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Izdavač:
UNIVERZITET EDUKONS, Fakultet poslovne ekonomije,
Vojvode Putnika 87, Sremska Kamenica, Novi Sad
Tel: 021/489-3647, 489-3611
e-mail: redakcija@educons.edu.rs
www.educons.edu.rs

Za izdavača:
Prof. dr Aleksandar Andrejević, Rektor

Glavni i odgovorni urednik:
Prof. dr Marko Malović

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Nebojša Malenković, **PhD student**[1]
University of Novi Sad,
Faculty of Economics in Subotica

THE IMPACT OF STOCK EXCHANGE TURNOVER ON GDP IN THE REPUBLIC OF SERBIA

ABSTRACT: Stock exchange turnover growth increases the capital performance of a country. This paper examines the stock exchange turnover trends after the global financial crisis while considering the novel COVID-19 global crisis in the Republic of Serbia. Moreover, this paper estimates the correlation between the stock exchange turnover and GDP indicators. Since the COVID-19 crises is recent, the available official data for the last two years are not complete yet. Therefore, the aim of this research is to measure the impact of stock exchange turnover on economic growth in the Republic of Serbia for the period 2006-2020, with respective predictions. The methodological approach consists of the application of linear regression model, with previous statistical adequacy tests. The final results of this research indicate that the growth of stock exchange turnover has positive and statistically significant impact on GDP in this country. However, the prediction analysis indicates that the stock exchange turnover may have a negative impact on GDP in the next years, which is why there are several suggestions for decision makers and further research.

Key words: stock exchange, BELEX, economic growth, correlation, regression, Serbia

[1] nebojsa.malenkovic@gmail.com

INTRODUCTION

The predominant opinion in the literature is attributed to the capital market and its central role in the economic crisis. The capital market is a virtual place where one can buy securities that are listed on the Stock Exchange. Stock Exchange engages in the commission, exclusion and suspension of financial instruments and business operators. Stock Exchange comprehends the companies' securities along with the amount of capital risk for all businesses, diversification of risk and return on capital, and contributes to the collection of information on business, background of distortions of business losses, useful for maximizing the quality of an investor's long term investment decision.

In the recent difficult period, characterized by COVID-19 pandemic, the economic-financial system has suffered different changes. This system has already undergone a change due to the difficulties that both families and companies are passing through. Companies operating in different sectors have been and are still experiencing negative effects caused by the COVID-19 pandemic. The negative impact of the crises affected the financial statements of many national and foreign companies. The crises contributed to the enormous changes in the way companies operate and do business, which changes the prospects for the future (Maritz, 2020).

Families and companies are the factors of GDP creation, the indicator of economic growth of the country. Following the spread of the pandemic, a significant number of companies all over the globe have confronted the liquidity needs (Grujić & Rajčević, 2022). The liquidity shortage has engaged the State support measures by allocating funds from the state budget. Another strategy to meet the liquidity needs of the companies is related to innovative role of the Stock Exchange. Since Stock Exchange encompasses the financial instruments (securities, shares), some countries have decided to promote the exchange of financial instruments during the crises. According to Singh (1997) the Stock Exchange is supposed to enhance the economic growth.

For example, in Italy the intervention of the Italian Stock Exchange increasing investment in the real economy was promoted, with the aim to create employment and improve overall productivity. In this county capital market has a fundamental role in economic growth and development. Some of the measures were: the facilitation of entry into the stock market so the listed companies can be structurally more solid to face economic crises; training activities for issuing companies that decide to go public (especially for SMEs) (Affari Italiani, 2020).

The general advantage of having more listed companies within the Stock Exchange is reflected in the greater national competitive advantage, and in achieving economies of scale and economies of scope (Given, 1996, p. 709; Ritter et al., 2013). At the first stage of COVID-19 pandemic, governments

(among which the Government of the Republic of Serbia) have undertaken a number of measures in order to avoid or decrease the negative effects of pandemic on the national economy (Službeni glasnik, 2020a; Službeni glasnik, 2020b).

As in all other countries, trade and economic-financial activities are reducing, while health care costs (and other associated costs) are exponentially rising in Serbia. According to the estimations by the end of 2020, Serbia experienced a decrease in GDP. The decline in economic activity was between -1 and -1.5% (NALED, 2022), due to indebtedness of the country and extensive measures to help the economy (Kisin et al., 2021).

As in most European countries, Serbia has adopted fiscal and monetary direct and indirect measures to sustain the economy and population. To prevent the negative economic effects of the COVID-19 pandemic Serbia has adopted tax policy measures, measures of direct incentives from the budget, and measures to preserve liquidity. According to NALED (2022), the total value of measures introduced in 2020 has been nearly 12.5% of GDP.

Analysing the effects of the state help, Marjanović & Đukić (2020) have found that the adopted economic measures of Serbia have significantly contributed to the country. Along these lines, the entering within a major recession was avoided. Moreover, these authors predict that the decline in economic activity should be smaller than in other European countries.

From the other side, the organizational structures of many Serbian companies and institutions have been changed in order to adapt to the new environment caused by COVID-19 pandemic (Krasulja et al., 2020). Belgrade Stock Exchange (BSE) organization has undertaken some measures due to COVID-19 pandemic emergency in Serbia. The "Decision on the duration of trading phases within securities trading methods on the segments of the regulated market and MTP Belex" reflected in the Resolution n. 506/20 of BSE comprehended the measures regarding mechanisms and recommendations for control of the spread of COVID-19. In that sense, BSE reduced the duration of trading hours in all market segments of the Stock Exchange (BSE, 2020a). However, the BSE decided to resume normal trading hours after two months (BSE, 2020b). During 2021, BSE adopted additional changes in the trading session as well as the New tariff regulation (BSE, 2021).

Following the logic of the literature and historical experience, the connection between the capital market, stock exchanges and economic growth should be positive. The opening and performance of the Stock Exchange within a country is reflected in the economic growth, measured in GDP increase. Stock Exchange empowers the profitability and the output growth rate, conditioning the GDP growth (Baier et al., 2004).

Therefore, this research goal is to measure the connection between GDP and Stock Exchange in the Republic of Serbia. More precisely, the aim

of this paper is to estimate the impact of stock exchange turnover on GDP and GDP per capita for the period 2011-2020. This time period includes the after-global-financial-crises, so the analysis of the above mentioned impact will help to create general predictions for the after-COVID19-crises.

This paper is structured in different sections. The following section presents the literature review. The author aim at selecting and analysing empirical researches containing similar topics of research and/or familiar research methods comparing to this paper. In the third section the data collection and research methodology is explained, with the intent of comprehension and the possibility of reproducibility. The presentation of the results and the related discussion is found in the fourth section. Conclusions and recommendations are given in the last section of this paper.

LITERATURE REVIEW

The method of analysing the literature regarding Stock Exchange and GDP in different countries consists of the studies selection, and related investigation of research questions, methods applied and final results.

Ake & Ognaligui (2010) analysed the relationships between stock markets and economic growth in developing countries on the Cameroon example. Using the quarterly official data for the 2006-2010 period, these authors estimated the causality between variables. Employing Granger causality test, the authors did not find the positive impact of stock market on GDP due to the unstable government financial policies. Although, after employing VAR (Vector Autoregressive) model and variance decomposition test, the authors could confirm the positive impact of market capitalization on GDP in this country.

When it comes to measuring the connection between stock market and economic growth in Portugal, Marques et al. (2013) conducted the analysis for the 1993-2011 period, including the global financial crisis effect. Using quarterly official data, and different methodological approaches (VAR, Granger bidirectional causality test), the findings suggested the positive relationship between the variables. Besides, these authors did not find the significance of the bank sector in financing the economic growth of the country.

Osinubi (2004) analysed the impact of stock market on economic growth in Nigeria. Applying the OLS model (ordinary least squares regression) on annual data for 1980-2000 period, the author confirmed that stock market promotes the GDP increase. His regression model was 98% reliable. Conducting the same research question as Osinubi (2004), Petros (2012) observed the relationship between economic growth and its determinants in

Zimbabwe, focusing on the stock market development of the country. This author used the official annual data for the 1991-2007 period. The methodological approach consisted in applying co-integration test (FMOLS - fully modified ordinary least square, and ARDL - autoregressive distributed log) and log-linear model (ECM - error correction model) for measuring the long and the short run relationship between the variables. Employing these methods, the author found that in both long and short time period efficient stock market impacts the economic growth positively. Nevertheless the positive output, both the authors conclude their studies claiming that the stock market is not transparent enough, suggesting the prompt regulations implementation for the capital market, and collaboration among all the sectors within the economy.

Employing the similar methodology as Petros (2012), Raza et al. (2015), in one part of their study, analysed the relation between stock market capitalization and economic growth in Pakistan. These authors aimed to measure the impact of GDP on stock market capitalization, rather than vice versa, considering that the two GDP growth factors are foreign direct investments (FDI) and remittances. Using the annual data for 1976-2011 period and applying DOLS (dynamic ordinary least squares) and FMOLS, the obtained results were positive. Namely, it was found that the relationship between the variables is positive both in the short and long term run. In this regard, the foreign capital inflow and remittances have a positive impact on GDP growth, thus impacting the growth of stock market capitalization of Pakistan in direct and positive way.

Running the regression model (unit root and the co-integration analysis) in order to estimate whether the stock market development contributes to the Chinese economic growth, Wang & Ajit (2013) used quarterly data for the period 1996-2011 retrieved from the official data base. The final results of their investigation have shown the negative relationship between the variables. In other words, it was found that the development of Chinese stock market has a negative impact on economic growth in this country in both short and long run. The supposed reason for the negative correlation among variables is the administratively-driven market as well as the market illiquidity in China during the time the research was conducted.

Aiming to determine the correlation between stock market performance and GDP, Masoud (2017) used a systematic literature review approach. That is to say that the author used the data and information from previous researches in order to estimate the effect of stock market performance on GDP in developing and in developed countries (principle of research reproducibility). This author found that efficient stock market performance contributes to the economic growth in both country classifications and both on short and long term run. Moreover, they claimed that the stock markets have to ensure the

improvement in liquidity and in risk management, as well as promote the estimation of indirect impacts of the stock exchange on GDP.

In a relatively recent study by Osaseri & Osamwonyi (2019), just before the beginning of COVID-19 pandemic, these authors measured the impact of stock market development (considering market capitalization and turnover ratio) on GDP in BRICS countries. The researchers have used quarterly official data for the period 1994-2015, considering the pre- and after-global crisis period. Conducting the regression analysis thought the Panel Least Squares (fixed effects) it was determined that the impact of stock market development on BRICS GDP is positive and significant.

In the recent research conducted by Verma et al. (2021), the aim was to estimate the relationship between stock market (using the S&P 500 index) and GDP in the world's top 10 economics by GDP (United States, China, Japan, Germany, United Kingdom, France, India, Italy, Brazil, and Canada) during the period 2015-April 2020. The data was obtained from different official data sources, and regression analysis has been applied. In an attempt to correlate the COVID-19 crisis by analysing previous crises provoked by epidemics and the above mentioned estimated impact, the results have shown that the fall in stock markets and the number of death cases significantly impact the GDP decrease.

Through the application of correlation and regression models represented in scatter diagrams, Živković (2021) estimated the interdependence of stock market turnover and GDP for the time period 2011-2019 (annual data). The research embedded the analysis for four countries: Croatia, Slovenia, Montenegro, and Romania. The results of her study have confirmed the overall positive significant impact of stock market turnover on GDP in all the countries, claiming that the main condition for the positive impact is the factor of liquidity.

When it comes to Serbia, Grbić (2020) has analysed the relationship between stock market development (market capitalization, total value, and turnover ratios) and real GDP in the Republic of Serbia. Employing a VAR model, Granger causality test, impulse response function, and forecast error variance decomposition on quarterly data for the period 2002-2018, she found that the impact of stock market on GDP is alternate between positive and negative due to liquidity shocks, which occur mainly during the crisis period.

With regards to the analysis of stock market and BSE indicators and GDP interdependence in the period before the global financial crisis effects have been accumulated, several studies confirm the positive relationship between the two variables (Marinković et al, 2013; Kalaš et al., 2016; Rađenović & Rakić, 2017), and negative relationship tendency between them during and immediately after the global financial crisis (Kalaš et al., 2016). On the other side, Rakić & Rađenović (2013) found that BSE is not contributing

to the Serbian economic growth. Generally, these four studies suggest that the size of the stock market is less relevant than its quality (reflected in liquidity) for GDP.

According to the analysis conducted by CEP (Center for European Policies), NALED (National Alliance for Local Economic Development), and CSP (Center for Contemporary Policy), the final GDP 2021 calculation for Serbia should show a slight decrease, but less in comparison to neighbouring countries, due to extensive economic packages that served to help the economy during the COVID-19 health and economic crisis. According to the predictions, budget deficit should be around 9% of GDP, and public debt should be below 60% of GDP (NALED, 2022, p. 2). Based on the analysis of 253 companies that have answered the questionnaire about the impact of the government's help measures, the great majority of them claim that the state measures help them survive on the market. The recovery of the companies' business activities and Serbian GDP are expected one year (average) after the crisis is over.

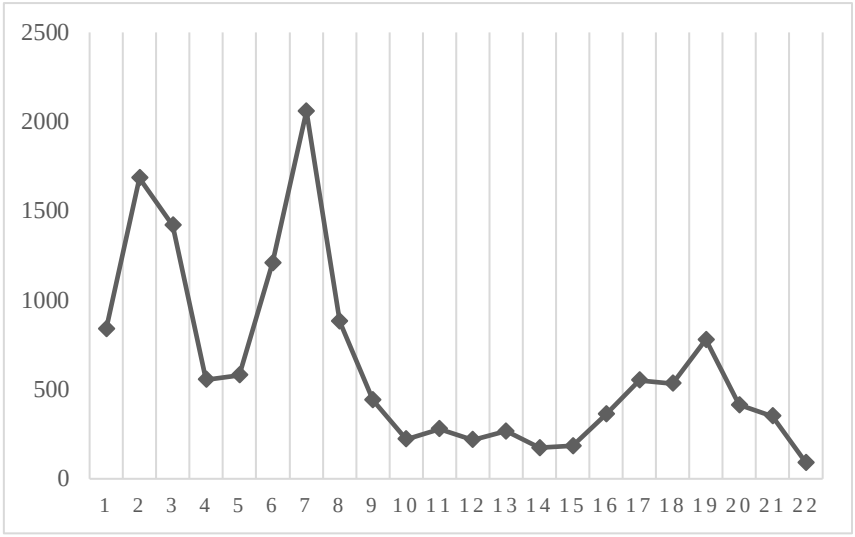
Empirical researches have shown efforts to analyse the Stock Exchange effect on GDP and its implications for the economic growth in different countries. Nevertheless, little literature has been found regarding the measuring of these effects in after-crisis time in Serbia, and none in the last couple of years considering the implications of the stock market during the COVID-19 crisis and using the regression analysis as a relevant econometric approach. Having this in mind, the present paper is about to cover this gap in the literature.

DATA AND METHODOLOGY

Annual data of all indicators has been derived from national secondary sources such as RZS (Statistical Office of the Republic of Serbia), NBS (National Bank of Serbia) and BSE (Belgrade Stock Exchange).

