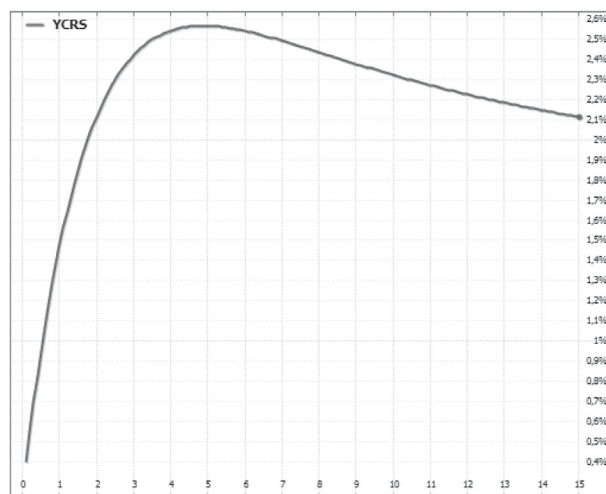
U skladu sa podacima koji su prikazani u prethodnom dijelu teksta, te polazeći od činjenice da ORS u najvećoj mjeri pokazuje ukupno kretanje prinosa obveznica Republike Srpske na Banjalučkoj berzi, jasno se može zaključiti da je i tekući prinos i prinos do dospeljeća obveznica Republike Srpske veći od kuponskog prinosa. Na osnovu svega toga, konstatuje se da je tekuća tržišna cijena obveznica Republike Srpske u prosjeku niža od nominalne vrijednosti.

Naime, na Banjalučkoj berzi se na dnevnom nivou objavljuje kriva prinosa dužničkih hartija od vrijednosti Republike Srpske za procjenjivane prinose do dospeljeća za raspon od šest mjeseci do deset godina. Ova kriva prinosa pokazuje odnos između prinosa i roka

dospeljeća obveznica i trezorskih zapisa Republike Srpske. Takođe, sama kriva prikazuje podatke od 11. 5. 2011. godine, odnosno od datuma prve emisije trezorskih zapisa Republike Srpske, a uslov da državne dužničke hartije od vrijednosti uđu u sastav krive su da obveznice i trezorski zapisi imaju tržišnu kapitalizaciju veću od 2.556.459 evra (5.000.000 KM).

Važno je napomenuti da se kriva prinosa objavljuje dnevno nakon zaključenja trgovanja na internet stranicama Banjalučke berze, gdje se takođe mogu naći podaci o procjeni prinosa za raspon od šest mjeseci do deset godina. Prilikom izbora dužničkih hartija od vrijednosti Republike Srpske uvrštavaju se obveznice i trezorski zapisi koji imaju tržišnu kapitalizaciju veću od 2.556.459 evra (5.000.000 KM). S druge strane, obveznice koje imaju rok dospeljeća koji je manji od jedne godine izražen kroz Makulijevo trajanje nisu izabrane, što se ne odnosi na trezorske zapise. To znači da obveznice sa varijabilnim kuponima, obveznice vezane za inflaciju i ostale obveznice sa posebnim karakteristikama neće biti izabrane. Stoga, prikaz krive prinosa dužničkih hartija od vrijednosti Republike Srpske na dan 31. 5. 2020. godine može se vidjeti na slici br. 5.

Slika 5. Kriva prinosa dužničkih hartija od vrijednosti Republike Srpske



Izvor: Banjalučka berza (www.blberza.com)

Ono što se može zaključiti jeste da je kriva prinosa koja je prikazana na slici 5. tipična kriva prinosa, odnosno normalna vremenska struktura kamatnih stopa – konkavnog oblika. Ona na vrlo jasan način pokazuje da obveznice Republike Srpske sa dužim rokom dospeljeća daju veći prinos. Dakle, procijenjeni prinos na hartije od vrijednosti iz krive prinosa dužničkih hartija od vrijednosti Republike Srpske na dan 31. 5. 2020. godine može se vidjeti u tabeli 3.

Tabela 3. Procijenjeni prinos

DOSPIJEĆE (u godinama)	PRINOS (u %)
1/12	0,3757
3/12	0,6264
6/12	0,9565

1	1,4777
2	2,1171
4	2,5433
6	2,5411
8	2,4355
10	2,3227
12	2,2261
15	2,1149

Izvor: analiza podataka autora

Takođe, i procijenjeni prinos na hartije od vrijednosti iz krive prinosa dužničkih hartija od vrijednosti Republike Srpske potvrđuje da se

6.	RSRS-O-J	97,00%	0,90	1,50%	1,55%	2,10%
7.	RSRS-O-K	96,00%	1,00	1,50%	1,56%	2,38%
8.	RSRS-O-L	96,00%	1,00	1,50%	1,56%	2,20%
9.	RSRS-O-M	93,15%	1,00	1,50%	1,61%	2,47%

Source: Author data analysis

Inspecting the previous table, it is concluded that the coupon yield of bonds that are part of the ORS is 1.5%, while the current yield and yield to maturity are on average 1.54% and 2.23%, respectively.

