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ORIGINALNI NAUČNI RAD

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Primena višedimenzionalnih pokazatelja za racionalnu analizu likvidnosti privrede Republike Srbije

Application of multidimensional indicators for rational analysis of liquidity of the economy of the Republic of Serbia

Rezime

Sam problem likvidnosti je „evergreen" tema rasprave na različitim nivoima javnog, društvenog, naučnog, a posebno privrednog života, koja se uvek aktuelizuje u kriznim uslovima poslovanja, koji su danas izraženi, kako kod nas, tako i u svetu. Načelo likvidnosti sadrži osnovu kvalitetnog i uspešnog poslovanja i predstavlja ključ nesmetanog odvijanja procesa proizvodnje i prometa, sa aspekta priliva i odliva novčanih sredstava, pa stoga nije slučajno da se likvidnost poredi sa „pulsom" koji odražava „zdravlje" ili „oboljenje" finansija preduzeća. Tradicionalna, statička dimenzija analize likvidnosti utemeljena na obračunskoj računovodstvenoj osnovi i relacijama može da posluži kao upozorenje na opasnost i posledice neracionalog disponiranja novca, ali ne i kao orijentacija za buduće novčane tokove. Moderna, dinamička, dimenzija analize likvidnosti utemeljena na „finansijskom mišljenju" tretira likvidnost ne samo u datom trenutku već u toku odvijanja poslovanja preduzeća i okrenuta je u budućnost; ima se u vidu tretman stvarnih transakcija u prometu gotovine i njenih ekvivalenata (lišenih upotreba metoda procenjivanja vrednosti). Otuda se u praksi upravljanja likvidnosti generišu dileme oko izbora podesnog analitičkog modela, koji bi mogao odgovoriti narastajućim upravljačkim potrebama. Cilj rada je da se istakne kao relevantna integralna primena višedimenzionalih pokazatelja za racionalnu analizu likvidnosti za period od 2017. do 2019. godine. Rezultati istraživanja na primeru izabranih preduzeća i delatnosti iz Republike Srbije pokazuju celishodnost preferiranja višedimenzionalih pokazatelja za meritornu analizu likvidnosti.

Ključne reči: *likvidnost, zaduženost, solventnost, Srbija.*

Abstract

The problem of liquidity itself is an "evergreen" topic of discussion at various levels of public, social, scientific, and especially economic life, which is always relevant in the crisis business conditions that are expressed today, both in our country and in the world. The principle of liquidity contains the basis of quality and successful business and is the key to the smooth running of the production and turnover process, from the aspect of cash inflows and outflows, so it is no coincidence that liquidity is compared to "pulse" which reflects "health" or "disease". The traditional, static, dimension of liquidity analysis based on accrual accounting basis and relations can serve as a warning of the danger and consequences of irrational disposition of money, but not as an orientation for future cash flows. The modern, dynamic, dimension of liquidity analysis based on "financial opinion" treats liquidity not only at a given moment, but in the course of the company's operations and is future-oriented; the treatment of actual transactions in cash transactions and its equivalents (deprived of the use of valuation methods) is taken into account. Hence, in the practice of liquidity management, dilemmas are generated on the choice of a suitable analytical model, which could respond to management needs. The aim of this paper is to highlight a relevant integral application of multidimensional indicators for rational liquidity analysis for the period from 2017 to 2019. The results of the research on the example of selected companies and activities from the Republic of Serbia show the expediency of preferring multidimensional indicators for meritorious liquidity analysis.

Keywords: *liquidity, indebtedness, solvency, Serbia.*

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UVOD

Nesporno je da likvidnost predstavlja probni kamen finansijskog poslovnog partnerstva na osnovu koga jača poslovno poverenje ili se ono napušta. Koliko je značajan ovaj aspekt analize finansija za svako preduzeće, bez obzira na njegovu veličinu, delatnost odnosno tipologiju, potvrđuje činjenica da duži prekidi ili pak nemogućnost nesmetanog odvijanja ovih finansijskih odnosa dovode preduzeće u poziciju stečaja.

Dakle, u fokusu analize likvidnosti jeste operativno pulsiranje internih i eksternih finansijskih odnosa. Drugim rečima, u pitanju je najvidljiviji sloj složenih finansijskih odnosa koji su rezultat dinamike i međuzavisnosti promena kratkoročne i dugoročne finansijske ravnoteže u odvijanju poslovnih aktivnosti preduzeća.

Splet finansijskih odnosa preduzeća kao kompleksnog sistema u okruženju i njihovo ispitivanje u finansijskoj analizi nije jednostavan, naprotiv, on je kompleksan, i ne samo da zahteva uvažavanje specifičnosti preduzeća već ne dopušta da se finansijska analiza odvija „bez kompasa“, odnosno bez adekvatnog analitičnog instrumentarijuma.

Okvir za analizu likvidnosti temelji se na određenim instrumentarijima i metodskim postupcima, i to sa (Čavlin, 2004):

– kvantitativnog aspekta odnosa veličina koje determinišu pokazatelje likvidnosti, vrednujući validnost datih koeficijenata u odnosu na prihvaćene standarde (veličine – koeficijente);

– kvalitativnog aspekta ispitivanja i ocene likvidnosti konvertovanja likvidne imovine u novčani oblik i dospećem kratkoročnih obaveza – te njihovog usklađivanja; to se čini korišćenjem novčanog toka, odnosno gotovinskog ciklusa i njegovih pokazatelja.

Tek racionalnim povezivanjem i kritičkom ocenom rezultata analize likvidnosti sa navednih aspekata može se računati na relevantnu (jezgrovitu) produkciju korisnih informacija za meritorno odlučivanje o likvidnosti.

Predmet ovog rada uključuje analizu pokazatelja relevantnih za celovitu ocenu likvidnosti i identifikaciju pozicije likvidnosti u određenim delatnostima i preduzećima u Republici Srbiji. U skladu sa navedenim predmetom, sledeći su ciljevi koji su obuhvaćeni ovim radom, a to su:

– pregled tipičnih postavki koje se primenjuju u analizi likvidnosti,

– analiza likvidnosti i zaduženosti odabranih delatnosti u Republici Srbiji, i

– analiza međuzavisnosti izabranih pokazatelja likvidnosti preduzeća.

Naša polazna hipoteza jeste opravdanost integralne primene statičkih i dinamičkih, tj. višedimenzionalnih i međuzavisnih pokazatelja kao neophodne sistemske analitičke aparature za racionalnu analizu likvidnosti, a na primeru odabranih višedimenzionalnih pokazatelja likvidnosti za reprezentativne delatnosti privrede Republike Srbije. Da bi se ostvario cilj rada, uz analizu relevantne literature, u teorijskim aspektima sažeto su prikazane tipične postavke za analizu likvidnosti, data je ocena pozicije likvidnosti za izabrana preduzeća i delatnosti u Republici Srbiji, pri čemu su za izračunavanje pokazatelja korišteni podaci iz zvaničnih finansijskih izveštaja preduzeća u Republici Srbiji za period od 2017. do 2019. godine i izvršena analiza međuzavisnosti između izabranih pokazatelja likvidnosti, pri čemu su korištene deskriptivne i statističke metode.

1. METODOLOGIJA ISTRAŽIVANJA

Istraživanje u radu obuhvata analizu ključnih parametara likvidnosti i solventnosti preduzeća u Republici Srbiji za period od 2017. do 2019. godine. Za potrebe istraživanja oblikovan je uzorak preduzeća koja su klasifikovana na područja delatnosti poslovnim strukturnim statistikama Republičkog zavoda za statistiku Srbije, a pokazatelji su izvedeni iz javno dostupnih informacija odnosno zvaničnih finansijskih izveštaja koje su predmetna preduzeća dostavila Agenciji za privredne registre Republike Srbije, te iz neposrednog uvida u izveštaje preduzeća. Prema dostupnim podacima, od ukupnog broja preduzeća koja su pripremila i predala godišnje finansijske izveštaje, a za potrebe istraživanja, uvažavajući kriterijum delatnosti, oblikovan je uzorak i prikupljeni su relevantni podaci za trogodišnji period 2017–2019.

Korelaciona analiza primenjena je u svrhu ispitivanja stepena kvanitativnog slaganja varijabiliteta analiziranih varijabli. U osnovnom skupu koeficijent korelacije obeležava se sa ρ, a u uzorku sa r. Za uzoračke opservacije (x_i, y_i), i = 1, 2, ... n, koeficijent korelacije izračunava se po formuli:

$$r = \frac{\sum x_i y_i - n \cdot \bar{x} \cdot \bar{y}}{\sqrt{(\sum x_i^2 - n \cdot \bar{x}^2) \cdot (\sum y_i^2 - n \cdot \bar{y}^2)}}$$

Stepen povezanosti izražava se koeficijentom korelacije r. Vrednost koeficijenta korelacije kreće se u granicama od -1 (potpuno negativna povezanost) do 1 (potpuno pozitivna povezanost). Statističku značajnost koeficijenta korelacije možemo sprovesti na dva načina: preko t-vrednosti i upoređivanjem dobijenog r sa graničnom vrednošću r očitanom iz tablice. Kako navode autori Radović Marković i Hanić (2018), istinitost istraživačke hipoteze da između dve varijable postoji korelacija odnosno da je veza X i Y značajna (signifikantna) formalno se sprovodi procedurom testiranja nulte hipoteze da je koeficijent linearne korelacije jednak nuli, pri čemu se koristi sledeća statistika t-testa:

$$t = \sqrt{\frac{n-2}{1-r^2}}$$

2. PREGLED LITERATURE I POSTAVKE ZA ANALIZU LIKVIDNOSTI PREDUZEĆA

Vlade, centralne banke i regulatorna tela trude se da pospeše likvidnost na tržištu, uvodeći nove mere monetarne i finansijske politike, poreske olakšice, kao i druge mere za ublažavanje posledica COVID-19, koji je prouzrokovao oštre kontrakcije u ekonomskom razvoju, smanjenje likvidnosti i otežan pristup kapitalu (Vapa Tankosić, Čavlin i Buđevac, 2020). Swop linije centralnih banaka takođe olakšavaju pružanje adekvatnog nivoa devizne likvidnosti bankarskom sistemu kao neku vrstu „zadnjeg utočišta“, pod povoljnijim uslovima od tržišnih uslova (Kiss et al., 2020). Trenutna finansijska situacija i volatilnost koja utiče na globalna tržišta zahteva očuvanje specijalizovanih institucija koje imaju ulogu „osiguranika zadnjeg utočišta“ i koje podržavaju transakcije koje poslovne banke samostalno ne mogu da podrže (Vapa Tankosić i Vukosavljević, 2021). Rezultati istraživanja pokazuju da MSP smatraju da finansijski oblici podrške utiču na sposobnost i konkurentnost MSP i da najveći broj ispitanika najviše vrednuje korist od državnih institucija u obliku finansijske podrške (Vapa Tankosić et al., 2020).