The panel data for the period 2001-2022 is constructed with the scope of presenting the trends related to Stock exchange turnover (Figure 1). This time period is useful to observe the stock exchange turnover trends before and during the COVID-19 crisis, and to evaluate the stock exchange turnover trends related to GDP in the future based on empirical studies, past experience, actual economic situation within the country, and the results found.

Figure 1. Belgrade Stock Exchange Turnover trends: 2001-2022 in millions of EUR



Source: Author elaboration based on BSE annual data (BSE, 2022a)

Stock exchange turnover trends show the drastic fall in securities exchange between 2003 and 2004, 2007 and 2010, and 2019 and 2022. Namely, the cause-effect of the global financial crises 2008 is explained by the fall in securities exchange. In 2007, the stock exchange turnover has been 2059m EUR, falling more than a half in only one year, *i.e.* 882m EUR (2008) and keep decreasing in 2009 until 2010 (441m EUR, 222m EUR respectively). The stability in securities exchange was recorded for the period 2010-2015 (with the lowest value of 185m EUR in 2015 and the highest value of 280m EUR in 2011), while the continuous rise was recorded in the period 2015-2019 (from 185m EUR in 2015 to 780m EUR in 2019). The first official case of COVID-19 appeared in 2019, since when the stock exchange turnover has been progressively decreasing (only 90m EUR in 2022). Somewhat less drastic (in EUR) fall in stock exchange turnover is the nowadays experience due to the global COVID-19 crisis with respect to the last global financial crisis. Yet, the trend in stock exchange turnover (decreasing trend) has been the same in the last 2.5 years, which represents the threat to the county's economic growth.

The precise data for GDP in 2021 and 2022 is not available yet. Since the decrease in stock exchange turnover correlates with the decrease in GDP, there is a supposition that the results of GDP that are yet to come could be lower with respect of the results in 2020 (46796m EUR). This in the case of excluding the impact of other indicators directly impacting the GDP (foreign trade, labour market, etc.) only. The threat of the negative impact of decreasing trend in stock exchange turnover on GDP during the last 2 years could be suspected based on the previous global financial crisis 2008. Namely, the

amount of GDP decreased from 35712m EUR in 2008 to 31546m EUR in 2010 (RZS, 2022).

The aim of this research is to estimate the degree of dependence between stock exchange turnover and GDP. The hypotheses of this research are the following:

H1: The Stock exchange turnover growth has a positive and significant impact on GDP in the Republic of Serbia for 2006-2020 time period.

H2: The Stock exchange turnover growth has a positive and significant impact on GDP per capita in the Republic of Serbia for 2006-2020 time period.

For the purpose of testing the hypotheses, formulated in accordance with the literature systematic review, the econometric approach has been used. In order to determine the impact of Stock exchange turnover on GDP in this country, the multiple linear regression was employed. The statistical software package IBM SPSS was used to process the data. A description of the indicators is presented in the Table 1 with respective source and official description and units of measurement.

Table 1. Description of indicators

Indicator	**Label**	**Official description**	**Source**
Stock Exchange Turnover	SET	Stock Exchange Turnover in millions of EUR, annual.	BSE
BELEX15	BELEX15	BELEX15 is the index of the most liquid shares on the Belgrade Stock Exchange which measure changes in the prices of the most liquid shares on the domestic capital market, and is weighted by market capitalization (daily), annual, % change.	BSE
BELEXline	BELEXline	BELEXline is a general share index of Stock Exchange of Belgrade which describes overall market flow on the Stock exchange, annual, % change.	BSE
Number of transactions	NT	Number of transactions of securities inside the regulated market, annual.	BSE
Gross Domestic product	GDP	Real Gross Domestic product in current prices in millions of EUR, annual.	RZS and NBS
Gross Domestic product per citizen	GDP PC	Real Gross Domestic product per citizen in current prices in millions of EUR, annual.	RZS
Inflation	INFL	Inflation is based on consumer prices in annual % change.	RZS and NBS

Source: Author elaboration based on official data sources of RZS, BSE, and NBS (2022)

With regards to Table 1, it is to notice that GDP appears as *real* GDP, meaning that it has originally been corrected by inflation rate already. Therefore, inflation is used for descriptive purpose only (Table 2).

The panel data for the period 2006-2020 is constructed with the purpose of estimating the relationship and dependence between variables. This time period was chosen as the data for SET before 2006 is incomplete. Incomplete data related to SET is probably a consequence of lack of information systems of BSE before 2006. Namely, the BSE launched its first information services for data distribution in real time only in 2005. Years later, the BSE focused on the organization of educational services to the general public, improving the cooperation with issuers of securities, and listing companies (BSE, 2022b; BSE, 2022c). A description of the variables used in this research is presented in the Table 2.

Table 2. Descriptive statistics

	N	Range	Min	Max	Mean		Std. Dev.	Variance
		Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
Year	17	16	2006	2022	2014	1.23	5.05	25.5
SET	17	19688	90924	205976	531129	11870	489447	2.39559E+11
ΔSET	16	1.69	-0.74	0.95	-0.02	0.13	0.50	0.25
NT	17	2881403	6135	2887538	338415.88	166003.79	684451.18	4.68473E+11
ΔNT	16	9.23	-0.83	8.4	0.47	0.58	2.31	5.32
BELEX15	17	133.63	-75.62	58.01	3.95	6.63	27.32	746.17
BELEXline	17	112.84	-68.72	44.12	3.12	5.92	24.42	596.56
GDP	15	20865.7	25930.7	46796.4	36379.14	1435.48	5559.58	30908936.3
ΔGDP	15	9.1	-2.7	6.4	2.19	0.72	2.79	7.76
GDP PC	15	3284.3	3498.7	6783	5094.10	229.63	889.37	790976.24
ΔGDP PC	14	0.31	-0.09	0.22	0.05	0.02	0.08	0.01
INFL	15	11.29	1.22	12.41	5.60	1.05	4.04	16.35

Source: Author estimation

In the observed time period, the lowest value of SET was recorded in 2022 (almost 91m EUR) while the highest value was in 2007 (2059m EUR). The highest annual % Δ in SET was -0.74 (std. dev. = 0.50, var = 0.25) while the lowest change in SET was 0.95% with respect to the previous year (std. dev. = 0.50, var = 0.25). The average ΔSET was -0.02 (std. err. = 0.13). The greatest rate of increase in NT was 0.47% (mean = 0.58, std. err. = 2.31) in 2011 with respect to 2010, *i.e.* 2887 and 725m of transactions respectively (std. dev. = 2.31, var = 5.32). The average change in BELEX15 was 3.95% (std. err. = 6.63), while in BELEXline was 3.12% (std. err. = 5.92) reflecting the average

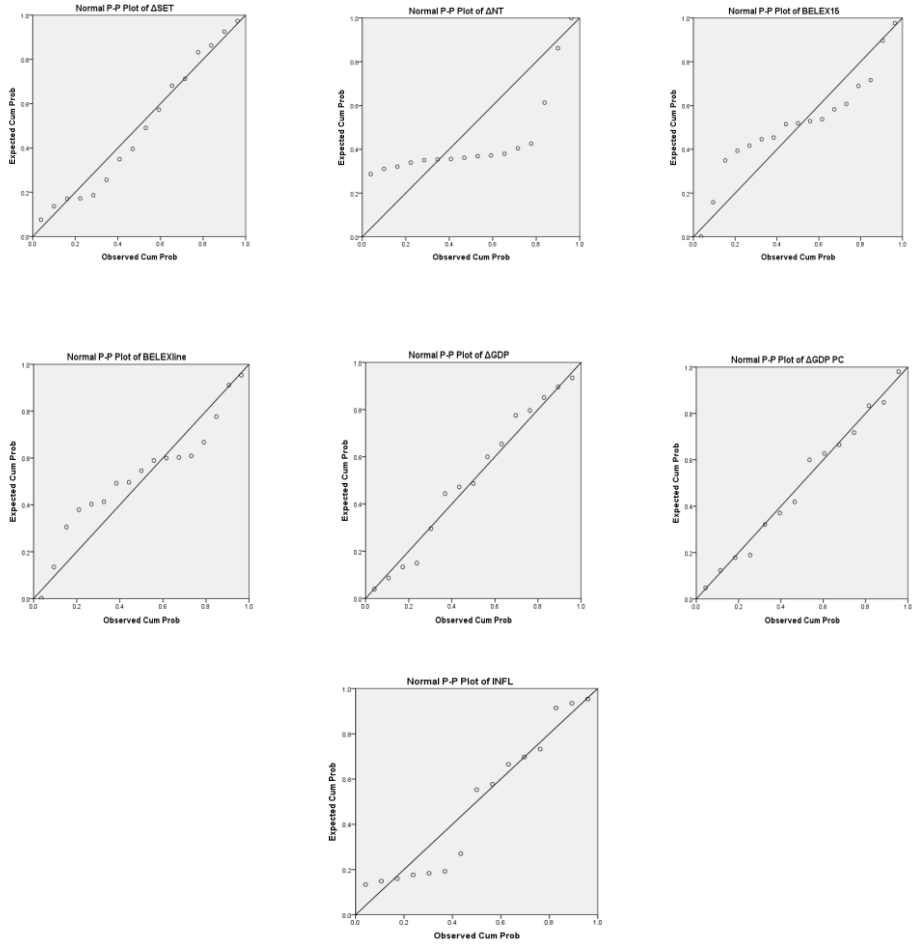
increase of these indexes. In the case of GDP, the average growth was 2.19% (std. err. = 0.72), while the average growth in GDP PC was lower (mean = 0.05, std. err. = 0.02). The highest rate of inflation was 12.41% in 2008, when the global financial crisis culminated. Inflation variable will not be used for modelling, since it is incorporated in the *real* GDP.

In this research, SET, GDP and GDP PC are presented in million EUR, NT in numbers, BELEX indicators and INFL in % change, and changes in variables (Δ) are calculated by the author and represented in %. Since the econometric analysis is applied, the %Δ in all variables is calculated (beside BELEX indicators and INFL that have already been calculated in %Δ in the original methodology) in order to ensure the reliability of the analysis using the standardized unit. Therefore, the variables used for the regression analysis are the following:

ΔSET - % change in SET, annual;
ΔNT - % change in NT, annual;
BELEX15 - % change in BELEX 15, annual;
BELEXline - % change in BELEXline, annual;
ΔGDP - % change in GDP, annual;
ΔGDP PC % change in GDP PC, annual.

Previous to regression modelling, the distribution analysis has been conducted. The assumption of normal distribution is adopted, and the Fractional Rank Estimation method is Blom's. The distribution test is applied in order to estimate the normal distribution of variables. Distributions are presented through P-P Plots in Figure 2:

Figure 2. Normal distribution test



Source: Author estimation

The presence of normal distribution allows the application of regression model without transforming variables trend.

In order to estimate whether the dependent variable is determined by independent variable, the linear regression model was employed.

The model specification of linear regression is based on Perić (2020) and Dey (2005). Linear regression analysis is used to process the estimation of impact of independent variable(s) on depended variable, and the regression models are as follows:

$$\mathbf{\Delta GDP_t = \alpha_0 + \beta_1 \Delta SET_t + \beta_2 \Delta NT_t + \beta_3 BELEX15_t + \beta_4 BELEXline_t + \varepsilon_t} \quad \mathbf{(1)}$$

$$\Delta GDP\ PC_t = \alpha_0 + \beta_1 \Delta SET_t + \beta_2 \Delta NT_t + \beta_3 BELEX15_t + \beta_4 BELEXline_t + \varepsilon_t \quad (2)$$

where α is the intercept of the equation; dependent variable in (1) is ΔGDP_t, and in (2) is $\Delta GDP\ PC_t$; β_n are the regression coefficients (capture the measure of effect), ΔSET_t, ΔNT_t, $BELEX15_t$, and $BELEXline_t$ are the independent variables, and ε_t captures the residuals (error) of the regression model. The regression model specifications are used for determining the impact of SET on GDP (and GDP PC) in *t*-time.

The results of the regression analysis are presented and discussed in the following part of this research.

RESULTS AND DISCUSSION

After conducting the collinearity diagnostics successfully, it can be proceeded with a regression coefficients estimation. The estimation of the SET impact on GDP and GDP PC is presented in Table 3 and Table 4. As appropriate statistical significance analysis, *p-value* at 5% level has been used. *R square* was used to determine the regression model's reliability.

Table 3. Regression estimation of the SET impact on GDP and GDP PP: 2006-2020

	ANOVA and R-values		**Coefficients**					
			Regressors	**Unstandardized**		**Standardized**		
				B	Std. Error	Beta	t	p
ΔGDP Model	p-value	0.049	Constant	1.628	0.578		2.815	0.020
	R	0.787	ΔSET	3.423	1.483	0.613	2.308	0.046
	R Square	0.620	ΔNT	0.084	0.236	0.075	0.357	0.729
	Adj R Square	0.451	BELEX15	-0.247	0.149	-2.315	-1.660	0.131
	Std. Error	2.051	BELEXline	0.203	0.159	1.852	1.277	0.234
ΔGDP PC Model	p-value	0.15	Constant	0.042	0.020		2.102	0.065
	R	0.703	ΔSET	0.096	0.051	0.574	1.876	0.093
	R Square	0.495	ΔNT	0.002	0.008	0.068	0.282	0.784
	Adj R Square	0.27	BELEX15	-0.006	0.005	-1.931	-1.201	0.260
	Std. Error	0.071	BELEXline	0.005	0.005	1.526	0.912	0.385

Source: Author estimation

For the time period 2006-2022, the regression results indicate that ΔSET, ΔNT, and BELEXline variables promote the economic growth. Although, it is not found the statistical significance for all of them. The outputs suggest that ΔSET has positive and statistically significant impact on ΔGDP (0.063%, p=0.046). In other words, GDP increases for 0.063% for each unit of increase in SET (1%), confirming that SET growth contributes the economic growth within the country in the examination. The ΔGDP Model is reliable at

the level of 62% ($p<0.05$). With regards to the second model, the results indicate that ΔSET, ΔNT, and BELEXline have a positive impact on ΔGDP PC (R-squared=49.5%, $p>0.05$), but none of them is statistically significant.

Table 4. Regression estimation of the SET impact on GDP and GDP PP after the global financial crisis: 2011-2020

	ANOVA and R-values		**Coefficients**					
			Regressors	**Unstandardized**		**Standardized**		
				B	Std. Error	Beta	T	p
ΔGDP Model	p-value	0.302	Constant	1.366	0.651		2.099	0.090
	R	0.751	ΔSET	4.040	1.646	0.810	2.454	0.058
	R Square	0.565	ΔNT	-0.527	0.945	-0.263	-0.557	0.601
	Adj R Square	0.216	BELEX15	0.014	0.246	0.076	0.058	0.956
	Std. Error	1.917	BELEXline	-0.079	0.216	-0.469	-0.367	0.729
ΔGDP PC Model	p-value	0.269	Constant	0.044	0.016		2.702	0.043
	R	0.767	ΔSET	0.063	0.041	0.487	1.517	0.190
	R Square	0.588	ΔNT	0.018	0.024	0.348	0.759	0.482
	Adj R Square	0.259	BELEX15	0.002	0.006	0.357	0.279	0.791
	Std. Error	0.048	BELEXline	-0.003	0.005	-0.683	-0.550	0.606

Source: Author estimation

For the time period after the global financial crises only (2011-2022), the results indicate that ΔSET, and BELEX15 variables have positive and not statistically significant impact on both ΔGDP (R-Squared=56.5%, $p>0.05$) and ΔGDP PC (R-Squared=58.8%, $p>0.05$). Regardless of the above, BELEX15 is very close to statistical significance (0.246%, $p=0.058$) in relation to ΔGDP. Thus, in future it would probably be statistically significant under unchanged conditions of actual BELEX15 trend (if the regression analysis based on the models in this paper is to be run in the future, the models will contain more observations).