4. DISCUSSION

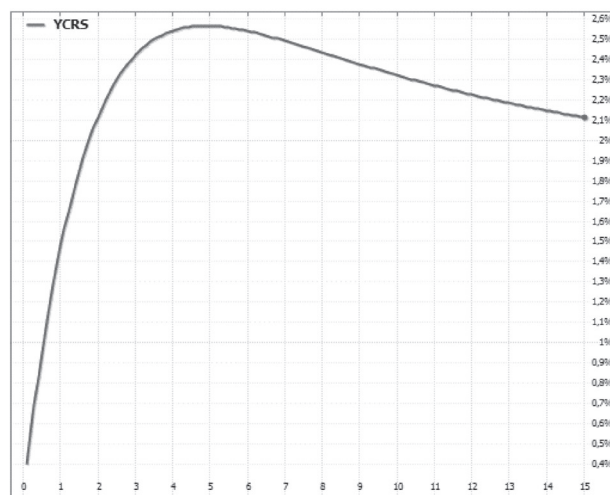
In accordance with the data presented in the previous part of the text, and starting from the fact that ORS mostly shows the total yield of the Republic of Srpska bonds on the Banja Luka Stock Exchange, it can be clearly concluded that the current yield and yield to maturity of the Republic of Srpska bonds is higher than coupon yield. Based on all this, it is concluded that the current market price of the Republic of Srpska bonds is on average lower than the nominal value.

Namely, on the Banja Luka Stock Exchange, the yield curve of debt securities of the Republic of Srpska is published on a daily basis for estimated yields to maturity for the range from six months to ten years. This yield curve shows the relationship between the yield

and the maturity of the Republic of Srpska bonds and treasury bills. Also, the curve itself shows data from May 11, 2011, ie from the date of the first issue of the Republic of Srpska treasury bills, and the condition for government debt securities to become part of the curve is that bonds and treasury bills have a market capitalization greater than EUR 2,556,459 (BAM 5,000,000).

It is important to note that the yield curve is published daily after the conclusion of trading on the website of the Banja Luka Stock Exchange, where you can also find data on the yield estimate for the range from six months to ten years. During the selection of debt securities of the Republic of Srpska, bonds and treasury bills with a market capitalization of more than EUR 2,556,459 (BAM 5,000,000) are included. On the other hand, bonds with a maturity of less than one year expressed through Makuli's duration are not selected, which does not apply to treasury bills. This means that variable coupon bonds, inflation-linked bonds and other bonds with special characteristics will not be selected. Therefore, the presentation of the yield curve of debt securities of the Republic of Srpska on May 31, 2020 can be seen in Figure 5.

Figure 5 - Yield curve of debt securities of Republic of Srpska



Source: Banja Luka Stock Exchange (www.blberza.com)

What can be concluded is that the yield curve shown in Figure 5 is a typical yield curve, ie the normal time structure of interest rates - concave shape. It shows in a very clear way that the Republic of Srpska bonds with a longer maturity give a higher yield. Therefore, the estimated securities yield from the yield curve of debt securities of the Republic of Srpska on May 31, 2020 can be seen in Table 3.

Table 3 - Estimated yield

Maturities (in years)	YIELD (%)
1/12	0,3757
3/12	0,6264
6/12	0,9565

1	1,4777
2	2,1171
4	2,5433
6	2,5411
8	2,4355
10	2,3227
12	2,2261
15	2,1149

Source: Author data analysis

Also, the estimated securities yield from the yield curve of debt securities of the Republic of Srpska confirms that with increasing

sa povećanjem roka dospijea povećava prinos prilikom ulaganja u obveznice Republike Srpske. Međutim, podaci u prethodnoj tabeli pokazuju da su najveće stope prinosa na one obveznice čiji je rok dospijea četiri godine.

Stoga, pored tvrdnji koje su iznesene u prethodnom dijelu teksta, vrlo je važno konstatovati da tržište Banjalučke berze funkcioniše na veoma niskom nivou efikasnosti i da se nalazi u najozbiljnijoj krizi, te da su potrebne radikalne reforme sistema trgovanja ili finansijskog tržišta. Naime, u prethodnom periodu nije bilo ozbiljnih promjena i prilagođavanja metoda trgovanja u skladu sa uslovima na tržištu. Prema tome, uzimajući u obzir prvenstveno iskustva berzi iz neposrednog okruženja, neophodno je redefinisati sistem trgovanja, a sve sa ciljem bolje i neposrednije kontrole trgovanja. Time bi berzanske cijene hartija od vrijednosti bile bliže njihovoj realnoj vrijednosti, što bi smanjilo jaz između prosječne ponderisane procentualne promjene cijene i prosječne ponderisane procentualne promjene prometa u KM i povećalo efikasnost funkcionisanja Banjalučke berze.

ZAKLJUČAK

Obveznice su dužnički finansijski instrument kojim se emitent kao dužnik (zajmoprimac) obavezuje da će vratiti zajmodavcu (investitoru) pozajmljeni novac i platiti kamatu za određeni vremenski period. U formalnom smislu, obveznica sadrži tri bitna elementa, a to su: rok dospijea obveznice, nominalna ili kuponska kamatna stopa i nominalni iznos duga ili glavnica. Prema svojim osnovnim svojstvima, obveznice se mogu klasifikovati prema različitim kriterijumima, a to su: prema ročnosti (kratkoročne, srednjoročne i dugoročne), prema tipu amortizacije (kuponske, anuitetne i diskontne), prema denominaciji (nacionalna valuta, nenacionalna valuta – Eurobonds i dualna) i prema emitentu (obveznice koje emituje država, državne agencije, lokalni organi vlasti, banke i korporacije).