U lokalnoj ekonomskoj literaturi postoje brojna istraživanja na temu likvidnosti, među kojima se ističe doprinos koji su dali Rodić

INTRODUCTION

It is indisputable that liquidity is the foundation of a financial business partnership on the basis of which business confidence is strengthened or abandoned. How important this aspect of financial analysis is for every company, regardless of its size, activity or typology, is confirmed by the fact that longer interruptions or the impossibility of unhindered development of these financial relations puts the company in a position of bankruptcy.

Thus, the focus of liquidity analysis is the operational pulsation of internal and external financial relations. In other words, it is the most visible layer of complex financial relations that are the result of the dynamics and interdependence of changes in short-term and long-term financial balance in the course of business activities of the company.

The set of financial relations of the company as a complex system in the environment and their examination in financial analysis is not simple, on the contrary, it is complex, and not only requires respect for the specifics of the company, but does not allow financial analysis to take place "without compass", that is, without adequate analytical tools.

The framework for liquidity analysis is based on certain instruments and methodological procedures, as follows: (Čavlin, 2004):

– quantitative aspect of the ratio of variables that determine liquidity indicators, evaluating the validity of given coefficients in relation to accepted standards (variables - coefficients);

– qualitative aspect of testing and assessment of liquidity of converting liquid assets into cash and maturity of short-term liabilities - and their adjustment; this is done by using the cash flow, ie the cash cycle and its indicators.

Only by rational linking and critical evaluation of the results of liquidity analysis from the above aspects can we count on the relevant (concise) production of useful information for meritorious decision-making on liquidity.

The subject of this paper includes the analysis of indicators relevant for the overall assessment of liquidity and the identification of the liquidity position in certain activities and companies in the Republic of Serbia. In accordance with the above subject, the following goals are covered by this paper, and they are:

– an overview of typical assumptions applied in liquidity analysis,

– analysis of liquidity and indebtedness of selected activities in the Republic of Serbia, and

– analysis of the interdependence of selected liquidity indicators of the company.

Our initial hypothesis is the justification of the integral application of static and dynamic, ie. multidimensional and interdependent indicators as necessary system analytical apparatus for rational liquidity analysis, and on the example of selected multidimensional liquidity indicators for representative activities of the economy of the Republic of Serbia. In order to achieve the goal of the paper, along with the analysis of relevant literature, in theoretical aspects, typical settings for liquidity analysis are summarized, liquidity position assessment for selected companies and activities in the Republic of Serbia is given, using data from official company financial statements in the Republic of Serbia for the period from 2017 to 2019, and an analysis of the interdependence between selected liquidity indicators was performed, using descriptive and statistical methods.

1. RESEARCH METHODOLOGY

The research includes an analysis of key parameters of liquidity and solvency of companies in the Republic of Serbia for the period from 2017 to 2019. For the purposes of the research, a sample of companies classified in the areas of business structural statistics of the Republic Statistical Office of Serbia was formed, and the indicators were derived from publicly available information or official financial reports submitted by the companies to The Serbian Business Registers Agency, as well as directly using companies' reports. According to the available data, from the total number of companies that prepared and submitted annual financial reports, and for the purposes of the research, taking into account the activity criteria, a sample was formed and relevant data for the three-year period 2017-2019 were collected.

Correlation analysis was applied to examine the degree of quantitative correlation of the variability of the analyzed variables. In the basic set, the correlation coefficient is denoted by ρ, and in the sample by r. For sample observations (xi, yi),i= 1,2, ...n the correlation coefficient is calculated using the formula:

$$r = \frac{\sum x_i y_i - n \cdot \bar{x} \cdot \bar{y}}{\sqrt{(\sum x_i^2 - n \cdot \bar{x}^2) \cdot (\sum y_i^2 - n \cdot \bar{y}^2)}}$$

The degree of correlation is expressed by the correlation coefficient, r. The value of the correlation coefficient ranges from -1 (completely negative correlation) to 1 (completely positive correlation). The statistical significance of the correlation coefficient can be carried out in two ways: through the t-value and by comparing the obtained r with the limit value r read from the table. As stated by the authors Radovic-Markovic and Hanic (2018), the truth of the research hypothesis that there is a correlation between the two variables, ie that the relationship X and Y is significant (significant) is formally carried out by testing the null hypothesis that the linear correlation coefficient is zero using the following t test statistics:

$$t = \sqrt{\frac{n-2}{1-r^2}}$$

2. LITERATURE REVIEW AND SETTINGS FOR COMPANY LIQUIDITY ANALYSIS

Governments, central banks and regulators are working to boost market liquidity by introducing new monetary and financial policy measures, tax breaks and other mitigation measures Covid-19, which has caused sharp contractions in economic development, reduced liquidity and access to capital (Vapa Tankosic, Cavlin and Budjevac, 2020). Central banks' swop lines also make it easier to provide an adequate level of foreign exchange liquidity to the banking system as a kind of "last resort", under more favorable conditions than market conditions (Kiss et al. 2020). The current financial situation and volatility affecting global markets requires the preservation of specialized institutions that have the role of "last resort insurers" that support transactions that commercial banks cannot support on their own (Vapa Tankosic and Vukosavljevic, 2021). The results of the research show that SMEs believe that financial forms of support affect the ability and competitiveness of SMEs and that the largest number of respondents most value the benefits of state institutions in the form of financial support. (Vapa Tankosic et al., 2020).

In the local economic literature, there are numerous researches on the topic of liquidity, emphasizing the contribution of Rodic (2003),

(2003), Malešević (2014), Stevanović et al. (2011), Mikerević et al. (2015), Tintor (2009), Belak (2014) i Žager et al. (2017). Analizom dosadašnjih istraživanja pokazuje se da su u lokalnoj ekonomskoj literaturi još uvek nedovoljno zastupljeni radovi u kojima se nastoji, primenom statističkih metoda, uvažavajući određena ograničenja, iznaći naoptimalniji model za analizu likvidnosti radi racionalnijeg upravljaja preduzećem. Finansijski pokazatelji se, prema istorijskom osvrtu koji iznosi Horrigen (1968), već dugo primenjuju u analizi likvidnosti. Tokom vremena, teorija i praksa analize likvidnosti se razvijala, usled narastajućih potreba upravljanja u tržišno orijentisanim preduzećima, čemu su doprinela istraživanja mnogobrojnih autora, među kojima izdvajamo sledeće: Altman (1968), Plewa i Friedlob (1995), Coyle (2000), Shim i Siegel (2019), Soprano (2015). Njihova primena omogućava analizu u različitim kontekstima i u različitim dimenzijama.

Ipak, treba istaći da je likvidnost pojmovno i sadržinski stalni predmet rasprave i teorije i prakse, gde se ispoljavaju izvesne razlike, najčešće povezane sa solventnosti (Proklin i Zima, 2011), pa iz toga razloga, u kontekstu ovog istraživanja, radi jasnijeg razumevanja, ističemo njihovu suštinu kroz sledeći prikaz, dat u tabeli 1:

Tabela 1. *Ključne razlike između likvidnosti i solventnosti*

Kriterijum poređenja	**Likvidnost**	**Solventnost**
Određenje	Likvidnost ukazuje na sposobnost izmirenja kratkoročnih dospelih obaveza	Solventnost ukazuje na sposobnost preduzeća da ima dovoljno imovine da dugoročno podmiri svoje dugove
Značaj	Govori kako se brzo kratkoročna imovina preduzeća može konvertovati u gotovinu	Nesolventnost može rezultirati bankrotom preduzeća
Orijentacija na obaveze	Kratkoročna	Dugoročna
Operativni izazovi	Kada preduzeće nije u mogućnosti da svoju imovinu brzo pretvori u gotovinu	Kad preduzeće nema dovoljno imovine za izmirenje obaveza
Osnovna funkcija	Izmiriti kratkoročno dospele obaveze raspoloživom likvidnom imovinom	Da se održava finansijsko zdravlje preduzeća kako bi se na vreme ispunile dužničke obaveze

Izvor: obrada autora

Dakle, za potrebe istraživanja možemo sumirati da se pojam likvidnosti odnosi na (Malešević, Čavlin, 2020):

– likvidnost preduzeća, i

– likvidnost imovine, i to sa aspekta: finansijske imovine, poslovne imovine i obrtne imovine.

Likvidnost preduzeća definiše se kao sposobnost preduzeća da pravovremeno izmiruje dospele kratkoročne obaveze raspoloživom likvidnom imovinom na način koji omogućava nesmetano odvijanje tokova poslovanja preduzeća, kako materijalnih tako i finansijskih, u određenom skladu, bez zastoja.