Since there is a positive effect of SET on GDP, the *H1* is confirmed, which is in tandem with some earlier research. The effects of SET on GDP PC are not statistically significant, which is why *H2* is not confirmed.

The findings of this research complement those of several earlier studies. As concerns the impact of SET on GDP, the findings of this research are consistent with Živković (2021) and partially consistent with Osinubi (2004), Grbić (2020), and Verma et al. (2021). Technically, the results of this research are consistent with Osinubi (2004) both in the final results and methodology applied. Even Osinubi applied regression modelling, he used stock market variable while in this research stock exchange turnover is used as independent variable. Although stock market and stock exchange turnover are interconnected, SET is one of the indicators of overall stock market. Another friction between Osinubi and this study is that here the global crisis time period

was taken into account. As concerns Grbić (2020) research, the results are consistent with this paper as well. However, the methodological approach in this research is not complement with VAR modelling and Granger causality test that Grbić used in her research. With regards to Verma et al. (2021), the authors employed regression analysis and the overall results of this study are consistent with the study of these author. However, the sample Verma et al. used is larger than in this study, and the countries taken into consideration are highly developed countries, while Serbia belongs to the group of transition countries.

Based on the results, and on the SET decreasing trend since COVID-19 crisis has begun, it is supposed that SET fall in the last two years will be one of the contributors to the GDP decrease in the near future. In this sense, the state crisis management should collaborate with the capital market participant in order to decrease the risks of GDP greater fall.

According to the review of monthly and yearly BSE reports (BSE, 2022a), it appears that the listed companies with lower market capitalization are more vulnerable to the crisis compared to the listed companies with higher market capitalization. The reason for high vulnerability is reflected in liquidity issues of the companies. This is in harmony with the literature, considering the fact that high liquidity potential allows companies to deal with the new market environment caused by COVID-19 health crisis.

CONCLUSION

This paper has argued that the SET should enhance GDP growth in the Republic of Serbia. This research empirically estimated the impact of SET on GDP and GDP PC in this country for the 2006-2020 period. Along with this, the SET trend was analysed for the period 2001-2022. Regression models have revealed the existence of a positive and significant impact of SET on GDP, while the impact on GDP PC is positive but not statistically significant. While observing the trends of stock market indicators, one can come to a conclusion that there is a common phenomenon for the countries: high market liquidity ensures higher turnover. High turnover in stock exchange contributes to GDP increase.

Along with the efforts in providing liquidity, the economic-financial system requires healthy and stable business and political environment, especially in the time of crisis. Stable environment is the fundamental prerequisite for economic development, and its recovery due to the crises caused by the COVID-19 pandemic. Therefore, some recommendations are given for policy and decision makers:

- Introducing or improving crisis management at the companies' level (internal organization, with the scope of continuous analysis of the previous crises effect, of recovery strategies, and studying the effects of COVID-19 crisis in "real time", observing the other countries' experiences, and keep up-to-date with global capital movement);
- Improving crisis management at the government level (such as increasing financial aid for listed SME that are crucial for the market within the national economy, and limiting the government intervention for quite liquid listed companies, with the aim of preserving a low level of indebtedness and keeping inflation rate under control);
- Improving Stock Exchange management in order to meet the criteria for stock liquidity and market capitalization (such as proposing diversification of portfolios, stimulating foreign listed companies to invest in BSE, increasing flexibility for opening hours while respecting the regulations and legislation). BSE should be prepared for the crisis. If BSE engages more in promoting the stock liquidity and market capitalization, the government would search for foreign financial help much less, ensuring the lower level of state indebtedness.

Considering the limitations of this research, recommendations for further academic research are also given. The limitations of this study are what this paper has left for further research. Namely, the first limitation is the unavailability of GDP data for 2021 and 2022 official national data. The second limitation, which is the consequence of the first limitation, is the application of quarterly data. Taking into account these data, the regression modelling will show the exact impact of SET on GDP over the first years of COVID-19 crisis. The third limitation consists in considering one Stock Exchange. Where the future intention is to conduct a comparative analysis between countries, more than one Stock Exchange should be modelled.

REZIME
UTICAJ BERZANSKOG PROMETA NA BDP U REPUBLICI SRBIJI

Rast berzanskog prometa povećava performanse kapitala unutar zemlje. U radu se razmatraju kretanja berzanskog prometa nakon svetske finansijske krize uz razmatranje nove globalne krize COVID-19 u Republici Srbiji. Pored toga, u ovom radu se procenjuje korelacija između berzanskog prometa i pokazatelja BDP-a. S obzirom da je kriza COVID-19 skorašnja i da još uvek traje, dostupni zvanični podaci za poslednje dve godine još nisu potpuni. Cilj ovog istraživanja je, stoga, evaluacija uticaja berzanskog prometa na privredni rast u Republici Srbiji za period 2006-2020, sa odgovarajućim predviđanjima. Metodološki pristup se sastoji u primeni modela linearne regresije, uz

prethodne testove statističke adekvatnosti. Rezultati ovog istraživanja ukazuju da rast berzanskog prometa ima pozitivan i statistički značajan uticaj na BDP u ovoj zemlji. Međutim, analiza predviđanja ukazuje da berzanski promet može imati negativan uticaj na BDP u narednim godinama, zbog čega postoji nekoliko predloga za donosioce odluka i buduća istraživanja.

Ključne reči: berza, BELEX, privredni rast, korelacija, regresija, Srbija

REFERENCES

1. Affari Italiani (2020). Jerusalmi (Borsa Italiana): "We need an efficient capital market". Retrieved from: https://www.affaritaliani.it/economia/jerusalmi-borsa-italiana-serve-un-mercato-di-capitali-efficiente-711927.html
2. Ake, B., & Ognaligui, R. (2010). Financial Stock Market and Economic Growth in Developing Countries: The Case of Douala Stock Exchange in Cameroon. *International Journal of Business and Management, 5*(5), pp. 82-88.
3. Baier, S. L., Dwyer Jr., G. P., & Tamura, R. (2004). Does opening a stock exchange increase economic growth? *Journal of International Money and Finance, 23*(3), pp. 311-331. DOI: 10.1016/j.jimonfin.2004.01.001
4. BSE. (2020a). Decision on the Duration of Trading Phases Within Securities Trading Methods on the Segments of the Regulated Market and MTP Belex - 13.02.2019. Retrieved from: https://www.belex.rs/eng/regulativa/vesti/77708
5. BSE. (2020b). Decision on the Duration of Trading Phases Within Securities Trading Methods on the Segments of the Regulated Market and MTP Belex - EFFECTIVE 18.5.2020. Retrieved from: https://www.belex.rs/eng/regulativa/vesti/78042
6. BSE. (2021). Regulation Announcements. Retrieved from: https://www.belex.rs/eng/regulativa/vesti/objava
7. BSE. (2022a). Annual statistics. Retrieved from: https://www.belex.rs/eng/trgovanje/izvestaj/godisnji
8. BSE. (2022b). History. Retrieved from: https://www.belex.rs/eng/o_berzi/istorijat
9. BSE. (2022c). International cooperation. Retrieved from: https://www.belex.rs/eng/o_berzi/medjunarodna_saradnja
10. Dey, K. D. (2005). Turnover and Return in Global Stock Markets. *Emerging Markets Review, 6*(1), pp. 45-67. DOI: 10.1016/j.ememar.2004.09.003

11. Given, S. R. (1996). Economies of scale and scope as an explanation of merger and output diversification activities in the health maintenance organization industry. *Journal of Health Economics, 15*(6), pp. 685-713. DOI: 10.1016/s0167-6296(96)00500-0
12. Grbić, M. (2020). Stock market development and economic growth: The case of the Republic of Serbia. *Post-Communist Economies, 33*(4), pp. 484-499. DOI: 10.1080/14631377.2020.1745566
13. Grujić, M., & Rajčević, P. (2022). Comparative analysis of (un)readiness of listed joint-stock companies from the region to resist the crisis. Proceedings of Jahorina Business Forum 2022, East Sarajevo. Retrieved from:https://jbf.ekofis.ues.rs.ba/images/2022/ZR_JPF2022/33_Grujic_Rajcevic.pdf
14. Kalaš, B., Stameski, N., & Alimpijević, A. (2016). Quantitative approach to stock exchange market-evidence from Serbia 2006-2015. *International Journal of Applied Economic Studies, 4*(3), pp. 21-30.
15. Kisin, J. Mašović, A., & Ignjatović, J. (2021). Growing public debt as a result of the COVID-19 pandemic in the Western Balkans Region: the case of North Macedonia and Serbia. *Business Economics, XV*(2), pp. 66-85. DOI: 10.5937/poseko20-35315
16. Krasulja, N., Ivannikov, & N., Arsenijević, O. (2020). Organizational culture and behavior in the COVID-19 pandemic on the example of serbia. In International thematic proceedings COVID-19 pandemic crisis management a non-medical approach, pp. 167-191. Belgrade: Union – Nikola Tesla. Retrieved from: https://www.researchgate.net/profile/Marko-Pavlovic-7/publication/350688959_Konferencija_Kovid_2020/links/606d7ee3299bf13f5d5fe794/Konferencija-Kovid-2020.pdf#page=167
17. Marinković, S., Stojković, D., & Radović, O. (2013). Stock market development and economic growth: The Case of Belgrade Stock Exchange. *Actual Problems of Economics, 143*(5), pp. 399-408.
18. Maritz, A. (2020). A Multi-Disciplinary Business Approach to COVID-19: La Trobe Business School Perspectives. *International Journal of Organizational Innovation, 13*(1), pp. 45-62. Retrieved from: https://www.ijoi-online.org/attachments/article/266/45%20final.pdf
19. Marjanović, D., & Đukić, M. (2020). Ekonomske mere za ublažavanje posledica COVID-19. In *Black swan in the world economy 2020*. Institut ekonomskih nauka, Beograd, pp. 91-105. Retrieved from: http://ebooks.ien.bg.ac.rs/1490/1/5.%20marjanovic%2C%20djukic.pdf
20. Marques, L. M., Fuinhas, J. A., & Marques, A. C. (2013). Does the stock market cause economic growth? Portuguese evidence of economic regime change. *Economic Modelling, 32*, pp. 316-324. DOI: 10.1016/j.econmod.2013.02.015

21. Masoud, N. M. H. (2017). The impact of stock market performance upon economic growth. *International Journal of Economics and Financial Issues, 3*(4), pp. 788-798.
22. NALED. (2022). Efekti ekonomskih mera za ublažavanje negativnih posledica COVID-19 na privredu. Belgrade: NALED.
23. NBS. (2022). Statistics. Retrieved from: https://nbs.rs/en/drugi-nivo-navigacije/statistika/index.html
24. Osaseri, G., & Osamwonyi, I. O. (2019). Impact of Stock Market Development on Economic Growth in BRICS. *International Journal of Financial Research, 10*(1), pp. 23-30. DOI: 10.5430/ijfr.v10n1p23
25. Osinubi, T. S. (2004). Does Stock Market Promote Economic Growth in Nigeria? *The ICFAI Journal of Applied Finance, 10*(3), pp. 17-35.
26. Perić, M. (2020). Impact of FDI Inflow on Average Wage and Employment in Serbia. *Management: Journal of Sustainable Business and Management Solutions in Emerging Economies, 25*(1), pp. 13-22. DOI: 10.7595/management.fon.2019.0007
27. Petros, J. (2012). The effect of the stock exchange on economic growth: a case of the Zimbabwe stock exchange. *Research in Business and Economics Journal, 6*, pp. 1-17.
28. Rađenović, T., & Rakić, B. (2017). Interdependence between Level of Financial System Development and Economic Growth in Serbia. *Journal of Balkan and Near Eastern Studies, 19*(6), pp. 645-665. DOI: 10.1080/19448953.2017.1328896
29. Rakić, B., & Rađenović, T. (2013). Importance of Capital Market Efficiency for Economic Growth: the Case of Serbia. *Actual Problems of Economics, 140*(2), pp. 318-330.
30. Raza, S.A., Jawaid, S. T., Afshan, S., & Karim, M. Z. A. (2015). Is stock market sensitive to foreign capital inflows and economic growth? Evidence from Pakistan. *Journal of Chinese Economic and Foreign Trade Studies, 8*(3), pp. 142-164.
31. Ritter, J. R., Signori, A., & Vismara, S. (2013). Economies of scope and IPO activity in Europe. In M. Levis & S. Vismara (Eds.), *Handbook on research on IPO* (pp. 11-34). Cheltenham: Edward Elgar.
32. RZS. (2022). Data base – Statistics. Retrieved from: https://data.stat.gov.rs/?caller=SDDB
33. Singh, A. (1997). Financial liberalization, stock markets and economic development. *Economic Journal, 107*(442), pp.771-782. DOI: 10.1111/j.1468-0297.1997.tb00042.x
34. Službeni glasnik. (2020a). Uredba o utvrđivanju Programa finansijske podrške privrednim subjektima za održavanje likvidnosti i obrtna sredstva u otežanim ekonomskim uslovima usled pandemije COVID-19 izazvane

virusom SARS-CoV-2. Službeni glasnik RS, br. 54/2020 i 57/2020. Retrieved from: https://mfin.gov.rs/sr/propisi-1/uredba-o-utvrdjivanju-programa-finansijske-podrske-privrednim-subjektima-za-odrzavanje-likvidnosti-1

35. Službeni glasnik. (2020b). Uredba o fiskalnim pogodnostima i direktnim davanjima privrednim subjektima u privatnom sektoru i novčanoj pomoći građanima i cilju ublažavanja ekonomskih posledica nastalih usled bolesti COVID-19. Službeni glasnik RS, br. 54/2020 i 60/2020. Retrieved from: https://www.paragraf.rs/propisi/uredba-o-fiskalnim-pogodnostima-privredi-privatnom-sektoru-gradjanima.html
36. Verma, P., Ankur, D., Anuj, B., Ashok, A., Kestwal, M.C., & Kumar, P. (2021). A Statistical Analysis of Impact of COVID19 on the Global Economy and Stock Index Returns. *SN Computer Science, 2*(27), pp. 1-13. DOI: 10.1007/s42979-020-00410-w
37. Wang, B., & Ajit, D. (2013). Stock market and economic growth in China. *Economics Bulletin, 33*(1), pp. 95-103.
38. Živković, A. (2021). Međuzavisnost berzanskih indikatora i BDP-a na primeru odabranih balkans kih zemalja. *Ekonomija: teorija i praksa, 14*(3), pp. 44-63. DOI: 10.5937/etp2103044Q

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Marko Malović, PhD, Full Professor[1]
University Educons, Novi Sad and University of East Sarajevo
Faculty of Business Economics

Vesna Petrović, PhD, Associate Professor[2]
University of East Sarajevo
Faculty of Business Economics

FOR WHAT THE BELL TOLLS? A CONTRIBUTION TO UNDERSTANDING DEPENDENCE OF THE PANDEMIC AND GLOBAL TRADE

ABSTRACT: The outburst of COVID-19 pandemics has heavily contracted and structurally altered both the size and the flows of international trade throughout 2020 and 2021. Even though contagion effect on global trade is clearly a negative one for a number of reasons elaborated in the paper, we venture to argue that this is in fact an evolutionary, expected and unavoidable consequence of the globalisation process itself. Among the key trends affecting the present and future of the international trade, roughly half of them are fully independent and the other half at best semi-dependent from the pandemics itself. In other words, it appears that the bell tolls for the wrong suspect, in as much as the two phenomena might be coextensive, not to mention the ideological and operational confusion behind recently widespread deliberations to deploy trade policies in order to simultaneously achieve several non-trade objectives of dubious compatibility. Notwithstanding the grim prospects on the horizon, some Mediterranean economies, if proven capable, may yet turn out to be the unintended winners of the silver lining.