Kao i drugi finansijski instrumenti, i obveznica svom vlasniku (imaocu obveznice) obezbjeđuje odgovarajući prinos. Shodno tome, prilikom ulaganja u obveznice, svaki investitor mora napraviti razliku između tri vrste prinosa, a to su: nominalni (kuponski) prinos, tekući prinos i prinos do dospijea. Nominalni ili kuponski prinos je prinos koji obveznica obezbjeđuje na osnovu njenog posjedovanja u skladu sa iznosom kuponske stope. Kao takav, kuponski prinos ne mijenja se u periodu dospijea obveznice i nakon emitovanja obveznice nije osjetljiv na tržišne faktore. Tekući prinos je jedna od mjera stvarnog prinosa za investitore prilikom ulaganja u obveznice, a dobije se kao količnik kamatnog prihoda i cijene po kojoj je investitor kupio obveznicu. Stoga, on je izuzetno osjetljiv na promjene tržišne cijene, te je zbog toga dobar indikator trenutne rentabilnosti ulaganja u obveznicu. Za razliku od prethodnog, prinos do dospijea je diskontna stopa koja izjednačava sadašnju vrijednost gotovinskog toka obveznice (engl. cash flow) i cijenu obveznice. Prema tome, može se zaključiti da je prinos do dospijea interna stopa prinosa koja izjednačava sadašnju vrijednost gotovinskog toka obveznice i cijenu obveznice. U finansijskoj literaturi, prinos do dospijea često se tumači kao mjera prosječne stope prinosa koji će se ostvariti ako se obveznica kupi sada i zadrži do dospijea. Još jedna važna determinanta analize prinosa prilikom ulaganja u obveznice jeste odnos između cijene obveznice i prinosa prilikom ulaganja u obveznicu. Cijena obveznice je promjenljiva u vremenu, te varijabilnost cijena obveznica utiče na njen prinos, cijenu i rizik. U tom kontekstu, veća varijabilnost utiče na povećavanje rizika prilikom ulaganja u obveznicu, gdje investitori zahtijevaju veći prinos, što u krajnjem kontekstu smanjuje cijenu obveznice. Međutim, objašnjenje svih karakteristika

cjenovne varijabilnosti leži u konveksnom obliku odnosa cijene i prinosa. U praktičnom smislu, dvije karakteristike obveznice bitne su za varijabilnost njene cijene, a to su: kupon i period dospijea. Pri datom roku dospijea i početnom prinosu, varijabilnost cijene obveznice je veća što je manja kuponska kamatna stopa, i obrnuto. S druge strane, pri datoj kuponskoj stopi i početnom prinosu, što je duži period dospijea, veća je i varijabilnost cijene i obrnuto. Takođe, ovdje se može zaključiti da između cijene i prinosa prilikom ulaganja u obveznice postoji inverzna veza. Dakle, kada očekivani prinos raste, sadašnja vrijednost budućeg novčanog toka se smanjuje i obrnuto. Odnos cijene obveznice i prinosa na obveznicu može se posmatrati i kroz prizmu zahtijevanog prinosa. Kada je kuponska stopa veća od zahtijevanog prinosa, tada je cijena obveznica veća od nominalne vrijednosti i tada se radi o premijskoj obveznici. S druge strane, kada je kuponska stopa manja od zahtijevanog prinosa, tada je cijena obveznica manja od nominalne vrijednosti i radi se o diskontnoj obveznici. Međutim, svaki prinos može (a i ne mora) biti ostvaren na nivou koji je viši ili niži od očekivanog prinosa. Vjerovatnoća da se ne ostvari zadovoljavajući rezultat (prinos) jeste rizik obveznice, te je za svakog investicionog analitičara izuzetno važna temeljna analiza odnosa rizika i prinosa prilikom ulaganja u obveznicu. Investitor se u procesu ostvarivanja prinosa prilikom ulaganja u obveznicu suočava sa različitim vrstama rizika, a to su: kreditni rizik, kamatni rizik, rizik inflacije, rizik promjene deviznog kursa, rizik likvidnosti, rizik reinvestiranja i rizik opoziva.

U okviru praktičnog dijela rada, primijenjeni su teorijski postulati analize prinosa prilikom ulaganja u obveznicu, u svrhu analize prinosa prilikom ulaganja u obveznicu na tržištu kapitala Republike Srpske. Dakle, korišteni su i podaci o kretanju Indeksa obveznica Republike Srpske. Indeks obveznica Republike Srpske (ORS) jeste ponderisan cjenovni indeks koji na najreprezentativniji način i u najvećoj mjeri pokazuje ukupno kretanje prinosa obveznica Republike Srpske na Banjalučkoj berzi. Nakon izvršenih proračuna i analiza dobijenih rezultata može se zaključiti da je kuponski prinos obveznica koje ulaze u sastav ORS-a 1,5%, dok je tekući prinos i prinos do dospijea u prosjeku 1,54% i 2,23%, respektivno. Prema tome, tekući prinos i prinos do dospijea obveznica Republike Srpske veći je od kuponskog prinosa. Na osnovu svega toga konstatuje se da je tekuća tržišna cijena obveznica Republike Srpske niža od nominalne vrijednosti. U svrhu analize prinosa prilikom ulaganja u obveznicu na tržištu kapitala Republike Srpske izvršena je i serijozna analiza krive prinosa. Kriva prinosa je tipična kriva prinosa, odnosno normalna vremenska struktura kamatnih stopa rastućeg – konkavnog oblika, koja na vrlo jasan način pokazuje da obveznice Republike Srpske sa dužim rokom dospijea daju veći prinos. Međutim, analizom krive prinosa konstatovano je da su najveće stope prinosa na one obveznicu čiji je rok dospijea četiri godine.