Likvidnost imovine definiše se funkcionalnom sposobnošću pojedinih delova obrtne i ukupne imovine (njenih materijalnih i prelaznih oblika) da se izvesno (bez većih gubitaka) mogu pretvoriti u svoj početni – novčani oblik.

Pritom razlikujemo njene sledeće oblike: likvidnost finansijske imovine ili instrumenata (Orsag, 2012), poslovne imovine i obrtne imovine (Block, Hirt i Danielsen, 2016).

Sa druge strane, solventnost se može shvatiti kao sposobnost preduzeća da uredno izmiruje svoje obaveze (kratkoročne i dugoročne) i održava stabilno poslovanje u predvidivoj budućnosti (na duži rok). Stoga se može prihvatiti da se solventnost preduzeća tretira kroz sledeće dimenzije, dvojako, i to kao (Malešević, Čavlin, 2020):

– statička solventnost – sposobnost da se unovčavanjem raspoložive ukupne imovine, makar i po likvidacionoj vrednosti, podmire ukupne obaveze preduzeća. Drugim rečima, orijentacija je pitanje (pre)zaduženosti odnosno pokazuje da li sadašnja pravična tržišna, odnosno likvidaciona vrednost celokupne imovine preduzeća može da pokrije obaveze, tj. da bude veća od sadašnje vrednosti svih njegovih obaveza;

– dinamička (platežna) solventnost – sposobnost preduzeća da u predvidivoj budućnosti, tj. na duži rok izmiruje sve svoje obaveze, uključujući i dugoročne, u rokovima njihovog dospeća, bez zastoja u poslovanju i većih gubitaka u unovčavanju imovine preduzeća. Drugim rečima, fokusira se na uredno izmirivanje dugoročnih finansijskih obaveza preduzeća.

2.1. Postavke za tipičnu analizu likvidnosti

Shvatanje i pojmovno definisanje likvidnosti preduzeća iskazuje se opštim pokazateljem ili odnosom: likvidna imovina / kratkoročne obaveze. Dati analitičko-matematički pokazatelj, odnosno merilo, izražava definisani opšti pojam likvidnosti. Za analizu likvidnosti dati odnos jeste polazište u smislu definisanog pojma likvidnosti. Njegova temeljnija analiza podrazumeva dekomponovanje datog odnosa – pokazatelja na više izvedenih pokazatelja likvidnosti koji će omogućiti temeljniju i validnu analizu likvidnosti. Analiza likvidnosti zasniva se na sledećim postavkama (Malešević, Čavlin, 2020):

1. analiza i rangiranje likvidne imovine i kratkoročnih obaveza, a analiza likvidnosti vrši se na osnovu diferenciranja:
   a) likvidne imovine po stepenu njene unovčivosti, i
   b) kratkoročnih izvora (obaveza) po roku dospeća plaćanja;
2. analiza likvidnosti preduzeća, koja se realizuje na osnovu sledećih postavki:

a) trenutne likvidnosti,

b) likvidnosti preduzeća na obračunskoj osnovi (statička),

c) likvidnosti preduzeća na gotovinskoj osnovi (dinamička).

2.2. Postavke za tipičnu analizu solventnosti

Solventnost određuje koliko dobro preduzeće dugoročno održava svoje poslovanje, a zasniva se na sledećim postavkama (Malešević, Čavlin, 2020):

1. Statička analiza solventnosti polazi od ispitivanja finansijskih odnosa između poslovne imovine i dugova, koji se izražavaju sledećim odnosima: poslovna imovina / dugovi odnosno dugovi / poslovna imovina.

Malesevic (2014), Stevanovic et al. (2011) Mikerevic et al. (2015) Tintor (2009), Belak (2014) and Zager et al. (2017). The analysis of previous research shows that in the local economic literature there are still insufficiently represented works in which the application of statistical methods, respecting certain limitations, seeks to find the most optimal model for liquidity analysis for more rational management of the company. According to the historical review presented by Horrigen (1968), financial indicators have long been used in liquidity analysis. Over time, the theory and practice of liquidity analysis has evolved, due to the growing needs of management in market-oriented companies, which has contributed to the research of numerous authors, including Altman (1968); Plewa and Friedlob (1995), Coyle (2000), Shim and Siegel (2019) Soprano (2015). Their application enables analysis in different contexts and in different dimensions.

However, it should be noted that liquidity is conceptually and substantively a constant subject of discussion and theory and practice where certain differences are most often associated with solvency (Proklin and Zima, 2011), and therefore, in the context of this research, for a clearer understanding, we emphasize their essence through the following presentation given in Table 1:

Table 1. *Key differences between liquidity and solvency*

Comparison criterion	***Liquidity***	***Solvency***
Determination	*Liquidity indicates the ability to settle short-term overdue liabilities*	*Solvency indicates the ability of a company to have sufficient assets to settle its debts in the long run*
Significance	*It shows how quickly a company's short-term assets can be converted into cash*	*Insolvency can result in the bankruptcy of a company*
Commitment orientation	*Short-term*	*Long-term*
Operational challenges	*When a company is not able to quickly turn its assets into cash*	*When the company does not have enough assets to settle its obligations*
Basic function	*Settle short-term liabilities with available liquid assets*	*To maintain the financial health of the company in order to fulfill the debt obligations on time*

Source: edited by the author

Thus, for the purposes of research, we can summarize that the term liquidity refers to (Malesevic, Cavlin, 2020):

– liquidity of the company, and

– liquidity of assets, from the aspect of: financial assets, business assets and current assets.

The liquidity of the company is defined as the ability of the company to timely settle due short-term liabilities with available liquid assets in a way that allows the smooth flow of business flows of the company, both material and financial, in a certain fund without delay.

The liquidity of an asset is defined by the functional ability of certain parts of current and total assets (its material and transitional forms) to be able to transform (without major losses) into their initial - monetary form.

We distinguish its following forms: liquidity of financial assets or instruments (Orsag, 2012), business assets and current assets (Block, Hirt and Danielsen, 2016):

On the other hand, solvency can be understood as the ability of a company to properly settle its obligations (short-term and long-term) and maintain stable operations in the foreseeable future (in the long run). Therefore, it can be accepted that the solvency of a company is treated through the following dimensions, in two ways, as (Malesevic, Cavlin, 2020):

– Static solvency - the ability to liquidate the available total assets, even at liquidation value, to settle the total liabilities of the company. In other words, orientation is a question of (over) indebtedness, ie it shows whether the current fair market, ie liquidation value of the entire property of the company can cover the obligations, ie. to be greater than the present value of all his obligations.

– Dynamic (payment) solvency - the ability of a company to, in the foreseeable future, ie. in the long run, settle all its obligations, including long-term ones, within their maturity, without downtime and major losses in the realization of the company's assets. In other words, it focuses on the orderly settlement of long-term financial obligations of the company.

2.1. Settings for a typical liquidity analysis

The understanding and conceptual definition of a company's liquidity is expressed by a general indicator or ratio: liquid assets / short-term liabilities. The given analytical-mathematical indicator, ie measure, expresses the defined general notion of liquidity. For the analysis of liquidity, the given starting point is given in the sense of the defined notion of liquidity. Its more thorough analysis implies the decomposition of a given ratio - indicators into several derived liquidity ratios that will enable a more thorough and valid analysis of liquidity. Liquidity analysis is based on the following settings (Malesevic, Cavlin, 2020):

1. analysis and ranking of liquid assets and short-term liabilities, and liquidity analysis is performed on the basis of differentiation:

a) liquid assets by the degree of their liquidity, and

b) short-term sources (liabilities) after the due date of payment.

2. liquidity analysis of the company, and the liquidity analysis of the company is realized on the basis of the following settings:

a) current liquidity,

b) liquidity of the company on an accrual basis (static),

c) liquidity of the company on a cash basis (dynamic).

2.2. Settings for typical solvency analysis

Solvency determines how well a company maintains its business in the long run, and is based on the following settings (Malesevic, Cavlin, 2020):

1. static solvency analysis starts from the examination of financial relations between business assets and debts, which are expre-

Prvi izraz iskazuje opštu solventnost, drugi iskazuje zaduženost preduzeća, a postavka i tok analize solventosti bazira se na analizi sledećih relacija:

a) solventnosti (opšte i optimalne),

b) zaduženosti,

c) finansijske stabilnosti.

2. Dinamička analiza solventnosti zasniva se na sledećim postavkama, sa jedne strane bazirajući se na analizi sledećih relacija:

a) finansijske moći,

b) faktora zaduženosti, i

c) indeksa finansijske poluge,

a sa druge strane na analizi:

d) pokrivenosti ukupnih obaveza novčanim tokom iz poslovanja, i

e) pokrivenosti kamata novčanim tokom iz poslovanja.