[1] profmarkomalovic@gmail.com
[2] vesna.petrovic@fpe.unssa.rs.ba

Key words: COVID-19, International Trade, (De)Globalisation, Global Supply Chains

We are hostages of our children. -M. Yourcenar-

The most important single central fact about a free market is that no exchange takes place unless both parties benefit.
-M. Friedman-

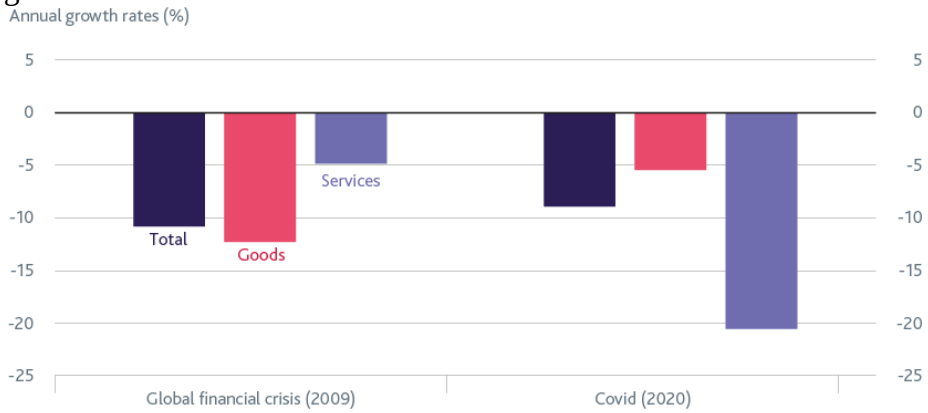
INTRODUCTION

The outburst of the pandemic, caused by specific strains of corona virus potentially lethal to humans, has heavily contracted and structurally altered the size and the flows of international trade during 2020 and 2021, although world trade has already been severely affected by the trade war between the two political and economic superpowers and the resulting *de facto* suspension of the World Trade Organization (WTO). Based on the analysis of changes in the content and directions of international trade nominally brought by COVID-19, in this paper we present arguments in support of the thesis that this downfall is an unintended child of a gradual and somewhat natural degeneration of international economic relations, fundamentally and dialectically conditioned by the genesis and the very nature of globalisation.

International trade flows are volatile, unbalanced and fragmented within global production, and supply chains. Contrary to the popular belief, after the first blow of the previous international financial crisis and the drastic decline in world trade in 2008-2009, international trade has never returned to the pre-crisis trend trajectory (Bekkers *et alia*, 2020). Something similar, although certainly quantitatively more significant in the case of services, can be expected with the COVID crisis, but the structural transformations of world trade flows will probably be more interesting and turbulent than their aggregate expression, which will sooner or later stabilise at the end through either the V- or L-shaped recovery. Trade in goods in the first quarter of 2021 grew somewhat faster than its pre-pandemic dynamics, but international trade in services continued to fall behind (UNCTAD, 2021). Trade in energy was significantly reduced, much like the trade in drugs and medical supplies needed to fight COVID-19 in the first months of the pandemic. Trade in food and non-medical chemicals has not been significantly affected by the pandemic (Eurostat, 2021). In any case, we are adjusting to a qualitatively "new" normal, which can be seen in Chart 1, which compares the annual rates of decline in

total world trade and changes in its structure during the COVID-19 pandemic and the previous international financial crisis.

Chart 1: Annual rates of decline in total international trade, trade in goods and global trade in services over the last two crises



Source: Bank of England (2021)

INTERDEPENDENCE OF PANDEMIC AND GLOBAL TRADE

The outbreak of the COVID-19 pandemic initially caused not only massive contractions in aggregate demand due to insecurity or wage cuts or even job losses, but also an additional increase of already raised tariffs, non-tariff barriers, even restrictions on exports of certain strategic or deficient products, i.e. broad spectrum protectionism (over 90 countries resorted to protectionism after the declaration of the pandemic, and according to The Economist (2021) 2/3 of countries that applied the measures of restriction and control of exports of medical devices after the outbreak of the pandemic applied the same restrictions in August 2021). Global trade plunges of this sort and prolonged trade wars are not part of the solution and will not shorten neither the health crisis nor the economic crisis. Quite the contrary, a new momentum of trade liberalisation, international scientific and economic collaboration are necessary ingredients for a sustainable exit from the pandemic (Baldwin-Evenett, 2020). However, it cannot be ignored that the speed and destructiveness of this pandemic bears the stamp of the achieved development of international trade and globalization, because the virus first and foremost spread along well-trodden trade and tourist routes (Barlow *et alia*, 2021). Over 80% of international trade in goods is carried over sea (UNCTAD, 2021), while ships are unfortunately very suitable for the spread of infection among the crew forced to interact within a small space. There is no need to waste breath on the draconian reduction of international tourism and

tourism-related services, which traditionally involve close contact between consumers and service providers. Finally, the greatest economic loss and *eo ipso* a blow to international trade (which will be fully evident only with hindsight) is the loss of human lives in terms of their contribution to creative economic activity and in terms of their unrealized, i.e. prematurely extinguished consumer potential. At the same time, it may be interesting that Zhang *et alia* (2021) found empirically that during the first year of the pandemic in China, the volume of international trade decreased only in correlation with the number of deaths from COVID-19, while in the USA it decreased in correlation with the number of corona virus infections. Moreover, Liu, Ornelas, and Shi (2021) find that in China, government measures to combat the infection have had more of an impact on the dynamics of import orders than health statistics and the current potential for the spread of the infection.

Be that as it may, one important behavioral peculiarity of economic life imposed by the contagion is rather striking. Namely, a year and a half ago, when a pandemic was declared and the corona virus began to sow death in all four corners of the world, consumers panicked and began to over-purchase all sorts of goods, while today, on the contrary, companies are struggling to produce enough supplies (Murray-Curran-Chipman, 2021). The dizzying speed with which demand for a variety of goods is being restored, including durable consumer goods, is creating shortages, transport bottlenecks and, for the time being, a slight recovery in inflation, in line with the empirical findings of Jack and Stuermer (2021). Global supply chains are straining to the limit and cracking down on production or exchange of a range of commodities from copper, iron, aluminum, steel, wheat, mercantile corn, logs, cardboard boxes, plastics to semiconductors and energy. Rental of trucks, railways, transport containers, etc. has also become more expensive (Murray-Curran-Chipman, 2021). Restrictions on the supply side continue to hamper production and logistics capacities and consequently the volume of trade, so that the decline in exports generally goes hand in hand with the decline in imports, because the tops of the EU-CHINA-US global industrial-trade triangle are sources of imported raw materials, semi-finished products as well as markets for the placement of their final goods (Baldwin, 2020). For example, China obtained a significant percentage of its own needs for semiconductors (at least before the customs war) as input from the United States (Malović, 2019), while China defends its status as the world's number one trading power not only as a net exporter of consumer goods, but as a leading supplier of semi-finished products in the manufacturing industry (20% of global needs for semi-finished products) related to precision mechanics, machinery and automotive industry and electrical communication equipment (UNCTAD, 2020).

It is not impossible for this type of disturbance to further deepen the previously growing foreign trade imbalances in the world economy, which are a very credible predictor of the latter protectionist reaction, especially if an expansive fiscal policy is implemented alongside trade disequilibria (Delpeuch-Fize-Martin, 2021). Currently, the massive difference in the intensity of fiscal expansion around the world only further favors possible troubles in international trade. The biggest imbalances in international trade, however, should be expected by countries that are outside the major regional trade integrations, import mostly finished products and trade with whom they usually arrive from the immediate geographical neighbourhood (Comunale-Dainauskas-Lastauskas, 2021).

All in all, the reduction in the volume and deformation of the factor content of international trade at the global level is fuelled by the acquisition of several co-factors: 1) politico-economic repercussions of shifted production and trade gravity to the east, to Asia; 2) technical progress and sectoral expansion in the field of information and communication technologies, automation and artificial intelligence (Industrial Revolution 4.0) which stabilizes the ideology of globalisation; 3) green evolution additionally accelerated by the pandemic that brought about both price increases, substitutions in the production or outsourcing in the procurement of materials, assemblies and technologies, in other words "reshuffled and re-dealt the cards"; 4) special coexistence of de-globalisation, anti-globalisation and globalisation processes in the world; as well as 5) interruption, shortening and diversification of global supply chains; 6) expiration (*id est* effectiveness) of monetary and fiscal expansion as a kind of state aid to the economy and the population (Goldin *et alia,* 2021).

Thus, the fact that China with its Asian hinterland has surpassed the United States with respect to trade volume and in many ways with respect to production activity as well has affected not only its international trade with the Western world, but also how Chinese investment, Chinese technology and trade-logistics centres are viewed down the Silk Road and across the planet (Crow-Saran, 2021). Although the trade war against China has at least temporarily disabled its full foreign trade potential, there is an opportunity for other Southeast Asian economies, primarily Malaysia and Vietnam. After all, Asian economies have proven to be more resilient in the pandemic itself, as they have conducted much stricter closures, more frequent testing based on need, with a stark advantage for much younger populations than in the west, less hospital days and lower Asian mortality (Goldin *et alia,* 2021).

Technical and technological progress has already shaped the transformation of cross-border business, objects and modes of international exchange, and the outbreak of the pandemic has only intensified the use of technologies such as machine learning, cybernetics, remote audio & video

software, cloud computing, video games and artificial intelligence applied in the home entertainment and remote-control industry, for example (*Ibidem*). This, of course, contributes to the stabilisation of the recently endangered narrative of raising the standard of living and well-being of globalization. Inhabiting a highly materialistic civilization, citizens crave technologically advanced products and services. It is becoming easier to control and direct masses of the dissatisfied citizens, which using these same technologies can become aware that these products are widely available elsewhere.

Raising environmental awareness has come naturally with a jump in GDP, and somewhere with a drastic deterioration of the human environment due to the influx of foreign direct investment, which, if focused on dirty technologies, usually seeks destinations with cheap labour and low environmental standards. However, even when green evolution progresses far from emerging markets and underdeveloped countries, along with the price of environmentally friendly products and altered production factor content partly obtained through imports, it is certainly to blame for both trade creating and trade diverting effects, if we may borrow J. Viner's terminology. The likely impact of green evolution on international trade will be less delicate this time around, as WTO rules have so far allowed environmental measures only if they have the minimum necessary negative impact on world trade, and recent research reveals that OECD members account for a quarter of total CO2 emission in foreign trade activities (The Economist, 2021). Another question is whether it can be successful and at what politico-economic cost, since it is a public secret that key environmental policies have so far been a zero-sum game globally. With a strict application of environmental standards to reduce pollution in developed countries, there is an overflow of about a third of emissions abroad by relocating dirty industries elsewhere instead of permanently abandoning or substituting them (*Ibidem*). When we talk about developing countries, raising environmental standards would have a beneficial effect on certain dimensions of economic development in them, but it would certainly slow down and hinder both economic growth and the balance of international trade.

Unfortunately, the same interconnectedness enabled by globalisation, which facilitated the creation of wealth and multiplied economic opportunities, produces negative effects as well, which began to manifest themselves during the 1990s and 2000s. Global and transnational risks such as international terrorism, environmental degradation, cyber-attacks, epidemics, human trafficking, financial instability and cross-border financial crises have ricocheted off with increasing frequency around the world. Such risks can arise in a single jurisdiction and - through the same channels that have nurtured the 'bright side' of globalization - can spread quickly and sometimes unnoticed across even fairly remote geographical areas (Crow-Saran, 2021). In a word,

anti-globalisation efforts have now been supported as a by-product of globalisation by organically emerging trends of de-globalisation, which are only seemingly its opposite, and indeed it is a somewhat natural evolutionary degeneration of international economic relations. Milanović (2019, pp. 147-148) reminds us that modern global supply chains, as probably the biggest organisational innovation in the era of globalisation, could have emerged only with technologically enabled remote control of a complex production process and globally secured respect for property rights. For a number of attractive emerging markets and developing countries, the last thirty years of production and financial globalisation have meant almost certain prosperity if they have managed to insert their economic capacities into global production and supply chains. At first, outsourcing arrangements contributed moderately to the economic growth of host countries, then were often enhanced by more technologically advanced off-shoring arrangements and/or the host's political and economic ability to choose its own production and development path at an ever-higher level of the Porter-Krugman competitiveness ladder. For countries that have managed to take advantage of their relative advantages (institutional factors, abundance of resources and/or their favourable overall, market size, geographical location), globalisation has changed for the better: in recent decades domestic countries have been forced to negotiate with their parent companies not to transfer advanced technologies to the international economic periphery (Milanović, 2019). However, to achieve what Baldwin (2016) calls the final third globalisation would mean -in addition to the mobility of goods, services and finance- completely free migration of people (both as consumers and as labourers) and equalisation of labour yields between the economic North and the South, an achievement that we are presently far away from and which the COVID-19 pandemic will certainly slow down further still.

Finally, the characteristic features of modern global supply chains are the reliance on several major logistics axes and the just-in-time delivery paradigm (D'Aguanno *et alia,* 2021). The practice of supply at the time of the corona deviated more or less from both of these characteristics. Namely, the global production and supply chains are being shortened, and their actual diversification, which is currently causing delays in the delivery and increase in prices not only of transport, but also of the services and semi-finished products that are in the chain bed. However, as in practice this means more and more frequent and mass migration of production and service assets of globalised economic activity from Asia to the Mediterranean, this could also be a chance for sufficiently agile economies of the Western Balkans. However, post-industrial developed countries' interest in global free trade agreements and further liberalisation is likely to remain limited in the future, as competition from developing countries with low unit labour costs increases pressure on labour markets and a potential decline in worker welfare in

industrialised countries (Petersen, 2020). More importantly, worldwide, globalised production processes are becoming increasingly capital- and technology-intensive. As a result, relocating production processes to low-wage countries becomes less cost-effective and therefore less important. The trend of re-hiring in the developed world, which is already evident in the United States, will probably continue to take off. The spread of 3D printing technology is accelerating this development. Rising energy prices (due to the introduction of CO2 taxes and green evolution) will support this development of the situation, as transport costs will jump as a result (*Ibidem*). In this regard, Aguanno *et alia* (2021) find that re-shoring transition leads to increased volatility of economic activity, while diversification of supply sources reduces the volatility of GDP of those who win orders and increases those who lose orders, so the overall effect of disintegration or repackaging of existing global chains supply to the volatility of economic activity questionable.