Takođe, javni i privatni entiteti u Republici Srpskoj mogu da koriste prednosti tržišta kapitala Republike Srpske. Naime, prilikom finansiranja nabavke stalnih i obrtnih sredstava, oni bi mogli da se zaduže putem emisije dugoročnih korporativnih obveznica pod povoljnijim uslovima, nego da se zadužuju putem kreditnih aranžmana kod banka. Tako, na primjer, finansiranje nabavke magnetnih rezonanci, CT aparata, opremanje i znavljanje operacionih sala u zdravstvenim ustanovama po svojoj prirodi predstavljaju značajna finansijska ulaganja koja se otplaćuju u dugom roku, te zahtijevaju dugoročne izvore finansiranja. Stoga, prema podacima koji su prikazani u ovom radu, ukoliko se entiteti odluče na finansiranje nabavke stalne imovine putem zaduživanja, uz period otplate oko četiri godine, trebalo bi da tu nabavku finansiraju putem emisije korporativnih obveznica, jer bi tim postigli najbolji finansijski efekat. To bi u krajnjem slučaju doprinijelo daljem razvoju i napretku tržišta kapitala u Republici Srpskoj.

maturity, the yield when investing in bonds of the Republic of Srpska increases. However, the data in the previous table show that the highest yield rates are for those bonds with a maturity of four years.

Therefore, in addition to the statements made in the previous part of the text, it is very important to state that the Banja Luka Stock Exchange market operates at a very low level of efficiency and is in the most serious crisis, and that radical reforms of the trading system or financial market are needed. Namely, in the previous period, there were no serious changes and adjustments of trading methods in accordance with market conditions. Therefore, taking into account, primarily, the experience from neighboring stock exchanges, it is necessary to redefine the trading system, with the aim to obtain better and more direct trading control. This would bring the stock exchange prices of securities closer to their real value, which would reduce the gap between the weighted average percentage change in price and the weighted average percentage change of trading volume in BAM and increase the efficiency of the Banja Luka Stock Exchange.

CONCLUSION

Bonds are a debt financial instrument, by which the issuer as a debtor (borrower) undertakes to return the borrowed money to the lender (investor) and pay interest for a certain period of time. In the formal sense, a bond contains three essential elements, namely: the maturity of the bond, the nominal or coupon interest rate and the nominal amount of debt or principal. According to their basic properties, bonds can be classified according to various criteria, namely: maturity (short-term, medium-term and long-term), type of depreciation (coupon, annuity and discount), denomination (national currency, non-national currency-Eurobonds and dual) and according to the issuer (bonds issued by: the state, state agencies, local authorities, banks and corporations).

Like other financial instruments, the bond provides its owner (bondholder) with an appropriate yield. Consequently, when investing in bonds, each investor must distinguish between three types of yield, namely: nominal (coupon) yield, current yield and yield to maturity. Nominal or coupon yield is the yield that the bond provides on the basis of its possession in accordance with the coupon rate. As such, the coupon yield does not change during the maturity of the bond and is not sensitive to market factors after the bond is issued. Current yield is one of the measures of real return for investors when investing in bonds, and is obtained as a quotient of interest income and the price at which the investor bought the bond. Therefore, it is extremely sensitive to changes in the market price, and is therefore a good indicator of the current profitability of a bond investment. Unlike the previous one, the yield to maturity is a discount rate that equalizes the present value of the cash flow of the bond (cash flow) and the price of the bond. Therefore, it can be concluded that the yield to maturity is an internal rate of return that equals the present value of the cash flow of the bond and the price of the bond. In the financial literature, the yield to maturity is often interpreted as a measure of the average rate of return that will be realized if a bond is purchased now and held to maturity. Another important determinant of bond yield analysis is the relationship between bond price and bond yield. The price of a bond is variable over time, and the variability of bond prices affects its yield, price and risk. In this context, greater variability affects the increase in risk when investing in a bond, where investors demand a higher return, which in the final context reduces the price of the bond. However, the explanation of all the characteristics of price

variability lies in the convex form of the price-yield relationship. In practical terms, two characteristics of a bond are essential for the variability of its price, namely: coupon and maturity. At a given maturity and initial yield, the variability of the bond price is greater as the coupon interest rate is lower and vice versa. On the other hand, at a given coupon rate and initial yield, the longer the maturity period, the greater the price variability and vice versa. Also, it can be concluded here that there is an inverse relationship between bond price and bond yield. Thus, when the expected yield grows, the present value of future cash flow decreases and vice versa. The relationship between the bond price and the bond yield can also be observed through the prism of the required yield. When the coupon rate is higher than the required yield, then the bond price is higher than the nominal value and then it is a premium bond. On the other hand, when the coupon rate is less than the required yield, then the bond price is less than the nominal value and then it is a discount bond. However, each yield may (and does not have to) be achieved at a level that is higher or lower than the expected yield. The probability of not achieving a satisfactory result (yield) is the risk of the bond, and for any investment analyst, a thorough analysis of the relationship between bond risk and bond yield is extremely important. The investor in the bond yield realization process faces different types of risks, namely: credit risk, interest rate risk, inflation risk, exchange rate risk, liquidity risk, reinvestment risk and risk of bond call.