Tabela 2. *Pregled tipičnih statičkih i dinamičkih pokazatelja likvidnosti i solventnosti*

Statički pokazatelji likvidnosti i solventnosti	
Pokazatelj efektivne likvidnosti	gotovina + novčani kratkoročni ekvivalenti + kratkoročna potraživanja / kratkoročne obaveze
Pokazatelj trenutne likvidnosti	(gotovina + kratkoročne hartije od vrednosti) / kratkoročne obaveze
Pokazatelj perspektivne likvidnosti	ukupna obrtna imovina / kratkoročne obaveze
Pokazatelj opšte solventnosti	poslovna imovina / ukupne obaveze
Pokazatelj ukupne zaduženosti	ukupne obaveze / ukupna imovina
Pokazatelj finansijske stabilnosti	kapital + rezerve + dugoročne obaveze / dugoročna imovina
Dinamički pokazatelji likvidnosti i solventnosti – „novčani tok“	
Pokazatelj pokrivenosti kratkoročnih obaveza novčanim tokom iz poslovanja	novčani tok iz poslovnih aktivnosti / prosečne kratkoročne obaveze
Defanzivni interval likvidne imovine	(obrtna imovina – zalihe) / prosečna dnevna gotovina iz poslovnih aktivnosti
Pokazatelj broja dana „gotovine u rukama“	gotovina i trenutno unovčljive hartije od vrednosti / prosečni dnevni gotovinski odlivi za operativne troškove
Prosečan period trajanja gotovinskog ciklusa	prosečan period trajanja zaliha + prosečan period trajanja potraživanja od kupaca – prosečan period isplate dobavljača
Prosečno vreme isplate dobavljača	dobavljači x 365 / godišnja nabavka
Prosečan period trajanja zaliha	zalihe x 365 / prodaja
Prosečno vreme trajanja potraživanja	potraživanja x 365 / prodaja
Pokrivenost troškova kamata	poslovni rezultat (engl. „EBIT“) / troškovi kamata
Pokrivenost ukupnih fiksnih obaveza	(poslovni rezultat + troškovi zakupa) / troškovi kamata + troškovi zakupa + dospela glavnica dugoročnog duga + preferencijalna dividenda* (1 / (1 - poreska stopa na finansijski rezultat izražena decimalnim brojem))
Faktor zaduženosti	ukupne obaveze / (zadržana dobit + amortizacija)
Pokazatelj solventnosti novčanih tokova	novčani tok iz poslovnih aktivnosti / prosečne ukupne obaveze

Izvor: obrada autora

3. REZULTATI ISTRAŽIVANJA I DISKUSIJA

Uzorak obuhvata preduzeća raspoređena prema delatnostima na sledeći način: sektor Poljoprivreda, šumarstvo i ribarstvo (u nastavku teksta: sektor A), sektor Prerađivačka industrija (sektor B) i sektor Trgovina na veliko i trgovina na malo, popravka motornih vozila i motocikala (sektor C). Struktura poslovnog prihoda, neto dobiti/gubitka po sektorima u Republici Srbiji 2017–2019. data je u tabeli 3.

Tabela 3. *Struktura poslovnog prihoda, neto dobiti/gubitka po sektorima u Republici Srbiji za 2017–2019.*

	Sektor A	**Sektor B**	**Sektor C**	**Zbir A + B + C**	**%**	**Svi poslovni sektori RS**
2019.						
Poslovni prihodi	331.315.773,00	3.152.191.576,00	4.454.973.987,00	7.938.481.336,00	62,98%	12.604.409.590,00
Neto dobitak	17.884.413,00	189.269.592,00	146.701.882,00	353.855.887,00	51,24%	690.537.135,00
Neto gubitak	22.291.339,00	62.479.737,00	61.029.111,00	145.800.187,00	51,63%	282.418.681,00
2018.						
Poslovni prihodi	327.735.001,00	3.048.126.827,00	3.854.967.017,00	7.230.828.845,00	64,56%	11.199.793.391,00

ssed by the following relations: business assets/debts or debts/ business assets

The first expression expresses the general solvency, and the second expresses the indebtedness of the company, and the setting and course of the solvency analysis is based on the analysis of the following relations:

a) solvency (general and optimal),

b) indebtedness,

c) financial stability.

2. dynamic solvency analysis is based on the following settings, on the one hand based on the analysis of the following relations:

   a) financial power,

   b) indebtedness factors, and

   c) leverage index, and on the other hand on the analysis:

   d) coverage of total liabilities by cash flows from operations, and

e) interest coverage by cash flow from operations.

Table 2. *An overview of typical static and dynamic liquidity and solvency ratios*

Static indicators of liquidity and solvency	
Effective liquidity ratio	cash + cash short-term equivalents + short-term receivables / short-term liabilities
Current liquidity ratio	(cash + short-term securities) / short-term liabilities
Perspective liquidity indicator	total current assets / current liabilities
General solvency ratio	operating assets / total liabilities
An indicator of total indebtedness	total liabilities / total assets
Financial stability indicator	capital + reserves + long-term liabilities / long-term assets
Dynamic indicators of liquidity and solvency - "cash flow"	
Indicator of coverage of short-term liabilities by cash flow from operations	cash flow from operating activities / average short-term liabilities
Defensive interval of liquid assets	(current assets - inventories) / average daily cash from operating activities
"Cash in hand" indicator	cash and current redeemable securities / average daily cash outflows for operating expenses
Average cash cycle duration	average period of inventory duration + average period of trade receivables - average payment period of suppliers
Average supplier payout time	suppliers x 365 / annual procurement
Average stock life	stock x 365 / sale
Average duration of receivables	receivables x 365 / sales
Interest cost coverage	operating result ("EBIT") / interest expenses
Coverage of total fixed liabilities	(operating result + lease costs) / interest costs + lease costs + due principal of long-term debt + preferential dividend * (1 / (1-tax rate on the financial result expressed in decimal numbers))
Indebtedness factor	total liabilities / (retained earnings + depreciation)
Cash flow solvency ratio	Cash flow from operating activities / average total liabilities

Source: edited by the author

3. RESEARCH RESULTS AND DISCUSSION

The sample includes companies distributed by activities as follows: Sector: Agriculture, forestry and fisheries from companies (hereinafter: Sector A), Sector: Manufacturing (hereinafter: Sector B) and Sector: Wholesale and retail trade; repair of motor vehicles and motorcycles (hereinafter: Sector C). The structure of operating income, net profit/loss by sectors in the Republic of Serbia in the period 2017-2019 is given in Table 3.

Table 3. *Structure of operating income, net profit / loss by sectors in the Republic of Serbia in 2017-2019*

	Sector A	Sector B	Sector C	Sum A+B+C	%	All sectors in RS
2019						
Operating income	331.315.773,00	3.152.191.576,00	4.454.973.987,00	7.938.481.336,00	62,98%	12.604.409.590,00
Net profit	17.884.413,00	189.269.592,00	146.701.882,00	353.855.887,00	51,24%	690.537.135,00
Net loss	22.291.339,00	62.479.737,00	61.029.111,00	145.800.187,00	51,63%	282.418.681,00
2018						
Operating income	327.735.001,00	3.048.126.827,00	3.854.967.017,00	7.230.828.845,00	64,56%	11.199.793.391,00

Neto dobitak	31.440.007,00	172.799.451,00	120.369.513,00	324.608.971,00	44,00%	737.717.856,00
Neto gubitak	33.691.567,00	71.265.183,00	42.986.238,00	147.942.988,00	54,25%	272.713.098,00
2017.						
Poslovni prihodi	309.777.042,00	2.913.604.544,00	3.623.853.541,00	6.847.235.127,00	65,77%	10.411.552.581,00
Neto dobitak	18.491.709,00	230.857.892,00	125.354.577,00	374.704.178,00	56,06%	668.429.274,00
Neto gubitak	11.198.430,00	85.490.505,00	49.113.973,00	145.802.908,00	52,30%	278.774.483,00

Izvor: obrada autora

Prema objavljenim podacima, preduzeća koja su predala godišnje finansijske izveštaje za 2019. godinu ostvarila su ukupno 7.938.481.336,00 dinara prihoda od prodaje, što predstavlja 62,98% ukupnog prometa odnosno 51,24% neto dobitka svih aktivnih preduzeća. Slična situacija je u celom istraživanom periodu. S obzirom na to, dobijeni rezultati mogu se smatrati reprezentativnim za usvajanje zaključaka.

Tabela 4. *Pregled pokazatelja likvidnosti i solventnosti u Republici Srbiji za 2017–2019.*

Pokazatelj	**Period**	**Sektor A**	**Sektor B**	**Sektor C**	**Prosek sektora A, B i C**	**Prosek svih sektora**
Perspektivna likvidnost (tekući racio likvidnosti)	**2019.**	1,02	1,05	1,13	1,07	0,94
	2018.	0,96	0,99	1,12	1,02	0,95
	2017.	0,94	0,94	1,07	0,98	0,91
Efektivna likvidnost (rigorozni racio)	**2019.**	0,60	0,64	0,67	0,63	0,10
	2018.	0,56	0,60	0,67	0,61	0,76
	2017.	0,54	0,57	0,64	0,58	0,73
Gotovinski ciklus (u danima)	**2019.**	89,42	78,25	45,95	71,21	112,65
	2018.	83,03	75,46	43,25	67,25	106,09
	2017.	90,60	70,19	40,64	67,14	95,47
Zaduženost	**2019.**	0,36	0,53	0,59	0,49	0,44
	2018.	0,38	0,55	0,60	0,49	0,42
	2017.	0,38	0,57	0,61	0,52	0,43
Dinamički racio solventnosti	**2019.**	6,22	12,86	15,53	11,54	1,73
	2018.	4,76	9,53	13,69	9,33	19,13
	2017.	4,16	7,16	9,82	7,05	11,16

Izvor: obrada autora

Analizom dobijenih rezultata moguće je istaći sledeće ocene likvidnosti i solventnosti u tabeli 4.

Prosečne vrednosti koeficijenta perspektivne likvidnosti preduzeća u analiziranim sektorima u Republici Srbiji pokazuju da su daleko od njene poželjne teorijske norme (≥ 2), što pokazuje da su ugroženi uslovi za održanje likvidnosti. Prosečna vrednost pokazatelja sektora A, B i C je nešto preko 1, i to neznatno, što je ipak bolje od proseka privrede, čemu su doprinele niže poželjne vrednosti koeficijenta u sektoru A.