Lastly, the world is likely to face the expiration in effectiveness of delayed fiscal and especially monetary expansion, which by repetition gives less and less of the desired resilience while raising inflation and the share of public debt to GDP towards areas of utmost concern. The jump in world food prices by an average of 30% and the drastic jump in energy prices have certainly added fuel to the fire, and currently some economists are evoking unpleasant memories of stagflation from the 1970s. Should there be a resurgence of labour unions around the world in respect to their membership and socioeconomic influence, this undesirable scenario may well be repeated. And even if stagflation is absent, price increases have already occurred, global supply chains have been distorted, deliveries have been delayed, and so on, it will put pressure either on further price increases or on the creation of shortages, which in both cases promises an unfavourable outcome for international trade (The Economist, 2021).

CONCLUSION

The research conducted through this paper suggests several preliminary conclusions that we leave to the test of time. First, although the negative impact of the COVID-19 pandemic on the volume, flows and structure (with an additional impact on volume over medium-run) of international trade is theoretically and empirically unquestionable for a number of reasons discussed in the text, causality is clearly not a one-way thing and has its longer and broader inception, which means that both phenomena are most likely coextensive by the regular and gradual degeneration of modern international economic relations, i.e. the genesis and nature of the process of globalisation itself. Of the six key trends listed in the paper for the present and future of

international trade, virtually half have nothing to do with the pandemic or its impact on trade, whereas half are only partially related to the consequences of the spread of COVID-19. Thus, it is unclear what the official bells are tolling for in this chapter of international exchange, where on a top of too lightly publicized suspects (corona virus, WTO, PRC…) we deal with escalating trade policies that try to achieve several non-trade goals (national security, geopolitical repositioning, preservation of the human environment, preservation of or growth in employment, etc.) of mutually questionable compatibility.

As luck would have it, even though dark clouds are indisputably gathering ahead and above the world trade, some Mediterranean economies, if they prove capable and flexible enough, could become spontaneous winners of the latest dealing of cards in the globalised production and overseas trade.

REZIME
ZA ČIM ZVONA ZVONE? PRILOG RAZUMEVANJU ZAVISNOSTI PANDEMIJE I GLOBALNE TRGOVINSKE RAZMENE

Izbijanje pandemije COVID-19 značajno je smanjilo i strukturno promenilo i veličinu i tokove međunarodne trgovine tokom 2020. i 2021. Iako je efekat zaraze na globalnu trgovinu očigledno negativan iz više razloga koji su elaborirani u radu, smatramo da je to u stvari evoluciona, očekivana i neizbežna posledica samog procesa globalizacije. Među ključnim trendovima koji utiču na sadašnjost i budućnost međunarodne trgovine, otprilike polovina njih je potpuno nezavisna, a druga polovina u najboljem slučaju poluzavisna od same pandemije. Drugim rečima, čini se da zvona zvone za pogrešnog osumnjičenog, utoliko što su ova dva fenomena sva je prilika kointegrisana, da i ne spominjemo ideološku i operativnu konfuziju u pozadini nedavno rasprostranjenih nastojanja da se trgovinskom politikom istovremeno postigne nekoliko netrgovinskih ciljeva sumnjive kompatibilnosti. Bez obzira na sive oblake ispred i iznad nas, neke mediteranske ekonomije - ako se pokažu sposobne i dovoljno fleksibilne – mogle bi na posletku postati nesuđeni laureati utešnih ekonomskih nagrada.

Ključne reči: COVID-19, međunarodna trgovina, (de)globalizacija, globalni lanci snabdevanje

REFERENCES

1. Baldwin, R. (2016), „The Great Convergence: Information Technology and the New Globalization“, Belknap Publishers of the Harvard University Press, Cambridge, MA.
2. Baldwin, R. (2020), „The Greater Trade Collapse of 2020: Learnings from the 2008-09 Great Trade Collapse“, VoxEU.org and CEPR, 7th of April, *mimeo*
3. Baldwin, R.-Evenett, S.J. (eds.) (2020), „COVID-19 and Trade Policy: Why Turning Inward Won't Work“, a VoxEU.org eBook, CEPR Press.
4. Bank of England (2021), „How has COVID affected Global Trade?“, *Bank Overground*, 23rd of July, *mimeo*.
5. Barlow, P. *et alia* (2021), „COVID-19 and the Collapse of Global Trade: Building an Effective Public Health Response“, Lancet Planet Health, Vol. 5, pp. 102-107.
6. Bekkers, E. *et alia* (2020), „Trade and COVID-19: The WTO's 2020 and 2021 Trade Forecast", a VoxEU.org, 24th of April, *mimeo*.
7. Crow, A.- Saran, S. (2021), „The Global Trade Map After COVID-19: Where to for Global Companies and Investors, and Policymakers?“, Observer Research Foundation, Special Report, May 19th, *mimeo.*
8. Comunale, M.-Dainauskas, J.-Lainauskas, P. (2021), „Supply Chains and Trade Flows Volatility in the Face of Global Shocks“, a VoxEU.com, 9th of March, *mimeo.*
9. D'Aguanno, L. *et alia* (2021), „Global Value Chains, Volatility and Safe Openness: Is Trade a Double-edged Sword?“, Financial Stability Paper No. 46, Bank of England, January.
10. Delpeuch, S.-Fize, E.-Martin, P. (2021), „Trade Imbalances and the Rise of Protectionism“, a VoxEU.org, 12th of February, *mimeo*.
11. The Economist (2021), „World Trade – The New Order of Trade“, Special Report, 9th of October, *mimeo.*
12. The Economist (2021♣), „The Environment – Making Trade greener“, Special Report, 9th of October, *mimeo*.
13. The Economist (2021*), „The World Economy – Stagflation Sensation“, Finance and Economics Section, 9th of October, *mimeo*.
14. Eurostat (2021), „Impact of COVID-19 on International Trade by Product Group“, The EU's Statistical Office, March, *mimeo*
15. Goldin, I. *et alia* (2021), „How COVID-19 changed Global Trade forever“, White Paper, Atradius Consulting, *mimeo*.
16. Liu, X.-Ornelas, E.-Shi, H. (2021), „The Trade Impact of the COVID-19 Pandemic“, VOX/CEPR Discussion Paper #16201.
17. Milanovic, B. (2019), „Capitalism, Alone“, The Belknap Publishers of the Harvard University Press, Cambridge, MA.

18. Murray, B.-Curran, E.-Chipman, K. (2021), „The World Economy is suddenly running low on Everything", Bloomberg Businessweek, 17th of May, *mimeo*.
19. Petersen, T. (2020), "A Glance into the Crystal Ball: What will the Future of International Trade look like?", New Perspectives on Global Economic Dynamics, Bertelsmann Stiftung, January 16th, *mimeo*.
20. UNCTAD (2020), „Global Trade Impact of the Coronavirus (COVID-19) epidemic", Trade and Development Report Update, Geneva, 4th of March.
21. UNCTAD (2021), „Global Trade's Recovery from COVID-19 Crisis hits Record high",
22. Zhang, W.-W. *et alia* (2021), „COVID-19 and International Trade: Insights and Policy Challenges in China and USA", Economic Research, DOI: 10.1080/1331677X.2021.1930091

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Jovana Kisin, **PhD candidate – Teaching Assistant**[1]
University Educons, Sremska Kamenica, Serbia
Faculty of Business Economics

Jelena Ignjatović, **PhD Lecturer**[2]
Academy of Vocational Studies, Sabac, Serbia

Azemina Mašović, **PhD Assistant Professor** [3]
Integrated Business Institute, Skoplje, North Macedonia

DYNAMICS, SCOPE AND STRUCTURE OF EXTERNAL TRADE OF THE REPUBLIC OF SERBIA

ABSTRACT: The COVID-19 pandemic has changed global economic perspectives and led to a turning point in economic trends around the world, as well as in the Republic of Serbia. With a detailed analysis of key figures of external trade of goods, the main aim of this paper is to appraise the position and results of the Republic of Serbia in the field of foreign trade exchange, as one of the most important indicators of economic activity. The methodology covered in the paper includes qualitative research techniques, such as analysis, comparative analysis, and synthesis. The first part of the paper deals with the trend of external trade in the past three decades, with special reference to the effect of the crisis caused by the COVID-19 pandemic. The second thematic unit analyzes the structure of the Republic of Serbia's foreign trade, according to the economic purpose of goods and the classification of activities. The focus of the third part is the territorial distribution of foreign trade of the Republic

[1] jovanna.kisin@gmail.com
[2] jignjatovic985@gmail.com
[3] azemina@fbe.edu.mk

of Serbia by main economic and geographical zones, ie countries of purpose and origin. Finally, concluding remarks are given. We found that the Republic of Serbia has many possibilities to improve external trade, which should primarily focus on increasing exports, in quantitative terms, but at the same time not to fail to raise the quality and value of our export products.

Key words: external trade, Republic of Serbia, dynamics, volume, structure, COVID-19

INTRODUCTION

Foreign economic relations are an important part of the economic activities of the Republic of Serbia (hereinafter Serbia). They are subject to regulation and direction of economic and political activity (Ignjatovic et al. 2020). The last decade of the XX century is characterized by a strained period in economic policy of the Republic of Serbia, followed by a period of reopening to the world, which is characterized by the growth of foreign trade. After the political changes in 2000, approaching the European Union became the main foreign policy priority of Serbia, which is still a strategic goal of the whole society (Markovic, Toskovic, 2013). The COVID-19 pandemic has changed significantly the global economic perspectives (Ignjatovic, et al.2021) and led to a turning point in economic trends in other countries of the world, as well as in Serbia.

In recent years, the foreign trade change between Serbia and China has become increasingly important (Jacimovic et al., 2018), precisely on the basis of the "17+1" mechanism, which is part of the Belt and Road Initiative. This mechanism, among other projects, affects the increase in trade exchange (Filipović, Ignjatović, 2021a). It includes 12 countries in Central and Eastern Europe and 5 countries in the Western Balkans and China, in order to strengthen EU-China relations (Filipović, Ignjatović, 2021b). Although the surrounding countries are uncompetitive in size and economic influence in international trade compared to China, Serbia has made the most progress in trade, which has doubled in the last ten years (Beraha, Jovicic, 2021).

Although China's influence is increasingly present, Serbia's largest foreign trade partners are still the countries of the European Union, and then the members of the CEFTA agreement (Vlaović, 2019). Regarding the exports, Germany is Serbia's largest trade partner, followed by Italy, and in third place is a member of CEFTA, Bosnia and Herzegovina. Consequently, another EU member, Romania, is in fourth place, while the Russian Federation is in fifth place. In relation to the import of goods, Germany is Serbia's number

one partner, followed by China in second place, Russia holds the third place, while Italy is in the fourth place. Neighboring Hungary ranks fifth as a partner of the Republic of Serbia in terms of imports.

Therefore, the aim of this paper is to look at the current position of the Republic of Serbia in the field of international trade, based on the analysis of the volume, dynamics, structure, and other relevant indicators of foreign trade. The structure of the paper is organized into three parts, with the first part analyzing the trends and the volume of foreign trade of the Republic of Serbia. The second part of the paper defines the structure of foreign trade of the Republic of Serbia, while the third part deals with the territorial distribution of foreign trade in Serbia. Finally, concluding remarks are given. Given the above, the methodology covered in the paper includes qualitative research techniques, such as analysis, comparative analysis, and synthesis.

EXTERNAL TRADE OF SERBIA: TREND AND VOLUME

In last 35 years, caused by many political events and the new political status of the Republic of Serbia in the international community, numerous changes in external trade have been involved concerning the level, structure and range of goods included in trade (Crnomarković, 2010). At the end of the 1980s, there was an increase in the SFRY (Socialist Federal Republic of Yugoslavia) trade with foreign countries, which reached its highest volume in 1990. At the end of the 1980s, the level of exports and imports was approximately the same, with an extremely small foreign trade deficit. Unfortunately, as early as 1991, the trend of declining foreign trade began. Due to international sanctions imposed in the period 1992-1998, one of the most difficult periods for the country's economy followed, during which data on foreign trade were not available. The isolation of our economy from world markets has left numerous negative economic consequences. Although the sanctions from 1996 were partially lifted, the destruction was not stopped, because in 1999 there was a NATO bombing of the then Federal Republic of Yugoslavia. In addition to the decline in the volume of foreign trade in the years after the sanctions, there is also an increase in the foreign trade deficit, which inevitably indicates that the economy has suffered major disruptions.

After a decade of economic downturn and sanctions, better times have finally begun in the 2000s. The larger part of the sanctions has been lifted, with the country's reintegration into many international, financial, and economic flows. The economic recovery began with the growing trend of foreign trade. However, only in 2003, imports were at the level of 1990, while exports reached that level in 2005. At the same time, since 2000, there has been an increase in the negative balance of foreign trade, with stronger growth

in imports compared to exposts. Until 2004, the foreign trade deficit grew at an average annual rate of 41%, and in 2005, the value of the trade deficit decreased by 19% compared to the previous year (Crnomarković, 2010). In the period 2006-2008, there was a significant growth of imports and exports, but together with a strong deficit growth. In those years, negative records of the foreign trade deficit were achieved, which have not been surpassed to date, although the volume of trade is far higher than in those years. In particular, the deficit in 2007 was 9.729 million USD, and in the following year 2008, this indicator was even worse, amounting to 11.902 million USD (Crnomarković, 2010). Since 2009, there has been a reduction in the trade deficit, which can be attributed to a significant reduction in imports compared to the reduction in exports (Rapaić, Dabić, 2013). After 2008, Serbia recorded a significant decline in exports and imports, which can be attributed to the global economic crisis, resulting in a drastic decline in world trade. The decline in exports is accompanied by a decline in imports to a greater or lesser extent, due to the high import dependence of companies participating in exports. In the observed period, 1998-2009, within the import of goods, the changes were smaller in terms of volume and structure, while on the export side, the changes are larger both in volume and structure[4] (Crnomarković, 2010).