Within the practical part of the paper, the theoretical postulates of bond yield analysis were applied, for the purpose of bond yield analysis in the capital market of the Republic of Srpska. Therefore, data on the movement of the Index of the Republic of Srpska Bonds were also used. The Index of the Republic of Srpska Bonds (hereinafter ORS) is a weighted price index that in the most representative way and to the greatest extent shows the overall movement of the yield of the Republic of Srpska bonds on the Banja Luka Stock Exchange. After calculations and analysis of the obtained results, it can be concluded that the coupon yield of bonds that are part of the ORS is 1.5%, while the current yield and yield to maturity are on average 1.54% and 2.23%, respectively. Therefore, the current yield and the yield to maturity of the Republic of Srpska bonds are higher than the coupon yield. Based on all that, it is concluded that the current market price of the Republic of Srpska bonds is lower than the nominal value. In order to analyze the bond yield in the capital market of the Republic of Srpska, a serious analysis of the yield curve was performed. The yield curve is a typical yield curve, ie the normal time structure of interest rates, which has an increasing-concave shape and which shows in a very clear way that the Republic of Srpska bonds with a longer maturity give a higher yield. However, the analysis of the yield curve shows that the highest yield rates are for those bonds with a maturity of four years.

Also, public and private entities in the Republic of Srpska can take advantage of the capital markets of the the Republic of Srpska. Namely, when financing the purchase of fixed and current assets, they could borrow through the issue of long-term corporate bonds under more favorable conditions, than to borrow through credit arrangements with banks. Thus, for example, financing the purchase of magnetic resonance imaging, CT machines, equipping and renovating operating rooms in health care institutions, by their nature, represent significant financial investments that are repaid in the long run, and require long-term financing. Therefore, according to the data presented in this paper, if the entities decide to finance the acquisition of fixed assets through borrowing, with a repayment period of about 4 years, in that case the entities should finance this acquisition through the issue of corporate bonds, because they would achieve the best financial effect. This would ultimately

Pored tvrdnji koje su iznesene u prethodnom dijelu teksta, može se konstatovati da tržište Banjalučke berze funkcioniše na vrlo niskom nivou efikasnosti i da se nalazi u najozbiljnijoj krizi, te da su potrebne radikalne reforme sistema trgovanja ili finansijskog tržišta. U prethodnom periodu, nije bilo ozbiljnijih promjena i prilagođavanja metoda trgovanja u skladu sa uslovima na tržištu. Prema tome, uzimajući u obzir prvenstveno iskustva berzi iz neposrednog okruženja, neophodno je redefinisati sistem trgovanja, a sve sa ciljem bolje i neposrednije kontrole trgovanja. Time bi berzanske cijene hartija od vrijednosti bile bliže njihovoj realnoj vrijednosti, što bi smanjilo jaz između prosječne ponderisane procentualne promjene cijene i prosječne ponderisane procentualne promjene prometa u KM i povećalo efikasnost funkcionisanja Banjalučke berze.

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contribute to the further development and progress of the capital market in the Republic of Srpska.

Therefore, in addition to the statements made in the previous part of the text, it is very important to state that the Banja Luka Stock Exchange market operates at a very low level of efficiency and is in the most serious crisis, and that radical reforms of the trading system or financial market are needed. Namely, in the previous period, there were no serious changes and adjustments of trading methods in accordance with market conditions. Therefore, taking into account, primarily, the experience from neighboring stock exchanges, it is necessary to redefine the trading system, with the aim to obtain better and more direct trading control. This would bring the stock exchange prices of securities closer to their real value, which would reduce the gap between the weighted average percentage change in price and the weighted average percentage change of trading volume in BAM and increase the efficiency of the Banja Luka Stock Exchange.

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Radovi sa priložima obavezno se dostavljaju u elektronskom obliku. Tekst rada i grafički prilozi (fotografije, grafikoni) moraju biti odvojeni dokumenti i u pogodnom obliku za konvertovanje i tehničko manipulisanje.

Prilikom dostavljanja rada, autor dostavlja i kontakt podatke: ime i prezime sa srednjim slovom, naučno i titularno zvanje, brojeve mobilnog i fiksnog telefona, poštansku adresu, elektronsku adresu, naziv ustanove u kojoj je zaposlen i radno mjesto u toj ustanovi.

Samo podaci koji se navode kao dio opreme članka (tzv. metapodaci) biće objavljeni u časopisu.

2. PRAVA I OBAVEZE AUTORA I IZDAVAČA

Za objavljivanje se prihvataju radovi koji, po mišljenju urednika i recenzenata, zadovoljavaju kriterijume časopisa u pogledu relevantnosti, profesionalnog nivoa i aktuelnosti. Redakcija zadržava pravo da radove prilagodi opštim pravilima uređivanja časopisa i standardu jezika.

Za sva mišljenja iznesena u objavljenom radu odgovoran je isključivo autor. Urednik, recenzenti ili izdavač ne prihvataju odgovornost za autorova iznesena mišljenja.

Ukoliko je rad prihvaćen za objavljivanje, pravo reprodukcije rada u svim drugim medijima pripada izdavaču od datuma prihvatanja.

Prilog treba da bude pripremljen prema standardima časopiša. Ukoliko se ne poštuju kriterijumi navedeni u nastavku, redakcija može da ne prihvati tekst ili da traži da se rad prilagodi, zbog čega objavljivanje može da kasni.

3. TEHNIČKE NORME OBLIKOVANJA ČLANKA

3.1. Obim rada

Rad treba da ima najviše do 15 strana A4 formata (između 15.0000 i 30.000 znakova).