Na bazi vrednosti koeficijenta efektivne likvidnosti može se zaključiti da analizirana preduzeća u proseku nemaju dovoljno brzo unovčive imovine za izmirenje kratkoročnih obaveza s obzirom na to da je prosečna vrednost pokazatelja znatno manja od poželjne teorijske vrednosti ≥1.

Pokazatelj zaduženosti kao odnos ukupnih obaveza (kratkoročne i dugoročne) i ukupne imovine govori koliko se društvo finansira iz tuđih izvora odnosno iz tuđeg kapitala. Što je pokazatelj veći, preduzeće je zaduženije i veći je rizik investirati u njega. Poželjno je, prema iskustvu u praksi, da pokazatelj zaduženosti ne prelazi vrednost 0,5 iz razloga što bi preduzeće trebalo da preferira finansiranje iz sopstvenih na račun tuđih izvora.

Vrednost pokazatelja zaduženosti u sektorima B i C veća je od 0,5, što znači da se finansira više iz tuđih nego iz sopstvenih izvora. Dakle, oslanjajući se na vrednosti pokazatelja zaduženosti, može se zaključiti da su preduzeća u sektorima B i C dobrano finansijski napregnuta, ali i upoznata sa kratkoročnim i dugoročnim obavezama jer je vrednost pokazatelja približno jednaka u analiziranom periodu. Vrednost pokazatelja zaduženosti u sektoru A je niža od 0,5, što znači da se preferira finansiranje iz sopstvenih, a ne iz tuđih izvora. Izolovano, gledano po pokazatelju zaduženosti, moglo bi se zaključiti da je sektor A bolje strukturiran, zbog relativno manje zaduženosti u odnosu na sektore B i C, ali i na prosečna ostvarenja privrede, ali data situacija zahteva analizu uzroka i okolnosti ovakvih vrednosti, imajući u vidu opštepoznate uslove i poziciju likvidnosti poslovanja u sektoru A.

Na osnovu dosadašnjih analiza, može se zaključiti da su prosečne vrednosti statičkih pokazatelja likvidnosti znatno manje od poželjnih teorijskih vrednosti, te da značajna zaduženost preduzeća u sektorima B i C implicira nepovoljnu ocenu likvidnosti, tj. ugroženu likvidnost i nepovoljne uslove za finansijski stabilno poslovanje preduzeća.

Dalji razvoj analize upotpunjujemo nalazima vrednosti dinamičkih pokazatelja likvidnosti i solventnosti, radi celovitijih zaključaka o likvidnosti i finansijskoj poziciji analiziranih preduzeća.

Net profit	31.440.007,00	172.799.451,00	120.369.513,00	324.608.971,00	44,00%	737.717.856,00
Net loss	33.691.567,00	71.265.183,00	42.986.238,00	147.942.988,00	54,25%	272.713.098,00
2017						
Operating income	309.777.042,00	2.913.604.544,00	3.623.853.541,00	6.847.235.127,00	65,77%	10.411.552.581,00
Net profit	18.491.709,00	230.857.892,00	125.354.577,00	374.704.178,00	56,06%	668.429.274,00
Net loss	11.198.430,00	85.490.505,00	49.113.973,00	145.802.908,00	52,30%	278.774.483,00

Source: edited by the author

According to the published data, the companies that submitted annual financial reports for 2019 generated a total of 7,938,481,336.00 dinars of sales revenue, which represents 62.98% of the total turnover, ie 51.24% of the net profit of all active companies. The situation is similar throughout the study period. Therefore, the results obtained can be considered representative for the adoption of conclusions.

Table 4. *Overview of liquidity and solvency indicators in the Republic of Serbia in the period 2017-2019*

Indicator	*Period*	*Sector A*	*Sector B*	*Sector C*	*Average Sectors A,B i C*	*Average of all sectors*
Perspective liquidity (current liquidity ratio)	*2019*	*1,02*	*1,05*	*1,13*	*1,07*	*0,94*
	2018	*0,96*	*0,99*	*1,12*	*1,02*	*0,95*
	2017	*0,94*	*0,94*	*1,07*	*0,98*	*0,91*
Effective liquidity (rigorous ratio)	*2019*	*0,60*	*0,64*	*0,67*	*0,63*	*0,10*
	2018	*0,56*	*0,60*	*0,67*	*0,61*	*0,76*
	2017	*0,54*	*0,57*	*0,64*	*0,58*	*0,73*
Cash cycle (in days)	*2019*	*89,42*	*78,25*	*45,95*	*71,21*	*112,65*
	2018	*83,03*	*75,46*	*43,25*	*67,25*	*106,09*
	2017	*90,60*	*70,19*	*40,64*	*67,14*	*95,47*
Indebtedness	*2019*	*0,36*	*0,53*	*0,59*	*0,49*	*0,44*
	2018	*0,38*	*0,55*	*0,60*	*0,49*	*0,42*
	2017	*0,38*	*0,57*	*0,61*	*0,52*	*0,43*
Dynamic solvency ratio	*2019*	*6,22*	*12,86*	*15,53*	*11,54*	*1,73*
	2018	*4,76*	*9,53*	*13,69*	*9,33*	*19,13*
	2017	*4,16*	*7,16*	*9,82*	*7,05*	*11,16*

Source: edited by the author

By analyzing the obtained results, it is possible to point out the following liquidity and solvency assessments in Table 4, as follows:

The average values of the coefficient of perspective liquidity of the companies in the analyzed sectors in the Republic of Serbia show that they are far from its desired theoretical norm (≥2), which shows that they are affected by the conditions for maintaining liquidity. The average value of the indicators of Sectors A, B and C is slightly over 1, and it is insignificant, which is still better than the average of the economy, with the lower desirable values of the coefficient in Sector A contributing.

Based on the value of the effective liquidity ratio, it can be concluded that the analyzed companies do not have enough assets on average that can be quickly converted into cash to settle short-term liabilities, given that the average value of the indicator is significantly less than the desired theoretical value ≥1.

The indebtedness indicator as the ratio of total liabilities (short-term and long-term) and total assets shows how much the company is financed by borrowing, ie using borrowed capital. The higher the indicator, the more indebted the company is and the greater the risk of investing in the company itself. It is desirable, according to experience in practice, that the indebtedness indicator does not exceed the value of 0.5 because the company should prefer using equity over borrowing.

The value of the indebtedness indicators in Sectors B and C is higher than 0.5, which means that it is financed more by borrowing than by using equity. Thus, relying on the value of the indebtedness indicator, it can be concluded that companies in Sectors B and C are well financially strained, but also familiar with short-term and long-term liabilities because the value of the indicator is approximately the same in the analyzed period. The value of the indebtedness indicator in Sector A is lower than 0.5, which means that financing by equity is preferred, and not by taking on more debt. Isolated, according to the indebtedness indicator, it could be concluded that Sector A is better structured, due to relatively less indebtedness in relation to Sectors B and C, but also on average achievements of the economy, but the given situation requires analysis of causes and circumstances of such values considering generally known conditions and the liquidity position of operations in Sector A.

Based on previous analyzes, it can be concluded that the average values of static liquidity indicators are significantly less than the desired theoretical values, and that the significant indebtedness of companies in Sectors B and C implies an unfavorable liquidity assessment, ie. endangered liquidity and unfavorable conditions for financially stable business operations of the company.

Analizom dobijenih rezultata dinamičke likvidnosti i solventnosti moguće je primetiti da je došlo do produženja gotovinskog ciklusa na nivou privrede sa 95 na 112 dana, a slična je tendencija u analiziranim sektorima A, B i C. Analizom strukture elemenata gotovinskih ciklusa može se uočiti da je efekat na produženje novčanog toka imalo smanjenje dana plaćanja obaveza prema dobavljačima. Naravno, period trajanja gotovinskog ciklusa najkraći je u sektoru B, na čije trajanje utiče tipologija delatnosti, a iskustvene norme ukazuju na njegovo kraće trajanje u trgovinskoj delatnosti u odnosu na poljoprivredu i industrijske delatnosti.

Dalje, iskustvene norme u praksi ukazuju na to da je veća vrednost pokazatelja pokrića troškova kamata (dinamičke solventnosti) bolja, pa se smatra da je vrednost od 3 do 7 solidna, a preko 7 poželjna. Prikazani rezultati pokrića troškova kamata prikazuju značajne razlike u finansijskoj moći odnosno stepenu generisanja operativne gotovine za plaćanje kamata za kredite. Naime, sektor A ima znatno lošiju finansijsku moć, za razliku od sektora B i C te proseka privrede, pa kako se smatra da viša vrednost pokazatelja znači veće mogućnosti zaduživanja i da ukazuje kreditorima na sigurniju naplatu kamata, to mora biti ključni razlog relativno manjeg stepena zaduženosti sektora A.

Sveukupno posmatrano, moguće je zaključiti da vrednosti odabranih statičkih i dinamičkih pokazatelja nisu na nivou poželjnih iskustvenih odnosno teorijskih vrednosti i da je ugrožena likvidnost i uslovi za njeno održanje. Pored toga, indikativno je značajno učešće tuđih izvora finansiranja zbog posledica po poslovnu i finansijsku samostalnost, koje je kod sektora A relativno manje, što ukazuje na neadekavatnu profitnu odnosno kreditnu poziciju i finansijsku fleksibilnost u sekoru A.

Dakle, polazeći od navedenih zaključaka analize, treba imati u vidu da moderno poslovno upravljanje određuje tzv. „vremenske makaze“, tj. sa jedne strane potrebna je efikasna reakcija na vreme, a sa druge strane je zbog rastuće kompleksnosti i dinamike potrebno sve više raspoloživog vremena za reakciju. Iz tog razloga, sa aspekta analize likvidnosti, postoji, sa jedne strane, potreba za što manjim brojem relevantnih pokazatelja, a sa druge strane težnja da se koristi što veći broj pokazatelja, što može da dovede do tzv. „paralize analize“, da bi se odslikalo stanje i perspektive likvidnosti preduzeća.