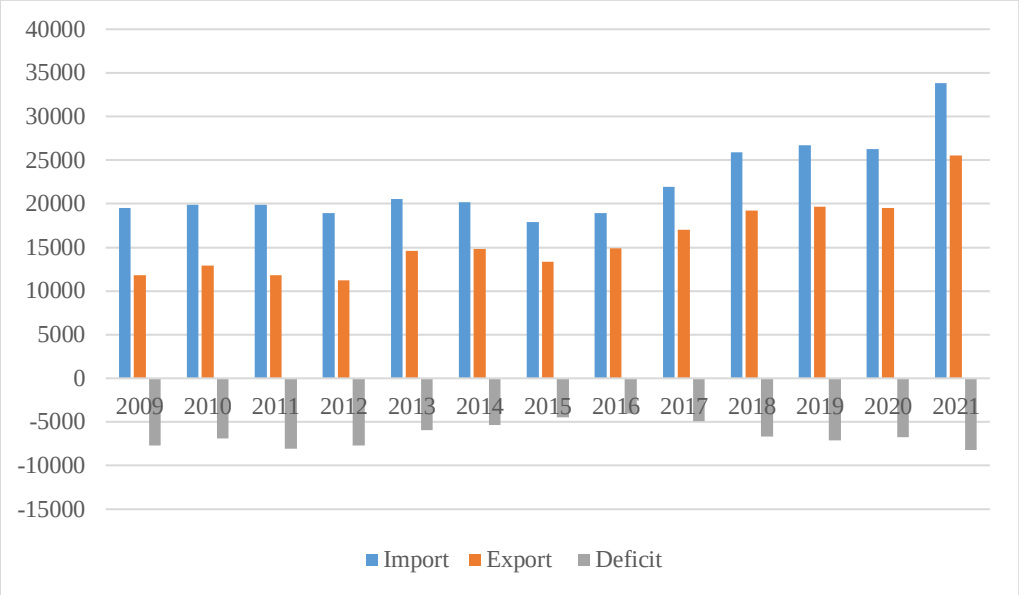
In the following tenyears, in the period 2009-2018, there were numerous changes in the volume of foreign trade. After a sharp decline in 2009, there will be relative stagnation in the next few years until 2012. The trend of imports and exports, in the period 2009-2012, did not notice significant changes and dynamics. Imports ranged around 19.000-20.000 million USD, while exports in millions of USD ranged from 11.000-12.000, with a slight increase in 2010. Following this dynamic, the negative trade balance did not have significant oscillations and ranged from around 7.000–8.000 million USD. In terms of foreign trade, the period 2013-2014 was very successful. Significant growth of exports was achieved, as well as slightly lower growth of imports, which had favorable effects in reducing the foreign trade deficit. In 2015, there was a significant decline in the volume of foreign trade and its basic indicators. Significant growth of imports and exports was achieved during 2015-2016, with a positive foreign trade balance. In this period there was no significant increase in the deficit (SORS, 2022a).

Two years before the COVID-19 pandemic, Serbia achieved the historically best result in terms of the volume of foreign trade, followed by the same ratio of imports and exports, ie the accompanying growth of the foreign trade deficit. The total foreign trade of Serbia in 2019 amounted to 46363.6 million USD, which is an increase of 2.8% compared to 2018. Exports of

[4] Note: Changing the state border affects the content of data on exports and imports and disrupts their comparability.

goods had a value of 19633.0 million USD, which is an increase of 2.0%, while imports of goods amounted to 26730.6 million USD, which is 3.3% more than in 2018. The foreign trade deficit in 2019 also had an increase of 6.8% compared to 2018 (Chart 1).

Chart 1: Imports/exports of Serbia, 2009-2021. (million USD)



Source: Authors based on data SORS, 2022c.

The impact of the COVID-19 pandemic on the scope, but also on the structure of Serbia's foreign trade, since the beginning of the pandemic, has not been pronounced and is reflected primarily in stagnation. According to official data (SORS, 2022c), the total volume of foreign trade of the Republic of Serbia in 2020 decreased by 1.4 percent compared to 2019. Compared to 2019, exports in 2020 decreased by 0.7% and imports by 1.9%. The foreign trade deficit even achieved the largest reduction of 5.1% compared to 2019, which is a positive result. During the second year of the pandemic, 2021, Serbia achieved many very good economic results, which also refers to the value of the volume of external trade, which was recorded in 2021. Total foreign trade of the Republic of Serbia for the period January - December 2021, was higher by 29.8% compared to the same period in 2020. Export in the amount of 25563.5 million USD, achieved a growth of 31.1%. Goods worth 33797.0 million USD were imported, which is 28.8% more than in 2020. The foreign trade deficit increased by 22.3% compared to 2020 and amounted to 8233.4 million USD. The coverage of imports by exports last year was 75.6% and is higher than the coverage in 2020 when it was 74.3% **(**SORS, 2022c**)**. In 2021, Serbia achieved a record level of volume and value

of foreign trade, and it will not be an easy task to repeat or exceed such results during the current year, taking into account current global developments. However, 2022 started very well for Serbia, in terms of growth, volume, and value of foreign trade, but some indicators are still worrying. According to the latest available data (SORS, 2022d), the total external trade of Serbia for the period January-February 2022 amounts to 10535.1 million USD, which is an increase of 32.1% compared to the same period in 2021. Exports were worth 4283.7 million USD, which is an increase of 19.8%, and imports of goods worth USD 6251.4 million USD, which is a growth of 42.1%. As a result of this growth in imports, there was an enormous increase in the deficit of 139.1% compared to the same period in 2021. Also, the coverage of imports by exports is 68.5% and is lower than the coverage in the same period last year, when it amounted to 81.3% (SORS, 2022d).

STRUCTURE OF SERBIA'S FOREIGN TRADE EXCHANGE

Besides data on the value of exported and imported goods, external trade statistics also include data about: exports and imports growth/decline rates, trade balance, coverage of imports by exports, export/import according to CA and SITC classifications, by country of destination/origin, by economic and geographical zones, and their development level, the economic purpose of products, types of external trade activities, etc. (SORS, 2022a). Each of these aggregates can be considered a separate indicator for analysis (Bjelić, 2018). One of them for which data are available is exports and imports for economic purpose of the European Union[5]. In terms of this classification, in 2021, as well as years ago, the structure of exports and imports of Serbia is dominated by intermediate goods with about 40% (Table 1).

Table 1. Exports/imports by economic purpose of the European Union, 2021.

	Imports (%)	Exports (%)	Balance (million USD)
Energy	9.0	2.9	-2298.6
Intermediate goods	37.9	42.8	-1864.1
Capital goods	20.1	20.6	-1506.9
Permanent consumer goods	2.1	4.8	519.5
Impermanent consumer goods	16.3	21.3	-72.3
Unclassified	14.6	7.5	-3011.0

Source - SORS, 2022a.

[5] The European Union classifies industrial products into five groups according to their purpose.

As data shows, after the category of Intermediate goods, in the external trade structure of Serbia the most important categories are Capital goods and Impermanent consumer goods with the participation of around 20% each. It is important to point out that Serbia achieves a negative foreign trade balance in almost all categories of imports and exports of goods according to the economic purpose of the EU, and imports significantly more than exports, especially in the categories of intermediate goods, energy and in the group unclassified by the economic purpose of the EU. The only exception is the group of permanent consumer goods, in which Serbia achieved a surplus in 2021, which amounted to about 500 million USD. In 2021 strong increase on the import side was recorded in the category of energy, where the deficit increased by about 830 million USD, mostly caused by major problems in the Electric power industry of Serbia and the need to import large amounts of electricity but also additional increased needs for other energy sources. A large change in the value of the increase in the deficit of almost one billion USD was achieved in the group unclassified by the economic purpose of the EU (SORS, 2022a). One of the structural indicators of exports and imports is by sectors and areas, ie the classification of activities[6] (hereinafter CA) according to the principle of prevalence**.** Following the previous indicator, the data for Serbia in this group are similar. The manufacturing sector dominates with almost 80% share, and in relation to it, other divisions are almost negligible (Table 2).

Table 2. Imports/exports by divisions of CA, 2021.

	Imports (%)	Exports (%)	Balance (million USD)
Agriculture, forestry and fishing	2.5	6.2	722.2
Mining and quarring	7.4	3.7	-1532.0
Manufacturing	77.6	78.5	-3686.2
Electricity, gas, steam and air conditioning supply	0.5	0.6	-9.9
Water supply, sewerage, waste management and remediation activites	0.4	1.0	107.8
Information and communication	0.2	0.3	- 6.0
Professional, scientific and technical activities	0.0	0.0	0.3
Arts, entertainment and recreation	0.0	0.0	0.2
Other service activities	0.0	0.0	0.0
Unclassified according CA	11.3	0.0	-3829.9

Source - SORS, 2022a.

[6] CA - Classification of Activities, more information at: https://www.stat.gov.rs/en-us/istrazivanja/klasifikacije/

Category Manufacturing has the largest deficit, which increased by about 600 million USD in 2021 compared to 2020. The group Unclassified by CA, in accordance with the previously mentioned similar group Unclassified by the economic purpose of the EU, has a significant share, but also an extremely large deficit, which also in 2021 had a significant increase of 900 million USD. Once more, the import of electricity falls into the category of electricity, gas, steam, and air conditioning supply, where a deficit has been recorded for the last year. Category Mining and quarrying do not have a large percentage share in imports and exports, but there is a significant deficit in terms of value. Agriculture, forestry, and fishing stand out due to the surplus that the Republic of Serbia has of over 700 million USD (SORS, 2022a). The latest classification recognized globally is the one adopted by the United Nations, known as the Standard International Trade Classification (hereinafter SITC). According to this, it can be seen that in the structure of imports and exports the largest share has goods from the group Machinery and transport devices, Manufactured products classified by material and Chemical and similar goods (Table 3).

Table 3. Imports/exports by divisions of SITC, 2021.

	Exports (%)	Imports (%)	Balance (million USD)
Food and live animals	14.1	6.2	1509.5
Beverages and tobacco	3.1	1.2	368.4
Crude materials, inedibles, except fuel	6.5	3.8	396.6
Mineral fuels, lubricants and related materials	2.9	9.1	-2319.0
Animal and vegetable oils, fats and waxes	1.2	0.3	208.3
Chemicals and related products	10.3	15.2	-2515.6
Manufactured goods classified chiefly by materials	2.4	19.1	-730.7
Machinery and transport equipment	26.7	25.3	-1728.8
Miscellaneous manufactured articles	11.4	8.0	210.8
Commodities and transactions not classified elsewhere in the SITC	1.4	11.8	-3633.0

Source: SORS, 2022a.

Serbia has a surplus in several product groups. In the Food and live animals category, it is the largest, achieving an increase of about 400 million USD in 2021. The surplus is also recorded in Beverages and tobacco, as well as the group of Crude materials, inedible, except fuel, which increased by over

500 million last year and, more importantly, went from deficit to surplus. The largest deficit is in Mineral fuels, lubricants and related materials, whose value increased by almost a billion USD in 2021. Group Chemicals and related products, and Machinery and transport equipment are also with high deficits, which has achieved even greater growth over the past year. Finally, the last category Commodities and transactions not classified elsewhere in this classification, which value is not negligible at all, especially in the context of the achieved growth of about 770 million USD only during 2021 (SORS, 2022a). In the structure of Serbian exports and imports, it was noticed that Serbian companies mostly export processed products, ie primary products, and import machines, appliances, and transport devices of twice the value. This structural view of exports, which is dominated by products of the lower stage of processing and imports, comparedto technology-intensive products, is unfavorable and reflects the technological level of the Serbian economy and global competitiveness (Rapaić, Dabić, 2013).

TERRITORIAL DISTRIBUTION OF SERBIAN EXTERNAL TRADE

Statistical territory, by definition, is the territory for which data are collected, which gives us data on the territorial distribution of foreign trade. For Serbia, this indicator is very interesting from the analytical point of view, especially if we take into account the uneven regional development of the country, and even still, according to some opinions, strong centralization, especially in the capital, and maybe only a few large urban centers. The data show that it is completely expected that the Belgrade and Vojvodina regions have the largest share in the total exports and imports of the Republic of Serbia. Almost half of the total imports go to the Belgrade region and a third to Vojvodina (Table 4).

Table 4. Imports/exports regional distribution, 2021

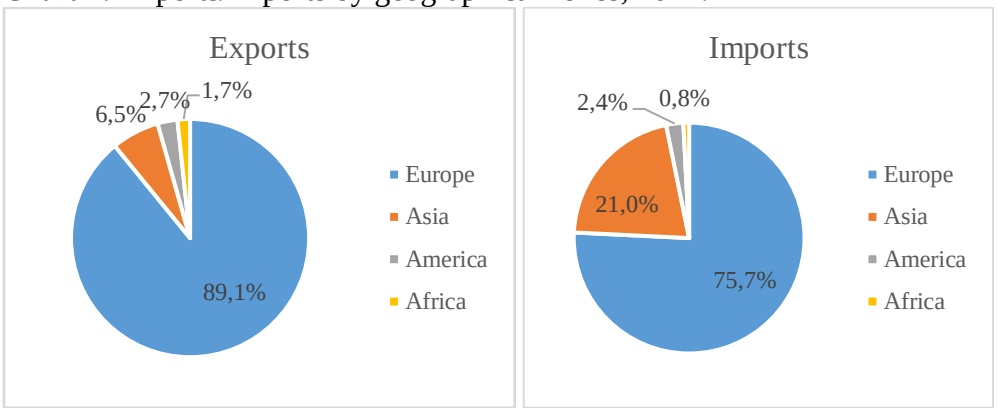
	Imports (%)	Exports (%)	Balance (million USD)
Belgrade region	46,0	23,8	-9460,0
Region of Vojvodina	29,8	34,8	-1190,6
Region of Šumadija and Western Serbia	13,8	21,8	900,6
Region of Southern and Eastern Serbia	9,6	19,5	1735,5
Unspecified by territory	0,7	0,1	-218,9

Source: SORS, 2022a.

On the other hand, these regions have an extremely high negative foreign trade balance when looking at the value in millions of USD. Belgrade region is a convincing leader with an increase in deficit during 2021 of over 1600 million USD, as well as Vojvodina with the same tendency to increase the deficit which only last year increased by almost 900 million USD. The regions of Šumadija and Western Serbia and Southern and Eastern Serbia do not have such a share in total imports and exports, but they are regions that export more than they import and have a surplus. Especially the region of Southern and Eastern Serbia, which during 2021 increased its surplus by one billion USD compared to 2020 (SORS, 2022a).

Insight into the structure of Serbian exports and imports, observed by countries of destination/origin, by main economic and geographical zones, it is clear that Europe in all these aspects is the most important trade zone with a share of total exports of 89.1% and share of total imports of 75.7% in 2021. The share of Europe and other geographical zones in Serbia's external trade is shown in the following graphs (Chart 2).

Chart 2: Exports/imports by geographical zones, 2021.



Source: Authors based on data SORS, 2022a.