3.2. Format dokumenata, stilovi i oblikovanje

Tekst rada u elektronskom obliku mora biti u jednom od standardnih formata: doc, docx, rtf (*Microsoft Word*).

Ilustrativne priloge treba priložiti u elektronskoj formi kao zasebne datoteke u nekom od standardnih formata: ai, cdr, eps (grafikoni, šeme) ili jpeg, tiff, gif, pdf (fotografije) sa rezolucijom od najmanje 300 tačaka po inču u prirodnoj veličini. U tekstu rada treba jasno označiti mjesto gdje se prilog pojavljuje i naziv priloga kako je označen na mediju.

Bez obzira na jezik, neophodno je da rad bude otkucan u fontu koji podržava unikatni standard (*Unicode*), po mogućnosti *Times New Roman*.

3.3. Jezik i pismo rada

Jezik rada, pored srpskog ili drugog jezika konstitutivnih naroda BiH može biti bilo koji jezik raširene upotrebe u međunarodnoj komunikaciji i u datoj naučnoj oblasti.

3.4. Sastavni dijelovi opreme članka

3.4.1. Ime autora

Navodi se puno ime i prezime (svih) autora, sa srednjim slovom. Prezimena i imena domaćih autora uvijek se ispisuju u originalnom obliku (sa srpskim dijakritičkim znakovima), nezavisno od jezika rada. Naučna i titularna zvanja autora u tekstu za objavu se ne navode (npr. *prof., dr...*).

3.4.2. Kontakt podaci

Adresa ili e-adresa autora objavljuje se u časopisu. Ako je autora više, daje se samo adresa jednog, obično prvog autora.

3.4.3. Naziv ustanove autora (afilijacija)

Navodi se pun (zvanični) naziv i sjedište ustanove u kojoj je autor zaposlen, a eventualno i naziv ustanove u kojoj je autor obavio istraživanje. U složenim organizacijama navodi se ukupna hijerarhija. Bar jedna organizacija u hijerarhiji mora biti pravno lice. Ako je autora više, a neki potiču iz iste ustanove, mora se naznačiti iz koje od navedenih ustanova potiče svaki od navedenih autora.

INSTRUCTIONS FOR AUTHORS

1. DELIVERY OF PAPERS

Papers are published on condition that they have not been previously published, nor have they been requested for publishing them in another magazine. Papers that are not adequately prepared on the basis of this instruction will not be taken into consideration.

Papers with attachments must be submitted electronically. The text and graphics (photographs, graphs) must be separate documents and in a suitable form for conversion and technical manipulation.

When submitting the paper, the author also submits contact information: name and surname with the middle letter, scientific and titular title, mobile and fixed telephone numbers, postal address, e-mail address, the name of the institution in which he/she is employed and a position in that institution.

Only the data that classifies as part of the article equipment (so-called metadata) will be published in the journal.

2. RIGHTS AND OBLIGATIONS OF AUTHORS AND PUBLISHERS

Only papers which, in the opinion of editors and reviewers, meet the criteria of the journal in terms of relevance, professional level and actuality, are published. The editorial board reserves the right to adapt the paper to the journal policy and the language standard.

All the opinions expressed in the published paper are solely responsibility of the author. Editor, reviewers or publisher do not accept responsibility for the author's expressed opinions.

If the paper is accepted for publication, the right to reproduce work in all other media belongs to the publisher from the date of acceptance.

The attachment should be prepared according to the standards of the journal. If the criteria listed below are not respected, the editorial board may not accept the text or request adjustments, which may cause the publication to be delayed.

3. TECHNICAL NORMS OF ARTICLE DESIGN

3.1. The scope of paper

The paper should have up to 15 pages of A4 format (between 15.000 and 30.000 characters).

3.2. Document formats, styles and design

The text in electronic format must be in one of the standard formats: doc, docx, rtf (Microsoft Word).

Illustrative attachments should be submitted electronically as separate files in one of the standard formats: ai, cdr, eps (charts, schemes) or jpeg, tiff, gif, pdf (photos) with a resolution of at least 300 dpi in natural size. The text of the paper should clearly indicate the place where the attachment should appear and the name of the attachment as it is marked on the medium.

Regardless of the language, the paper needs to be typed in a font that supports a unique standard (Unicode), preferably Times New Roman.

3.3. Paper language and letter

The language of paper, in addition to Serbian or the language of other constituent nations in B&H, can be any language of widespread use in international communication and in a given scientific field.

3.4. Components of the article equipment

3.4.1. Author name

The full name of (all) authors, with a middle letter, is listed. The first and last names of domestic authors are always printed in their original form (with Serbian diacritics), regardless of the language of paper. Scientific and titular titles of the author in text for publication are not listed (for example, PhD).

3.4.2. Contact Information

The address or e-mail address of the author is published in the journal. If there are multiple authors, only the address of one, usually the first author, is listed.

3.4.3. Name of the author's institution (affiliation)

The full (official) name and headquarters of the institution in which the author is employed is listed, and possibly the name of the institution in which the author performed the research. In complex organizations, the overall hierarchy is listed. At least one organization in the hierarchy must be a legal entity. If there are multiple authors is, and some of them are employed by the same institution, the institution of each author has to be listed.