Stoga se dalji predmet istraživanja fokusira na analizu međuzavisnosti i opravdanosti primene u praksi najtipičnijih pokazatelja statičke i dinamičke likvidnosti kao integralne osnove za relevantnu ocenu likvidnosti preduzeća.

Da bismo pristupili analizi i ispitali da li između posmatranih varijabli postoji međuzavisnost u okviru sektora A – Poljoprivreda, šumarstvo i ribarstvo u periodu 2017–2019. i, ukoliko postoji, koliko je ta veza jaka, primenjena je korelaciona analiza. Korelacionom analizom dalje je utvrđeno koji je smer veze između pet varijabli, a na osnovu numeričke vrednosti izveden je zaključak koliko je ta veza jaka. Pirsonov koeficijent korelacije, dat u tabeli 5, između pet posmatranih varijabli u okviru sektora A – Poljoprivreda, šumarstvo i ribarstvo u periodu 2017–2019. statistički je signifikantan na nivou 0,05 i pokazuje povezanost između perspektivne likvidnosti (tekući racio likvidnosti) i dinamičkog racija solventnosti (dinamički pokazatelj) (p = ,028). Znak Pirsonovog koeficijenta korelacije je pozitivan, veza između posmatranih varijabli je veoma jaka (0,999). Možemo zaključiti da je rezultat korelacione analize statistički signifikantan, pri čemu je prisutna pozitivna linearna korelacija. Druga značajna korelacija utvrđena je između efektivne likvidnosti (rigorozni racio) i dinamičkog racija solventnosti (dinamički pokazatelj) (p = ,030). Znak Pirsonovog koeficijenta korelacije je pozitivan, veza između posmatranih varijabli je veoma jaka (0,999). Možemo zaključiti da je rezultat korelacione analize statistički signifikantan, pri čemu je prisutna pozitivna linearna korelacija.

Tabela 5. *Analiza međuzavisnosti izabranih pokazatelja likvidnosti preduzeća u okviru sektora Poljoprivreda, šumarstvo i ribarstvo (sektor A)*

Correlations						
		POLJL	POLJEL	POLJG	POLJZAD	POLJS
POLJL	Pearson Correlation	1	,996	,135	-,971	,999*
	Sig. (2-tailed)		,058	,914	,154	,028
	N	3	3	3	3	3
POLJEL	Pearson Correlation	,996	1	,045	-,945	,999*
	Sig. (2-tailed)	,058		,972	,212	,030
	N	3	3	3	3	3
POLJG	Pearson Correlation	,135	,045	1	-,369	,091
	Sig. (2-tailed)	,914	,972		,759	,942
	N	3	3	3	3	3
POLJZAD	Pearson Correlation	-,971	-,945	-,369	1	-,959
	Sig. (2-tailed)	,154	,212	,759		,183
	N	3	3	3	3	3
POLJS	Pearson Correlation	,999*	,999*	,091	-,959	1
	Sig. (2-tailed)	,028	,030	,942	,183	
	N	3	3	3	3	3
*. Correlation is significant at the 0.05 level (2-tailed).						

Izvor: obrada autora

Further development of the analysis is complemented by the findings of the values of dynamic indicators of liquidity and solvency, in order to more comprehensive conclusions about the liquidity and financial position of the analyzed companies. By analyzing the obtained results of dynamic liquidity and solvency, it is possible to notice that the cash cycle at the level of the economy was extended from 95 to 112 days, and a similar tendency in the analyzed Sectors A, B and C. By analyzing the structure of the elements of cash cycles, it can be seen that the reduction in the number of days of payment of liabilities to suppliers had an effect on the extension of cash flow. Of course, the duration of the cash cycle is the shortest in Sector B, the duration of which is influenced by the typology of activities, and experiential norms indicate that its duration is shorter in trade than in agriculture and industrial activities.

Furthermore, empirical norms in practice indicate that a higher value of the indicator of interest cost coverage (dynamic solvency) is better, so it is considered that a value of 3-7 is solid, and over 7 is desirable. Presented, the results of interest cost coverage show significant differences in financial power or the degree of generation of operating cash to pay interest on loans. Namely, Sector A has significantly poorer financial power, unlike Sectors B and C and the average of the economy, so it is considered that a higher value of the indicator means greater borrowing opportunities and indicates to creditors a more secure collection of interest, and this must be the key reason for the relatively lower level of indebtedness of Sector A.

Overall, it is possible to conclude that the values of selected static and dynamic indicators are not at the level of desirable experiential or theoretical values and that the liquidity and conditions for its maintenance are endangered. In addition, the significant share of borrowing is indicative due to the consequences for business and financial independence, which is relatively lower in Sector A, which indicates an inadequate profit or credit position and financial flexibility in Sector A.

Therefore, starting from the above conclusions of the analysis, it should be borne in mind that modern business management determines the so-called "time scissors", ie, on the one hand requires an efficient response to time, and on the other hand due to growing complexity and dynamics for reaction. For this reason, from the aspect of liquidity analysis, on the one hand there is a need for as few relevant indicators as possible, and on the other hand there is a tendency to use as many indicators as possible, which can lead to the so-called "analysis paralysis", to reflect the state and prospects of the company's liquidity.

Therefore, the further subject of the research focuses on the analysis of interdependence and justification of application in practice of the most typical indicators of static and dynamic liquidity as an integral basis for a relevant assessment of company liquidity.

Therefore, in order to approach the analysis and examine whether there is interdependence between the observed variables within Sector A Agriculture, Forestry and Fisheries for comapnies in the period 2017-2019 and, if so, how strong this relationship is, correlation analysis was applied. Correlation analysis further determined the direction of the relationship between the five variables, and based on the numerical value, a conclusion was drawn as to how strong this relationship is. Pearson's correlation coefficient, given in Table 5, between the five observed variables within Sector A Agriculture, Forestry and Fisheries for companies in the period (2017-2019) is statistically significant at the level of 0.05 and shows the correlation between Perspective liquidity liquidity) and the Dynamic Solvency Ratio (dynamic indicator) (p =, 028). The sign of Pearson's correlation coefficient is positive, the relationship between the observed variables is very strong (0.999). We can conclude that the result of the correlation analysis is statistically significant with a positive linear correlation. Another significant correlation was found between Effective liquidity (rigorous ratio) and Dynamic solvency ratio (dynamic indicator) (p = .030). The sign of Pearson's correlation coefficient is positive, the relationship between the observed variables is very strong (0.999). We can conclude that the result of the correlation analysis is statistically significant with a positive linear correlation.

Table 5. *Analysis of the interdependence of selected liquidity indicators of companies within the sector Agriculture, Forestry and Fisheries (Sector A)*

Correlations						
		POLJL	*POLJEL*	*POLJG*	*POLJZAD*	*POLJS*
POLJL	*Pearson Correlation*	*1*	*,996*	*,135*	*-,971*	*,999**
	Sig. (2-tailed)		*,058*	*,914*	*,154*	*,028*
	N	*3*	*3*	*3*	*3*	*3*
POLJEL	*Pearson Correlation*	*,996*	*1*	*,045*	*-,945*	*,999**
	Sig. (2-tailed)	*,058*		*,972*	*,212*	*,030*
	N	*3*	*3*	*3*	*3*	*3*
POLJG	*Pearson Correlation*	*,135*	*,045*	*1*	*-,369*	*,091*
	Sig. (2-tailed)	*,914*	*,972*		*,759*	*,942*
	N	*3*	*3*	*3*	*3*	*3*
POLJZAD	*Pearson Correlation*	*-,971*	*-,945*	*-,369*	*1*	*-,959*
	Sig. (2-tailed)	*,154*	*,212*	*,759*		*,183*
	N	*3*	*3*	*3*	*3*	*3*
POLJS	*Pearson Correlation*	*,999**	*,999**	*,091*	*-,959*	*1*
	Sig. (2-tailed)	*,028*	*,030*	*,942*	*,183*	
	N	*3*	*3*	*3*	*3*	*3*
**. Correlation is significant at the 0.05 level (2-tailed).*						

Source: edited by the author

Legenda: POLJL: Poljoprivreda, šumarstvo i ribarstvo – perspektivna likvidnost (tekući racio likvidnosti)

POLJEL: Poljoprivreda, šumarstvo i ribarstvo – efektivna likvidnost (rigorozni racio)

POLJG: Poljoprivreda, šumarstvo i ribarstvo – gotovinski ciklus

POLJZAD: Poljoprivreda, šumarstvo i ribarstvo – zaduženost

POLJS: Poljoprivreda, šumarstvo i ribarstvo – dinamički racio solventnosti

Potom je urađena korelaciona analiza posmatranih varijabli u okviru sektora B – Prerađivačka industrija u periodu 2017–2019. da bi se utvrdilo da li postoji međuzavisnost i, ukoliko postoji, koliko je ta veza jaka. Korelacionim analizom dalje je utvrđeno koji je smer veze između pet varijabli, a na osnovu numeričke vrednosti izveden je zaključak koliko je ta veza jaka. Pirsonov koeficijent korelacije, dat u tabeli 6, između pet posmatranih varijabli u okviru sektora B – Prerađivačka industrija u periodu 2017–2019. statistički je signifikantan na nivou 0,05 i pokazuje povezanost između perspektivne likvidnosti (tekući racio likvidnosti) i efektivne likvidnosti (rigorozni racio) (p = ,019). Znak Pirsonovog koeficijenta korelacije je pozitivan, veza između posmatranih varijabli je veoma jaka (1,000). Možemo zaključiti da je rezultat korelacione analize statistički signifikantan, pri čemu je prisutna pozitivna linearna korelacija. Druga značajna korelacija utvrđena je između perspektivne likvidnosti (tekući racio likvidnosti) i zaduženosti (p = ,033). Znak Pirsonovog koeficijenta korelacije je negativan, veza između posmatranih varijabli je veoma jaka (-0,999). Možemo zaključiti da je rezultat korelacione analize statistički signifikantan, pri čemu je prisutna negativna linearna korelacija. Treća značajna korelacija utvrđena je između perspektivne likvidnosti (tekući racio likvidnosti) i dinamičkog racija solventnosti (dinamički pokazatelj) (p = ,028). Znak Pirsonovog koeficijenta korelacije je pozitivan, veza između posmatranih varijabli je veoma jaka (0,999). Možemo zaključiti da je rezultat korelacione analize statistički signifikantan, pri čemu je prisutna pozitivna linearna korelacija. Četvrta značajna korelacija utvrđena je između efektivne likvidnosti (rigorozni racio) i dinamičkog racija solventnosti (dinamički pokazatelj) (p = ,009). Znak Pirsonovog koeficijenta korelacije je pozitivan, veza između posmatranih varijabli je veoma jaka (1,000). Možemo zaključiti da je rezultat korelacione analize statistički signifikantan, pri čemu je prisutna pozitivna linearna korelacija.