In line with the above, the EU is traditionally a key trading partner of the Republic of Serbia. In the period after 2000, Serbia achieved slightly higher growth rates of trade with EU countries than the growth of total trade, ie relatively high average annual growth rates of domestic exports and imports in that period (Nikolić, 2018). According to data for 2021 (RZS, 2022a), Serbia more than half of its exports of goods (64.5%) are conducted with the EU, while the largest part of imports (57.2%) also comes from the EU. The value of Serbian exports to the EU has almost quadrupled from almost 3.2 billion euros in 2009 to over 11 billion euros in 2021. The total value of Serbian exports to the EU reached a new record in 2021 and amounts to almost 14 billion euros, which significantly exceeds the pre-pandemic record in 2019

when the amount was 11.4 billion euros. Serbia's exports to the EU is growing faster than EU imports. The coverage of imports by exports from the Serbian side in relation to the EU has significantly improved: from 48% in 2009 to over 85% in 2021. The trade-in agricultural products, with which Serbia has a surplus in relation to the EU, is especially emphasized. This surplus on the Serbian side reached its peak in 2021 at more than 688 million euros. Serbia's agricultural exports to the EU have almost quadrupled in the past decade, from 640 million euros in 2009 to over 2.3 billion euros in 2021. At the same time, Serbian imports of agricultural products from the EU have been steadily rising over the past decade from 440 million euros in 2009 to over 1.6 billion euros in 2021 (EU Delegation in the Republic of Serbia, 2022). Overall, the structure of Serbian exports to the EU is unfavorable, but after the Great Recession, some progress has been made, e.g. through a decline in the share of resource-intensive products (Nikolić, 2014). The EU's economic and trade interest in Serbia is unquestionable, and it will become increasingly important in the context of Serbia's further European integration (European Commission, 2016). Chapter 30, Foreign Economic Relations, refers to the rules applicable to foreign trade and the rules of the Common Trade Policy and which opened in 2017. In many cases the accession process of other countries, Chapter 30 has been treated as technical and very easy to close. However, in the case of Serbia, this chapter also refers to the economic aspects of cooperation with certain third countries, among which Russia is certainly the most important, and the fact that Serbia is still not a member of the World Trade Organization. Despite the constant growth of economic cooperation with the EU and countries in the region, which are also in the process of joining the EU, it is often pointed out that cooperation with third countries is key to initiating economic development. However, it is important to point out that Serbia, as a candidate for membership, will have to redefine economic and political relations with third countries in a way that corresponds to the common policies that member states pursue within the European framework. Without denying the importance of cooperation with third markets, this redefinition of relations does not necessarily have to be dramatic, if reforms are initiated in time and Serbia's interests are protected in a constructive way (ISAC fund, CEP, 2014).

Serbia's external trade by country of destination/origin primarily confirms all of the above, but some other countries stand out as prominent trade partners of the Republic of Serbia. Some EU member states are traditionally at the top of the list of the Republic of Serbia's most important trade partners in the field of goods. These are primarily Germany, Italy, Hungary, and Romania as important export destinations for Serbian goods. In general, the average importance of countries as trading partners in the past twenty years has not changed significantly. For the Republic of Serbia, the major external trade partners in exports are Germany, Bosnia and

Herzegovina, Italy, Russia, China, Hungary, Romania and Montenegro. The major external trade partners in imports are China, Germany, Russia, Italy, Turkey, and Hungary (SORS, 2022a). The importance of the mentioned trade partners has been almost the same for a long time, with the exception of China, which has significantly increased its share in the total trade with the Republic of Serbia during the last decade. In terms of participation and total value, Germany is undeniably the most important trade partner of the Republic of Serbia, with whom we achieve the largest volume of trade (7.700,9 million USD in 2021), far ahead of other countries. It is followed by China, from which it imports four times more than it exports from the Republic of Serbia, and the deficit that the Republic of Serbia has with China is about 40% of the total foreign trade deficit, which was 8,233.4 million USD last year. The third most important trade partner country for Serbia is Italy, from which we import a little more. A very important fact that should be emphasized is that foreign trade with Germany and Italy, which are in the top three partners of Serbia, has a well-balanced level of imports and exports, without major surpluses or deficits, which cannot be said for the already mentioned exchange with China. Russia and Bosnia and Herzegovina are fourthand fifth external trade partner countries, with which the volume of total trade is approximate, but Russia exports much more to the Republic of Serbia (due to energy imports), while Serbia exports twice as much to Bosnia and Herzegovina compared to imports (Table 5). Hungary, Romania, Poland, Czech Republic, Slovenia, Austria, France, Croatia, Bulgaria are countries with which trade volumes are smaller or larger, but with them a solid trade balance is established, and with these partners there is no major deviation in terms of excessive deficit or surplus. Turkey is a country with which we have a good exchange, but with five times higher imports to Serbia from Turkey, while Bosnia and Herzegovina, North Macedonia, and Montenegro are very important export markets for Serbia. Foreign trade was the largest with countries with which Serbia has signed trade agreements. After EU member states, Serbia's second most important partner is the CEFTA 2006 countries[7]. In the current CEFTA, Serbia has a dominant position, as the largest and most developed economy in the region, which is reflected in the growing trade surplus with CEFTA 2006 signatory countries. This is mainly the result of exports of oil and petroleum products, iron and steel, agricultural products (cereals and cereal products), electricity, and electrical machinery and apparatus (SORS, 2022b).

[7] CEFTA 2006 - Central European Free Trade Agreement (changed 2006). Signatory countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, North Macedonia, Moldova, Romania, Montenegro, Serbia and the United Nations Interim Administration Mission in Kosovo in accordance with UN Security Council Resolution 1244.

Table 5. Exports and imports with selected countries, 2021.

	Total (million USD)	Export (million USD)	Export (%)	Import (million USD)	Import (%)
Germany	7700.9	3243.2	12.7	4457.7	13.2
China	5280.5	971.7	3.8	4308.8	12.7
Italy	4903.3	2.177.2	8.5	2726.1	8.1
Russia	2802.3	996.2	3.9	1806.1	5.3
Bosnia and Herzegovina	2764.7	1845.8	7.2	918.9	2.7
Hungary	2711.7	1289.0	5.0	1422.7	4.2
Romania	2411.5	1410.5	5.5	1001.0	3.0
Turkey	2044.0	342.2	1.3	1701.8	5.0
Poland	2003.6	895.8	3.5	1107.8	3.3
Czech Republic	1674.0	887.7	3.5	786.3	2.3
Slovenia	1660.1	810.6	3.2	849.5	2.5
Austria	1606.4	755.9	3.0	850.5	2.5
France	1602.0	717.8	2.8	884.2	2.6
Croatia	1579.3	801.3	3.1	778.0	2.3
Bulgaria	1537.9	828.7	3.2	709.2	2.1
Northern Macedonia	1325.5	962.9	3.8	362.6	1.1
Montenegro	1062.6	969.2	3.8	93.4	0.3

Source - Authors based on data SORS, 2022a.

Analyzing the data from the previous table, Serbia had a foreign trade with the countries in the region last year, with a total value of around 13,400 million USD, which brings us to the importance of further development of regional cooperation and the pertinence of countries in the region as Serbia's foreign trade partners. Increasing exports to these economies will be more demanding in the future, as the trade potentials of cooperation are increasingly exhausted and will require new forms of economic cooperation, through investment, exchange of intellectual property, etc. The political problems reduce the chances for increased exports of Serbian companies to countries in the region, so it is necessary to work on political stability in the region, and on new forms of trade and investment cooperation in the regions, preceding our EU membership (FREN, 2018).

CONCLUSION

Serbia has been going through a very difficult economic period since the end of the 20th century, which has significantly disrupted and threatened external trade. In the period after the lifting of sanctions and the NATO bombing in 1999, it was very difficult to return to the old markets, primarily to Western European markets. Nevertheless, Serbia managed to establish a growth trend in external trade by year 2009. After the decline in the value of foreign trade turnover, due to the World Economic Crisis, stabilization occurs, followed by stagnation until 2012. The five-year period 2012-2016 was characterized by a significant increase in exports and a reduction in the external trade deficit, and after that, from 2017, a tendency of strong growth of all indicators was established. With the onset of the COVID-19 pandemic crisis, this trend was stopped. As the data show, when it comes to external trade, Serbia found itself in 2020 at a level similar to that of the year 2019, so this one-year interruption of the existing growth trend can be considered a COVID-19 consequence. In support of this fact, full recovery happened in 2021, with the incredible growth of exteral trade. However, taking into account a longer period of time, Serbia has had a foreign trade deficit for 22 years, with realistic prospects that it will continue in the future. The structure of Serbia's imports and exports has remained almost the same for years. Also, there were no major changes in the territorial distribution of foreign trade and foreign trade partners by country of destination/origin. Serbia has the largest trade exchange with the EU countries, then with the countries in the region, ie the signatories of the CEFTA 2006 agreement, which are important export markets for Serbia. The most important individual countries for the foreign trade are Germany, which has a dominant position, followed by China and Italy.

There is certainly plenty of space for improvement of Serbia's external trade that above all should focus on increasing exports, in quantitative terms, but concurrently not neglect to raise the quality and value of our export products. Partners of Serbia from other continents are incomparably smaller, which should be seen as an opportunity that could be used to increase exports by expanding markets, primarily in Asia, Africa, and America. China has become a much more important trading partner in recent years, mostly on the import side, but it is still a market that should be more important for our exports. It is not easy for Serbia to respond to the volume of production needed for large markets like China, but it is far from impossible. The formation of regional clusters is a measure of regional development but at the same time an opportunity to increase production and exports. With such an organized approach, several companies produce the same products for which there is interest, according to defined standards imposed by the export market. Special

attention should be paid to underutilized opportunities for the placement of our agricultural products. In the context of Serbia's European integration, long-term trade advantages of EU membership may cause changes in the structure of Serbian exports, which will increase the share of quality technology-intensive products in total exports, which would be a key factor in international competitiveness. It is necessary to implement a carefully and thoroughly planned foreign trade policy, which will certainly have numerous changes with approximation and harmonization with the EU Common Trade Policy, which represents open and free markets as part of the solution to the economic crisis, clear regulatory frameworks, fair world trade system and combating protectionism. Until then, Serbia should take full advantage of all the benefits of signed bilateral and multilateral trade arrangements.

REZIME
DINAMIKA, OBIM I STRUKTURA SPOLjNOTRGOVINSKE RAZMENE REPUBLIKE SRBIJE

Pandemija COVID-19 promenila je globalne ekonomske perspektive i dovela do prekretnice u privrednim kretanjima kako u svetu, tako iu Republici Srbiji. Osnovni cilj rada je da se detaljnom analizom ključnih pokazatelja spoljnorgovinske robne razmene sagleda pozicija i rezultati Republike Srbije u oblasti međunarodne trgovine, kako jednog od najznačajnijih indikatora privredne aktivnosti zemlje. Metodologija obrađena u radu obuhvata kvalitativne istraživačke tehnike, kao što su analiza, komparativna analiza i sinteza. Prvi deo rada se bavi trendom kretanja obima spoljnotgovinske razmene u protekle tri decenije, sa posebnim osvrtom na efekat krize izazvane pandemijom COVID-19. Druga tematska celina analizira strukturu spoljne trgovine Srbije, prema ekonomskoj nameni robe i klasifikaciji delatnosti. U fokusu trećeg dela je analiza teritorijalne raspodele spoljnotrovinske razmene Srbije po glavnim ekonomskim i georgrafskim zonama odnosno zemljama namene i porekla. Na kraju su data zaključna razmatranja. Svakako da ima dosta prostora za unapređenje spoljnotrgovinske razmene Srbije, koja pre svega treba da se fokusira na povećanje izvoza, u kvantitativnom smislu, ali da se istovremeno ne zamanje podizanje vrednosti kvaliteta i proizvoda naših proizvoda.

Ključne reči: spoljnja trgovina, Republika Srbija, dinamika, obim, struktura, COVID–19

REFERENCES

1. Beraha, I., Jovicic, E., (2021) Uticaj pandemije COVID-19 na spoljnotrgovinsku razmenu između Kine i zemalja Zapadnog Balkana, Institut ekonomskih nauka, pp. 107-124. https://www.library.ien.bg.ac.rs/index.php/zb/article/view/1434/1168
2. Bjelić, P., (2018), *Međunarodna trgovina*. Centar za izdavačku delatnost Ekonomskog fakulteta Univerziteta u Beogradu. Beograd.
3. Centar za međunarodne i bezbednosne poslove (ISAC fond), Centar za evropske politike (CEP), (2014) *Uvod u pregovore Srbije sa EU u okviru poglavlja 30 - Ekonomski odnosi sa inostranstvom*. https://cep.org.rs/publications/uvod-u-pregovore-srbije-sa-eu-u-okviru-poglavlja-30-ekonomski-odnosi-sa-inostranstvom/
4. Crnomarković, J., (2010) *External trade of the Republic of Serbia, 1988-2009*, Trends - September, Republic Statistical Office, https://www.stat.gov.rs/sr-latn/oblasti/spoljna-trgovina/pogledajte-i-ovo/
5. EU Delegation in the Republic of Serbia, (2022) Trade. https://europa.rs/trgovina/
6. European Commission, (2016) *Trade: free trade is a source of economic growth*. Directorate-General for Communication. Publications Office. https://data.europa.eu/doi/10.2775/86408
7. Filipović, S., Ignjatovic, J., (2021a) International relations through the prism of the new technological division of power, International problems, Belgrade, XXIII (4), pp. 637-667.
8. Filipovic, S., Ignjatovic, J. (2021b). Chinese investment in Central Eastern Europe and the Western Balkans, Culture of Polis, Novi Sad, 18 (45), pp. 73-86.
9. Fondacija za razvoj ekonomske nauke (FREN), (2018*) Unapređenje pozicije Srbije u okviru CEFTA 2006*, https://fren.org.rs/publikacija/unapredjenje-pozicije-srbije-u-okviru-cefta-2006/
10. Ignjatovic J., Kisin J., Mashovic A., (2021) *Economic aspects of the COVID-19 pandemic in the Western Balkans region*, International conference Sustainable Economic transformation in the postpandemic period, Educons University, Sremska Kamenica, pp. 63-88. https://educons.edu.rs/wp-content/uploads/2021/11/2021-zbornik.pdf
11. Ignjatovic J., Kisin J., Brajković M., (2020) Export as a trigger of economic growth of the Republic of Serbia, Business economics, Sremska Kamenica, XIV (2), pp. 19-37. https://educons.edu.rs/wp-content/uploads/2021/03/PE-20202.pdf
12. Jacimovic, D., Dragutinović Mitrović, R., Bjelić, P., Tianping, K., Rajkovic, M., (2018) The role of Chinese investments in the bilateral

exports of new E.U. member states and Western Balkan countries, Economic Research 31(1), pp. 1185-1197.
13. Марковић J., Тошковић J., (2013) Обим и значај трговинске сарадње Републике Србије, Пословна економија, Сремска Каменица, VII(2), стр. 229-247. https://educons.edu.rs/wp-content/uploads/2016/01/Poslovna-ekonomija-20132.pdf
14. Nikolić, G., (2018) Ekonomska determinisanost spoljne politike Srbije: krucijalna važnost evropskih integracija za domaću privredu, Međunarodni problemи, Beograd, LXX (1), str. 11–27.
15. Nikolić, G., (2014) Structural changes of Serbian Merchandise Exports 2000–2013, The Review of International Affairs, Belgrade, 1153–1154, pp. 66–83.
16. Rapaić, S., Dabić, D., (2013) Spoljnotrgovinski aspekt pristupanja Republike Srbije EU, Međunarodni problemi, Beograd, LXV (3), str. 341-364.
17. Statistical Office of the Republic of Serbia (SORS), (2022a) Spoljnotrgovinski promet. https://www.stat.gov.rs/sr-Latn/oblasti/spoljna-trgovina/spoljnotrgovinski-robni-promet
18. Statistical Office of the Republic of Serbia (SORS), (2022b) Spoljnotrgovinska razmena. https://www.stat.gov.rs/sr-latn/vesti/20220311-spoljnotrgovinska-robna-razmena-za-januar-2022/?s=1701
19. Statistical Office of the Republic of Serbia (SORS), (2022c) Data. https://data.stat.gov.rs/Home/Result/1701?languageCode=sr-Latn
20. Statistical Office of the Republic of Serbia (SORS), (2022d) Spoljnotrgovinska robna razmena. https://www.stat.gov.rs/sr-latn/vesti/20220331-spoljnotrgovinska-robna-razmena-za-februar-2022/
21. Vlaovic, G., (2019) *Evropska unija ubedljivo najveći trgovinski partner Srbije*. Demostat. https://demostat.rs/sr/vesti/ekskluziva/evropska-unija-ubedljivo-najveci-trgovinski-partner-srbije/765

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Tomas Harasta[1]
Mendel University in Brno – Czechia,
Faculty of Business and Economics

FINANCIAL ANALYSIS OF THE EFFECTS OF CRM SYSTEM IMPLEMENTATION IN A CZECH COMPANY MEGA, A. S.