3.4.4. Naslov

U opštem je interesu da se u naslovu koriste riječi prikladne za indeksiranje i pretraživanje. Ako takvih riječi nema u naslovu, poželjno je da se naslovu pridoda podnaslov. Naslov se ispisuje na dva jezika, i to:

- u datoteci priloga, na dva mjesta – na početku rada (na jeziku na kome je napisan rad) i u rezimeu (na jeziku na kome je napisan rezime).

3.4.5. Podnaslovi

Podnaslovi se numerišu po nivoima, arapskim brojevima, po principu: *1. Prvi podnaslov, 2. Drugi podnaslov, 2.1. Prvi podnaslov drugog reda, 2.2. Drugi podnaslov drugog reda, 3. Treći podnaslov...* (poput strukture podnaslova korišćene u ovom uputstvu).

3.4.6. Rezime

Rezime je kratak informativan prikaz sadržaja članka koji čitaocu (ali i učesnicima u uređivačkom procesu) omogućava da brzo i tačno ocijeni njegovu relevantnost. U interesu je autora da sažeci sadrže termine koji se često koriste za indeksiranje i pretragu članaka. Sastavni dijelovi sažetka su cilj istraživanja, metodi, rezultati i zaključak.

Sažetak treba da ima od 100 do 200 riječi i treba da stoji:

- u datoteci priloga, između naslova i ključnih riječi. Sažetak mora biti napisan na jeziku na kome je i rad. Sažetak ne sadrži reference.

Ukoliko je rad samo na srpskom jeziku, rezime treba da bude napisan i na engleskom jeziku. Za rezime na engleskom jeziku autor mora obezbijediti gramatičku i pravopisnu ispravnost. Obim rezimea može biti do 1/10 obima članka.

3.4.7. Ključne riječi

Ključne riječi su termini koje najbolje opisuju sadržaj članka za potrebe indeksiranja i pretraživanja. Treba ih dodjeljivati s osloncem na neki međunarodni izvor (popis, rječnik ili tezaurus) koji je najšire prihvaćen unutar date naučne oblasti.

Broj ključnih riječi ne smije biti veći od osam.

Ključne riječi daju se na jeziku na kome je napisan rad i na jeziku na kome je napisan rezime. U članku se daju neposredno nakon rezimea.

3.4.8. Sadržaj rada

Rad treba da bude relevantan za naučnu i stručnu javnost, sa jasno naglašenim ciljevima, uvodom, primijenjenim metodama, rezultatima istraživanja, diskusijom, zaključkom, referencama u tekstu i bibliografskim jedinicama na kraju. Ideje u radu moraju biti originalne i značajno doprinositi razvoju predmeta istraživanja, a metodologija mora biti jasno opisana.

3.4.9. Tabelarni i grafički prikazi

Tabelarni i grafički prikazi treba da budu dati na jednoobrazan način. Svaka tabela, grafikon ili slika moraju biti označeni brojem po redoslijedu navođenja u tekstu, s adekvatnim nazivom (npr.: *Tabela 2. Pouzdanost varijabli*).

3.4.10. Citiranje

Citiranje je doslovno navođenje tuđih otkrića, spoznaja, teorija, definicija, dokaza, stavova, teza, interpretacije mišljenja, podataka i sl. i njihovo jasno odvajanje od autorovih, te naznačavanje bibliografskog izvora iz kojeg potiču.

Pozivanje na izvore citiranog teksta označava se u zagradi na mjestu gdje se on nalazi, navođenjem prezimena autora, godine izdanja djela i stranice s koje je citat preuzet, a sam tekst se stavlja pod navodnike.

3.4.11. Implicitno navođenje teksta (parafraziranje)

Implicitno navođenje ili parafraziranje je prenošenje otkrića, spoznaja, teorija, definicija, dokaza, stavova, teza, interpretacije mišljenja, podataka i sl. nekog drugog autora, ali ne doslovno, kako stoji u korišćenom izvoru, već na sopstveni način, odnosno sopstvenim izražajnim stilom.

Informacioni sadržaj parafraziranjem mora biti prenesen jasno i vjerodostojno, ali sopstvenim stilskim izražajem. Parafrazirani tekst nije iste dužine kao izvorni, on može biti duži ili kraći u zavisnosti od cilja koji se želi postići, ali mora sačuvati suštinu izvornog teksta.

Pozivanje na izvore parafraziranog teksta označava se u zagradi na mjestu u tekstu gdje se on nalazi, navođenjem prezimena autora i godine izdanja djela iz kojeg je tekst preuzet u zagradi.

3.4.12. Napomene (fusnote)

Napomene se daju pri dnu strane na kojoj se nalazi komentarisani dio teksta. Ne unose se „ručno“, već uz pomoć automatskih alatki za označavanje fusnota u konkretnom programu.

3.4.4. Title

It is general interest to use words suitable for indexing and searching in the title. If there are no such words in the title, it is advisable to add a subtitle to the title. The title is written in two languages:

in the attachment file, in two places - at the beginning of the paper (in the language in which the paper is written) and in the summary (in the language in which the summary is written).

3.4.5. Subtitles

The subtitles are numbered by levels, using Arabic numerals, according to the principle: 1. First subtitle, 2. Second subtitle, 2.1. The first subtitle of the second order, 2.2. The second subtitle of the second order, 3. Third subtitle ... (like the subtitle structure used in this manual).

3.4.6. Summary

The summary is a brief informative overview of the contents of the article that allows the reader (but also the participants in the editorial process) to quickly and accurately assess its relevance. It is in the author's interest that the summaries contain terms that are often used to index and search articles. The constituent parts of the summary are the aim of the research, the methods, the results and the conclusion.