Tabela 6. *Analiza međuzavisnosti izabranih pokazatelja likvidnosti preduzeća u okviru sektora Prerađivačka industrija (sektor B)*

Correlations						
		PREL	PREREL	PRERG	PRERZAD	PRERS1
PREL	Pearson Correlation	1	1,000*	,974	-,999*	,999*
	Sig. (2-tailed)		,019	,145	,033	,028
	N	3	3	3	3	3
PREREL	Pearson Correlation	1,000*	1	,967	-,997	1,000**
	Sig. (2-tailed)	,019		,164	,052	,009
	N	3	3	3	3	3
PRERG	Pearson Correlation	,974	,967	1	-,985	,963
	Sig. (2-tailed)	,145	,164		,112	,174
	N	3	3	3	3	3
PRERZAD	Pearson Correlation	-,999*	-,997	-,985	1	-,995
	Sig. (2-tailed)	,033	,052	,112		,062
	N	3	3	3	3	3
PRERS	Pearson Correlation	,999*	1,000**	,963	-,995	1
	Sig. (2-tailed)	,028	,009	,174	,062	
	N	3	3	3	3	3
*. Correlation is significant at the 0.05 level (2-tailed).						
**. Correlation is significant at the 0.01 level (2-tailed).						

Izvor: obrada autora

Legenda: PRERL: Prerađivačka industrija – perspektivna likvidnost (tekući racio likvidnosti)

PREREL: Prerađivačka industrija – efektivna likvidnost (rigorozni racio)

PRERG: Prerađivačka industrija – gotovinski ciklus

PRERZAD: Prerađivačka industrija – zaduženost

PRERS: Prerađivačka industrija – dinamički racio solventnosti

Da bismo dalje ispitali da li između posmatranih varijabli u okviru sektora C – Trgovina na veliko i trgovina na malo; popravka motornih vozila i motocikala u periodu 2017–2019. postoji međuzavisnost i, ukoliko postoji, koliko je ta veza jaka, primenjena je korelaciona analiza. Korelacionim analizom dalje je utvrđeno koji je smer veze između pet varijabli, a na osnovu numeričke vrednosti izveden je

Legend: POLJL: Agriculture, Forestry and Fisheries - Perspective liquidity (current liquidity ratio)

POLJEL: Agriculture, Forestry and Fisheries - Effective liquidity (rigorous ratio)

POLJG: Agriculture, Forestry and Fisheries - Cash cycle

POLJZAD: Agriculture, Forestry and Fisheries - Indebtedness

POLJS: Agriculture, Forestry and Fisheries - Dynamic solvency ratio

Then, a correlation analysis of the observed variables within Sector B Manufacturing in the period 2017-2019 was performed to determine whether there is interdependence and, if so, how strong this relationship is. Correlation analysis determined the direction of the relationship between the five variables, and based on the numerical value, a conclusion was made as to how strong this connection is. Pearson's correlation coefficient, given in Table 6, between the five observed variables within Sector B Manufacturing in the period 2017-2019 is statistically significant at the level of 0.05 and shows the relationship between Perspective liquidity (current liquidity ratio) and Effective liquidity (rigorous ratio) (p = .109). The sign of Pearson's correlation coefficient is positive, the relationship between the observed variables is very strong (1,000). We can conclude that the result of the correlation analysis is statistically significant with a positive linear correlation. Another significant correlation was found between Perspective liquidity (current liquidity ratio) and Indebtedness (p = .033). The sign of Pearson's correlation coefficient is negative, the relationship between the observed variables is very strong (-0.999). We can conclude that the result of the correlation analysis is statistically significant with a negative linear correlation. The third significant correlation was found between Perspective liquidity (current liquidity ratio) and Dynamic solvency ratio (dynamic indicator) (p =, 028). The sign of Pearson's correlation coefficient is positive, the relationship between the observed variables is very strong (0.999). We can conclude that the result of the correlation analysis is statistically significant with a positive linear correlation. A fourth significant correlation was found between Effective Liquidity (rigorous ratio) and Dynamic Solvency Ratio (dynamic indicator) (p = .009). The sign of Pearson's correlation coefficient is positive, the relationship between the observed variables is very strong (1,000). We can conclude that the result of the correlation analysis is statistically significant with a positive linear correlation.

Table 6. *Analysis of the interdependence of selected liquidity indicators of companies within the Manufacturing sector (Sector B)*

Correlations						
	PREL	PREREL	PRERG	PRERZAD	PRERS1	
PREL	Pearson Correlation	1	1,000*	,974	-,999*	,999*
	Sig. (2-tailed)		,019	,145	,033	,028
	N	3	3	3	3	3
PREREL	Pearson Correlation	1,000*	1	,967	-,997	1,000**
	Sig. (2-tailed)	,019		,164	,052	,009
	N	3	3	3	3	3
PRERG	Pearson Correlation	,974	,967	1	-,985	,963
	Sig. (2-tailed)	,145	,164		,112	,174
	N	3	3	3	3	3
PRERZAD	Pearson Correlation	-,999*	-,997	-,985	1	-,995
	Sig. (2-tailed)	,033	,052	,112		,062
	N	3	3	3	3	3
PRERS	Pearson Correlation	,999*	1,000**	,963	-,995	1
	Sig. (2-tailed)	,028	,009	,174	,062	
	N	3	3	3	3	3
*. Correlation is significant at the 0.05 level (2-tailed).						
**. Correlation is significant at the 0.01 level (2-tailed).						

Source: edited by the author

Legend: PRERL: Manufacturing - Perspective liquidity (current liquidity ratio)

PREREL: Manufacturing - Effective liquidity (rigorous ratio)

PRERG: Manufacturing - Cash cycle

PRERZAD: Manufacturing - Indebtedness

PRERS: Manufacturing - Dynamic solvency ratio

To further examine whether between the observed variables within Sector C Wholesale and Retail; repair of motor vehicles and motorcycles in the period 2017-2019 there is interdependence and, if any, how strong this relationship is, correlation analysis was applied. Correlation analysis further determined the direction of the relationship between the five variables, and based on the numerical

zaključak koliko je ta veza jaka. Pirsonov koeficijent korelacije, dat u tabeli 7, između pet posmatranih varijabli u okviru sektora C – Trgovina na veliko i trgovina na malo; popravka motornih vozila i motocikala u periodu 2017–2019. statistički je signifikantan na nivou 0,05 i pokazuje povezanost između gotovinskog ciklusa i zaduženosti (p = ,006). Znak Pirsonovog koeficijenta korelacije je negativan, veza između posmatranih varijabli je veoma jaka (-1,000). Možemo zaključiti da je rezultat korelacione analize statistički signifikantan, pri čemu je prisutna negativna linearna korelacija.

Tabela 7. *Analiza međuzavisnosti izabranih pokazatelja likvidnosti preduzeća u okviru sektora Trgovina na veliko i trgovina na malo; popravka motornih vozila i motocikala (sektor C)*

Correlations						
		TRGL	TRGEL	TRGG	TRGZAD	TRGS
TRGL	Pearson Correlation	1	,988	,930	-,933	,986
	Sig. (2-tailed)		,099	,239	,234	,105
	N	3	3	3	3	3
TRGEL	Pearson Correlation	,988	1	,862	-,866	,949
	Sig. (2-tailed)	,099		,339	,333	,204
	N	3	3	3	3	3
TRGG	Pearson Correlation	,930	,862	1	-1,000**	,978
	Sig. (2-tailed)	,239	,339		,006	,134
	N	3	3	3	3	3
TRGZAD	Pearson Correlation	-,933	-,866	-1,000**	1	-,980
	Sig. (2-tailed)	,234	,333	,006		,129
	N	3	3	3	3	3
TRGS	Pearson Correlation	,986	,949	,978	-,980	1
	Sig. (2-tailed)	,105	,204	,134	,129	
	N	3	3	3	3	3
**. Correlation is significant at the 0.01 level (2-tailed).						

Izvor: obrada autora

Legenda: TRGL: Trgovina na veliko i trgovina na malo; popravka motornih vozila i motocikala – perspektivna likvidnost (tekući racio likvidnosti)

TRGEL: Trgovina na veliko i trgovina na malo; popravka motornih vozila i motocikala – efektivna likvidnost (rigorozni racio)

TRGG: Trgovina na veliko i trgovina na malo; popravka motornih vozila i motocikala – gotovinski ciklus

TRGZAD: Trgovina na veliko i trgovina na malo; popravka motornih vozila i motocikala – zaduženost

TRGS: Trgovina na veliko i trgovina na malo; popravka motornih vozila i motocikala – dinamički racio solventnosti

Prema dobijenim rezultatima analize korelacije, moguće je zaključiti da dominira jaka pozitivna statistički značajna korelacija između pojedinih pokazatelja likvidnosti odnosno visok stepen njihove međuzavisnosti, a na primeru analiziranih sektora. Izuzetak je smer korelacije, pa je kod sektora B prisutna jaka negativna linearna korelacija između pokazatelja perspektivne likvidnosti i zaduženosti, tj. porastom pokazatelja perspektivne likvidnosti smanjuje se zaduženost i obrnuto. U sektoru C je prisutna jaka negativna linearna korelacija između gotovinskog ciklusa i zaduženosti, tj. porastom pokazatelja gotovinskog ciklusa smanjuje se zaduženost i obrnuto.

Shodno navedenom, možemo zaključiti da dobijeni rezultati opravdavaju postupak analize višedimenzionalnim pokazateljima kako bi se kroz razvijanje integralne analize dobila relevantnija kritička ocena likvidnosti preduzeća. Drugim rečima, možemo istaći da su rezultati korelacione analize statistički signifikantni, tako da imamo argumenata da zaključimo da su empirijska istraživanja afirmisala našu polaznu hipotezu.

ZAKLJUČAK

Likvidnost je ključna operativna upravljačka veličina koja je od presudnog značaja za društvo i privredu. Upravljanje likvidnošću zahteva unapred usmerenu orijentaciju ka ciljnim vrednostima, a pritom se kao oslonac koriste postavke za analizu likvidnosti. Rezultati sprovedene analize opravdavaju potrebu primene analize statičkim i dinamičkim pokazateljima i instrumentima kako bi se dobio celovit i relevantan zaključak o likvidnosti poslovanja preduzeća.

U radu je provedena analiza likvidnosti u odabranim delatnostima Republike Srbije za trogodišnji period (2017–2019), koja pokazuje da vrednosti odabranih pokazatelja nisu na nivou poželjnih iskustvenih odnosno teorijskih vrednosti. Shodno tome, možemo zaključiti, vodeći se rezultatima analize odabranih statičkih i dinamičkih pokazatelja, da je ugrožena likvidnost, kao i uslovi za njeno održanje. Pored ostalog, sa jedne strane je ograničena poslovna i finansijska samostalnost, zbog značajnog učešća tuđih izvora finansiranja u sektorima B i C, a sa druge strane, kod sektora A je izražen nedovoljan kreditni kapacitet i finansijska fleksibilnost preduzeća. Strategija upravljanja likvidnošću treba da se usmeri na skraćenje gotovinskog ciklusa kroz prolongiranje isplate obaveza prema dobavljačima, sa jedne strane, a sa druge strane ubrzanje naplate potraživanja od kupaca i efikasnije upravljanje zalihama, radi poboljšanja finansijske samostalnosti, odnosno u sektoru A poboljšanje finansijske fleksibilnosti predstavlja poseban izazov.

Dobijeni rezultati opravdavaju postupak analize višedimenzionalnim pokazateljima likvidnosti kako bi se razvijanjem analize mogla dati

value, a conclusion was drawn as to how strong this relationship is. Pearson's correlation coefficient, given in Table 7, between the five observed variables within Sector C Wholesale and Retail; repair of motor vehicles and motorcycles in the period (2017-2019) is statistically significant at the level of 0.05 and shows the relationship between the Cash Cycle and Indebtedness (p = .006). The sign of Pearson's correlation coefficient is negative, the relationship between the observed variables is very strong (-1,000). We can conclude that the result of the correlation analysis is statistically significant with a negative linear correlation.

Table 7. *Analysis of the interdependence of selected liquidity indicators of companies within the sector Wholesale and retail trade; repair of motor vehicles and motorcycles (Sector C)*

Correlations						
		TRGL	TRGEL	TRGG	TRGZAD	TRGS
TRGL	Pearson Correlation	1	,988	,930	-,933	,986
	Sig. (2-tailed)		,099	,239	,234	,105
	N	3	3	3	3	3
TRGEL	Pearson Correlation	,988	1	,862	-,866	,949
	Sig. (2-tailed)	,099		,339	,333	,204
	N	3	3	3	3	3
TRGG	Pearson Correlation	,930	,862	1	-1,000**	,978
	Sig. (2-tailed)	,239	,339		,006	,134
	N	3	3	3	3	3
TRGZAD	Pearson Correlation	-,933	-,866	-1,000**	1	-,980
	Sig. (2-tailed)	,234	,333	,006		,129
	N	3	3	3	3	3
TRGS	Pearson Correlation	,986	,949	,978	-,980	1
	Sig. (2-tailed)	,105	,204	,134	,129	
	N	3	3	3	3	3
**. Correlation is significant at the 0.01 level (2-tailed).						

Source: edited by the author

Legend: TRGL: Wholesale and retail trade; repair of motor vehicles and motorcycles - Perspective liquidity (current liquidity ratio)

TRGEL: Wholesale and retail trade; repair of motor vehicles and motorcycles - Effective liquidity (rigorous ratio)

TRGG: Wholesale and retail trade; repair of motor vehicles and motorcycles - Cash cycle

TRGZAD: Wholesale and retail trade; repair of motor vehicles and motorcycles - Indebtedness

TRGS: Wholesale and retail trade; repair of motor vehicles and motorcycles - Dynamic solvency ratio

According to the obtained results of the correlation analysis, it is possible to conclude that a strong positive statistically significant correlation between individual liquidity indicators, ie a high degree of their interdependence, dominates, on the example of the analyzed Sectors. The exception is the direction of correlation, so in Sector B there is a strong negative linear correlation between the indicators of Perspective Liquidity and Indebtedness, ie. with the increase of the Perspective Liquidity indicator, indebtedness decreases and vice versa. And in Sector C, there is a strong negative linear correlation between the cash cycle and indebtedness, ie. an increase in the cash cycle indicator reduces indebtedness and vice versa.

Accordingly, we can conclude that the obtained results justify the analysis procedure with multidimensional indicators in order to obtain a more relevant critical assessment of the company's liquidity through the development of integrated analysis. In other words, we can point out that the results of the correlation analysis are statistically significant, so we have arguments to conclude that empirical research has affirmed our initial hypothesis.

CONCLUSION

Liquidity is a key operational management variable that is crucial for society and the economy. Liquidity management requires a forward-looking orientation towards target values, using liquidity analysis settings as a basis. The results of the conducted analysis justify the need to apply the analysis with static and dynamic indicators and instruments in order to obtain a complete and relevant conclusion on the liquidity of the company's operations.

The paper conducts an analysis of liquidity in selected activities of the Republic of Serbia for the three-year period 2017-2019, which shows that the values of selected indicators are not at the level of desirable experiential or theoretical values. Accordingly, we can conclude, based on the results of the analysis of selected static and dynamic indicators, that liquidity is endangered, as well as the conditions for its maintenance. Among other things, on the one hand, business and financial independence is limited, due to the significant participation of other sources of financing in Sectors B and C, and on the other hand, Sector A has insufficient credit capacity and financial flexibility of companies. The liquidity management strategy should be aimed at shortening the cash cycle by prolonging the payment of trade payables, on the one hand, and on the other hand speeding up the collection of trade receivables and more efficient inventory management, in order to improve financial independence, ie in Sector A, improving financial flexibility is a special challenge.

The obtained results justify the analysis procedure with multidimensional liquidity indicators in order to develop a relevant critical

relevantna kritička ocena likvidnosti preduzeća. Možemo zaključiti da su rezultati korelacione analize statistički signifikantni, tako da imamo argumenata da zaključimo da su empirijska istraživanja afirmisala našu polaznu hipotezu.

Dalji tok istraživanja treba usmeriti na dublje istraživanje pozicije likvidnosti putem regresionih modela koji bi pokazali uticaj pokazatelja likvidnosti na profitnu poziciju odnosno rentabilnost preduzeća. Treba imati u vidu da istraživanje obuhvata sve tipove preduzeća, bez obzira na veličinu, a veličina preduzeća je, uz delatnost preduzeća, važna determinanta standarda i nalaza analize likvidnosti preduzeća. Iako mikro i mala preduzeća čine preko 90% u broju, srednja i velika preduzeća uverljivo ostvaruju najveći udeo u ukupno ostvarenim prihodima, što znači da njihovo poslovanje ima najznačajniji uticaj na privredu. Pored toga, njihovo poslovno izveštavanje je u značajnijoj meri pouzdanije, što utiče na adekvatnost nalaza analize na bazi bilansnih podataka. Stoga bi dalji pravac istraživanja trebalo usmeriti i na detaljniju analizu preduzeća po veličini i delatnostima kako bi se još meritornije i serioznije vrednovali dobijeni rezultati istraživanja.

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assessment of the company's liquidity. We can conclude that the results of the correlation analysis are statistically significant, so we have arguments to conclude that empirical research has affirmed our initial hypothesis.

The further course of research should be directed to a deeper research of the liquidity position through regression models that would show the impact of liquidity indicators on the profit position or profitability of the company. It should be borne in mind that the survey covers all types of companies, regardless of size, and the size of the company, in addition to the activity of the company, is an important determinant of standards and findings of liquidity analysis of the company. Although micro and small companies make up over 90% of the number, medium and large companies convincingly achieve the largest share in total revenues, which means that their business has the most significant impact on the economy. In addition, their business reporting is significantly more reliable, which consequently affects the adequacy of the findings of the analysis based on balance sheet data. Therefore, the further direction of the research should be focused on a more detailed analysis of the company by size and activities in order to evaluate the obtained research results even more meritoriously and seriously.

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