The summary should contain from 100 to 200 words and should be in the attachment file, between titles and keywords.

The summary must be written in the same language as the paper. The summary does not contain references.

If the paper is in Serbian only, the summary should also be written in English as well. For the English summary, the author is responsible for grammatical and spelling accuracy. The scope of the summary can be up to 1/10 of the scope of the article.

3.4.7. Keywords

Keywords are terms that best describe the content of the article for indexing and search purposes. They should be assigned with a reference to an international source (list, dictionary or thesaurus) that is most widely accepted within the given scientific field.

The number of keywords must not exceed eight.

Keywords are given in the language in which the paper is written and in the language in which the summary is written. In the article they are provided after the summary.

3.4.8. Content of paper

The paper should be relevant to the scientific and professional public, written in accordance with IMRAD (Introduction, Method, Results and Discussion) by the presence of text organization with clearly stated goals, introduction, applied methods, research results, discussion, conclusion, references in the text and bibliographic units at the end. The ideas in the paper must be original and significantly contribute to the development of the subject of research, and the methodology must be clearly described.

3.4.9. Tabular and graphic representations

Tabular and graphic representations should be presented in a uniform manner. Each table, chart, or image must have a number assigned according to the order in which they appear in the paper, with the appropriate title (for example: Table 2. Reliability of variables).

3.4.10. Quoting

Quoting is a literal reference to others' discoveries, cognitions, theories, definitions, proofs, attitudes, theses, interpretations of opinions, data, and so on, their clear separation from author's, and the identification of the bibliographic source from which they originate.

Source of the quoted text is indicated in brackets at the place where it is located, by naming the author's surnames, the year of publication of the work and the page from which the quote was taken, and the quoted text is under quotation marks.

3.4.11. Implicit citing (paraphrasing)

Implicit citing or paraphrasing is the transfer of discoveries, cognitions, theories, definitions, proofs, attitudes, theses, interpretations of opinions, data, etc. of another author, not literally, as it is in the used source, but in author's own manner or own expressive style.

Paraphrased content must be cited clearly and credibly, but in the author's own style. The paraphrased text is not the same length as the original, it may be longer or shorter depending on the goal to be achieved, but it must preserve the essence of the source text.

Source of the paraphrased text is indicated in brackets at a place where it is located by stating the surname of the author and the year of publication of the work from which the text was taken.

3.4.12. Notes (footnotes)

The notes are provided at the bottom of the page where the commented part of the text is located. They are not inserted "manually", but with the help of automatic tools in a specific program.

3.4.13. Korišćeni izvori u radu

Izvori obuhvataju, po pravilu, bibliografske izvore (članke, monografije i sl.) i daje se isključivo u zasebnom odjeljku članka, u vidu liste referenci. Reference se ne prevode na jezik rada, niti se preslovljavaju.

Za različite vrste bibliografskih jedinica različito se navode bibliografski podaci. Treba poštovati pravila standarda APA, <http://www.apastyle.org/index.aspx>. Nestandardno, nepotpuno ili nedosljedno navođenje izvora jedan je od kriterijuma za objavljivanje članka u časopisu.

U spisku literature navode se samo reference koje je autor koristio pri izradi, abecednim redom po prezimenima autora ili naslovu citirane reference ukoliko se ona tretira kao anonimno djelo.

Ako publikacija ima više izdavača i/ili mjesta izdanja, navodi se samo prvi.

Nema nikakve potrebe navoditi seriju, biblioteku u kojoj je knjiga izdata (to važi i za sabrana/izabrana djela), niti prevodioca, ako je monografija prevedena.

Ako je relevantno istaći broj izdanja, on se navodi iza naslova, u zagradi.

3.4.14. Prilog

U prilogu bi trebalo dati samo one opise materijala koji bi čitaocima bili korisni za razumijevanje, evaluiranje ili ponavljanje istraživanja.

3.5. Jezičke preporuke

Jezik rada treba da pripada naučnom stilu standardnog jezika i da, stoga, bude usaglašen u što je moguće većoj mjeri s pravopisnom, gramatičkom i stilskom normom.

Individualne skraćenice bi trebalo izbjegavati, a ako se koriste, moraju biti raščitane pri prvoj upotrebi.

3.4.13. The sources used in the paper

Sources include, as a rule, bibliographic sources (articles, monographs, etc.) and are listed exclusively in a separate section of the article, in the form of a list of references. References are not translated into the language of the paper, nor is their letter changed.

Bibliographic data is listed differently for different types of bibliographic units. APA rules must be respected, <http://www.apastyle.org/index.aspx>. Non-standard, incomplete or inconsistent source guidance is one of the criteria for disregarding the article.

Only the references used by the author are listed in the literature list, in the alphabetical order of the author's surnames or the sources' titles, for those that are treated as anonymous works.

If the publication has multiple publishers and / or publishing sites, only the first one is listed.

There is no need to indicate the series, the library in which the book was issued (this also applies to the collected / selected papers), nor the translator, if the monograph is translated.

If it is relevant to indicate the issue number, it is listed behind the title, in brackets.

3.4.14. Attachment

Attachments should only provide descriptions of materials that would be useful for readers to understand, evaluate or repeat the research.

3.5. Language recommendations

The language of paper should belong to the scientific style of the standard language and, therefore, be as harmonized as possible with spelling, grammatical and stylistic norms.

Individual abbreviations should be avoided, and if they are used, they must be explained at first use.