ABSTRACT: Manuscript is focused on the analysis of the financial outcomes of the implementation of a CRM system in a Czech company MEGA, a. s. The paper briefly informs about the history of MEGA, a. s. and their process of implementation of the CRM system. Based on this knowledge further analysis of financial indicators have been made. Calculations have been made based on company financial data. The conclusion is based on all quantitative and qualitative data that has been used for the research in this manuscript. It was concluded that although it is very difficult to quantify the results of the implementation of the CRM system, an improvement was observed in various indicators. This includes productivity per employee as well as several profitability indicators.

Key words: CRM, Czech Company, Financial Indicators, Financial Analysis

INTRODUCTION

This case study is focused on the analysis of the effects of the implementation of a modern approach to strategic management called CRM, more specifically the implementation of a CRM system. The company that

[1] tom.harasta@gmail.com

has been chosen for this study is a Czech company called MEGA, a. s.[2] (Later on, just "MEGA"). I have chosen this company due to the following factors. Firstly, the company has been running since the year 1993 and thus extended historical data are available for research. Secondly, the company has gone through a structural change in a form of implementation of a CRM system (Microsoft Dynamics CRM) to support its management of sales and marketing and as the representatives of the company said, the aim was to make the CRM implementation a key system in the company. The implementation happened in February 2011 and thus there are extensive data available before and after the implementation of the system to see its results and effects. Lastly, the company does not only have a long history, but also a successful one. MEGA is one of the most successful companies in its field in the Czech Republic and thus an implementation of such a system should have a large effect as it can be expected to be pushed to its limits, mostly because of the company's well-developed organization and an effort of various stakeholders in the company.

ABOUT MEGA, A. S.

MEGA is a company that develops and sells technologically advanced products based on electro-membrane processes such as electrodialysis, electrophoresis, electrode ionization and membrane electrolysis. The technologies that MEGA produces are mainly used in food industry, in agriculture, for wastewater treatment, and in the automotive industry. MEGA is then not only focused on selling goods and services but also on the RnD and extended testing of its products and developed materials and substances. The company is a part of a now larger group of MEGA companies that work in different fields and different regions/countries.

The history of the company at a glance is as follows. In the year 1976 Luboš Novák (the CEO and the owner of the company) enters the research institute of the uranium industry to develop a membrane that cleans water from its uranium contamination. In 1985 the first RALEX2 membrane gets developed. In 1993 Luboš Novák starts MEGA and becomes the CEO and the owner. In the year 2000, a company called MEGA-Tec was founded to cover electrocoating, then in 2007, a company called MEGA ProfiLine was founded in Russia, in 2008 a company called MemBrain was founded. In the year of 2009, the first large dairy focused installation is constructed. In 2012 the biggest water treatment project has been done in Barcelona. In 2013

[2] a. s. is an official abbreviation for a joint-stock company in Czech Republic.

a new company in the MEGA group is founded called Мега-Украина. In 2015 a Membrane Innovation Centre gets opened (MEGA, a. s., 2021).

Company identification:

- Official name: MEGA a. s.
- Headquarters: Drahobejlova 1452/54, Libeň, 190 00 Praha 9, Czechia
- Identification number[3]: 44567146

CRM AND CRM SYSTEMS

CRM or customer relationship management is a management system that helps organisations manage their interactions with current or potential customers (SalesForce, 2021). Bardicchia (2020, pp. 12) describes CRM as a process in which a business or an organisation administers its interactions with customers typically by data analysis of a large amount of information they collect. The CRM systems integrate the information and communication technology parts of a complete CRM, which allows businesses and organisations to automize marketing and sales processes and services to create a profitable long-term customer relation (Torggler, 2009, pp. 300). CRM systems put together data from all kinds of communicational channels, such as websites, telephones, live chat, e-mailing, social media and marketing materials (Shaw, 1991). This allows the entity to learn from previous encounters with potential, previous or current customers. Thus, they can for example more effectively optimise the communication or marketing plan in the future and achieve desired strategic goals such as, for example, higher yearly growth in sales.

IMPLEMENTATION OF A CRM SYSTEM AT MEGA

A decade ago, MEGA has experienced rapid growth and thus the company decided to implement a CRM system to help the overall management of sales and marketing of the company. Even though MEGA used to have an ERP system for inventory management, they needed a more user-friendly and at the same time a more complex system for everyday use. This change has been scheduled and implemented in February 2011. However, preparations started already in November 2010 and thus the CRM has been in production mode from 1st February 2011. The CRM system MEGA decided to use is Microsoft Dynamics CRM (Žáková, 2011, pp. 10).

[3] A number used to identify a company in the business registry.

In 2012 in a company business finance report MEGA stated that during 2011 works on implementing a CRM system had been done (Justice.cz, Business finance report 2011, pp. 25). They also stated that the CRM system was already improving the efficiency of sales in the company's technological entities. Moreover, they mentioned that the CRM system was helping to find weaknesses when it comes to the company's business strategy and selling processes. To make the implementation of the CRM system possible and more efficient they cooperated with another company called LLP Prague, s.r.o. Microsoft Dynamics. In 2013 they also mentioned that MEGA was trying to implement CRM software into all parts of the business processes and then to all associated companies as well.

From this, we can assume that the impacts of the implementation of a CRM system at MEGA should be visible from the year 2011, as they mentioned that it already did impact the effectiveness of their business and that it should impact the effectiveness of sales and thus it should be the priority of the financial analysis in this work.

MEGA's focus when it comes to the use of CRM system is on maximising the usage of the company's production cap and working on faster deliveries. MEGA mentioned that even during the first year of implementing the CRM system they had seen an improvement in the delivery time of the most demanded products. Other requirements that MEGA had for the CRM system was that it had to be able to record the activities of individual traders, the development of individual business cases (which is especially useful in large businesses where each sale could take up to two years). They also wanted to keep track of the historical communication with each customer, with project documentation and the related documents. At the same time, the CRM had to be useful in the preparation of marketing and sales projects (Žáková, 2011, ppp. 10).

METHODOLOGY

To analyse and understand the impacts of the implementation of the CRM system at MEGA, the analysis of financial indicators of the company before and after the implementation will be studied.

Data that will be used for the financial analysis are the official financial statements, annual reports and auditor's reports from the public register and the collection of documents of the Czech Republic[4].

[4] The exact financial statements can be found at: https://or.justice.cz/ias/ui/vypis-sl-firma?subjektId=231974

Since the CRM system mostly impacts the sales and marketing management of the company, the financial indicators that will be used in this case study will be focused on sales, rentability of investments, productivity etc. The exact indicators will be defined, and their purpose will be explained in the later parts of the case study.

The period that will be used for the analysis of the effects of implementing the CRM system at MEGA will be the years from 2009 to 2014. The reason for choosing these years is that they represent a period right before, during and after implementing the CRM system. The years 2009 and 2010 were before, the years 2011 and 2012 are the years in which the implementation was in the works (as stated in the company financial reports), and the years 2013 and 2014 are the first years that could be considered years with fully functioning CRM system (of course with still ongoing improvement). However, even though the years 2011 and 2012 are in the sign on implementing the CRM system, the company has been using the system in some shape or form since the February of the year 2011 and thus, it may still have some impacts on the financial data of the company. Later years would most likely not make much sense for analysis as it would be difficult to see what were the impacts of the implementation of the CRM system and what was the development of the company caused by any other factor.

FINANCIAL ANALYSIS BEFORE AND AFTER CRM SYSTEM

Turnover Ratios

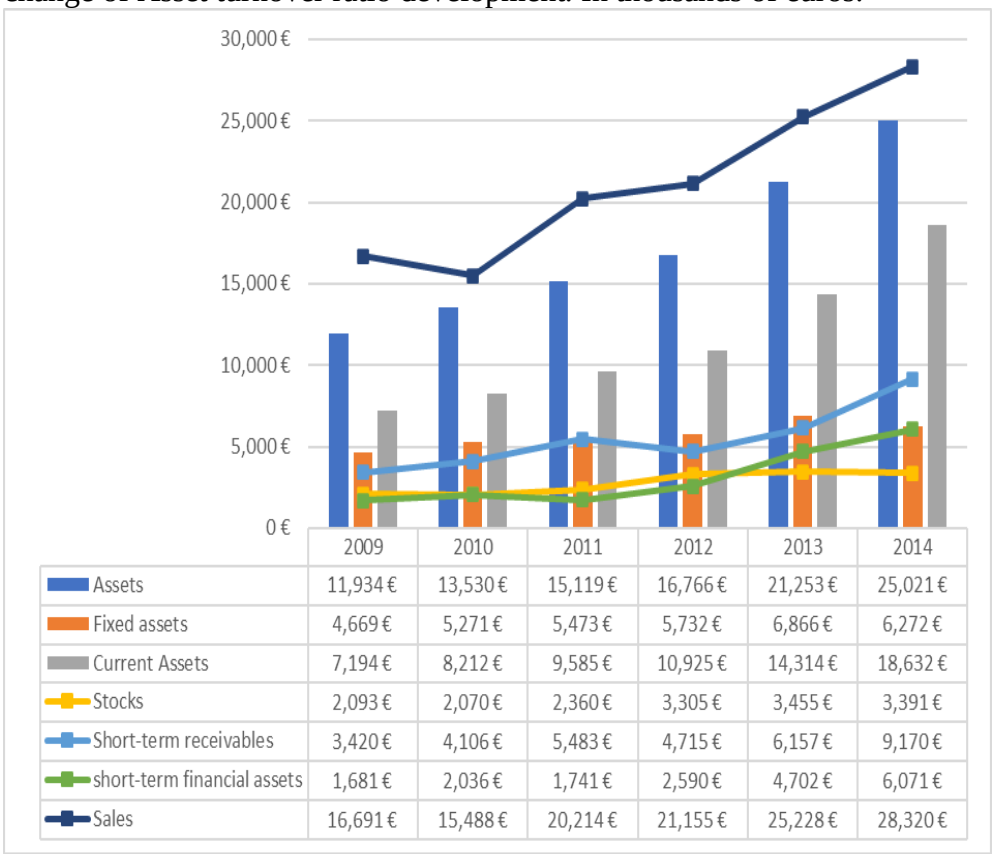
Table 1. – Turnover ratio indicators

	2009	2010	2011	2012	2013	2014
Asset turnover	1.40	1.14	1.34	1.26	1.19	1.13
receivables turnover	4.88	3.77	3.69	4.21	4.10	3.09
liabilities turnover	3.78	3.22	4.13	4.09	3.67	4.51
inventory turnover	7.98	7.48	8.57	6.40	7.30	8.35
Inventory turnover time (days)	45.76	48.79	42.61	57.02	49.99	43.70
Receivables turnover time (days)	74.79	96.77	99.01	86.79	89.08	118.19
Liabilities turnover time (days)	94.54	110.90	83.73	84.04	95.28	77.87

Reference – Own calculation from business finance data

Interestingly, we can see that the Asset turnover ratio has decreased over the studied years, which could potentially mean that the effectivity of turning assets into sales over time has decreased. However, since most of the other indicators show a different trend, we have to look deeper into this problematic.

Graph 1. – Visualization of various business finance data in reference to the change of Asset turnover ratio development. In thousands of euros.



	2009	2010	2011	2012	2013	2014
Assets	11,934 €	13,530 €	15,119 €	16,766 €	21,253 €	25,021 €
Fixed assets	4,669 €	5,271 €	5,473 €	5,732 €	6,866 €	6,272 €
Current Assets	7,194 €	8,212 €	9,585 €	10,925 €	14,314 €	18,632 €
Stocks	2,093 €	2,070 €	2,360 €	3,305 €	3,455 €	3,391 €
Short-term receivables	3,420 €	4,106 €	5,483 €	4,715 €	6,157 €	9,170 €
short-term financial assets	1,681 €	2,036 €	1,741 €	2,590 €	4,702 €	6,071 €
Sales	16,691 €	15,488 €	20,214 €	21,155 €	25,228 €	28,320 €

Reference – Own calculation from business finance data

The development of the asset turnover ratio over the studied years tells us that the effectivity of turning assets into sales was getting lower. And since in general businesses are trying to increase their asset turnover ratio value as much as possible, it is important to understand what the cause of this underwhelming development was. To do so we must look at the change of the ratio of different kinds of assets to the total assets and figure, what exactly was responsible.

From the previous graph, we can see that it is true that even though the sales were steadily increasing, the amount of firm's assets were increasing at roughly the same speed, thus relatively lowering the sales per asset ratio, and thus decreasing the turnover ratio. Over the years we see that fixed assets were staying at roughly the same level, which disqualifies them as the main cause of this problem. However, what does seemingly change rapidly over the years is the relative amount of current assets to sales. Over the years we see that current assets were rapidly increasing, faster than any other asset. Thus, we must look at the composition of current assets, which leads us to stocks and short-term receivables (long-term receivables are almost non-existent in this company; thus, they are omitted entirely). Even though we can see some ups and downs in the inventory turnover over the years, overall stocks seem to be increasing as expected to the number of sales, thus we must also disqualify them as the potential main cause of the problem. However, the ratio of short-term receivables and short-term financial assets to sales seems to be increasing rapidly and in correspondence to the rapid lowering of asset turnover in the years 2013 and 2014 (the year 2010 also had a drastic fall of the asset turnover, however that can be credited to a different cause, mostly to the fall of sales in that given year). Therefore, we can see that the main issue of lowering the company's asset turnover might be the increasing amount of short-term receivables and short-term financial assets. This can be also portrayed by the development of the receivables' turnover in the studied years, which follows a similar path as the asset turnover.

Liquidity Indicators

Since the issues that cause the asset and receivables turnovers getting lower are identified we can look at the following table with liquidity indicators and figure how their values have changed and if they are in a reasonable value range.

Table 2 – Liquidity indicators

	2009	2010	2011	2012	2013	2014	Recommended values[6]
current ratio	1.664	1.745	2.067	2.243	2.174	3.084	1,5 – 3 (varies per industry)
quick ratio	1.180	1.305	1.621	1.326	1.649	2.523	1 or higher (depending on the industry)
cash ratio	0.389	0.433	0.439	0.358	0.714	1.005	Not lower than 0,5 – 1 is preferred

Reference – Own calculation from business finance data

The current ratio[5] shows us that the increasing amount of receivables and short-term financial assets in the last years had a significant impact on the value. The value moved from a lower part of the recommended range to slightly exceeding it in 2014. However, this should not be considered as a bad thing as higher liquidity is better than the threat of not being able to pay off current debts and liabilities.

The quick ratio[8] was also brought up to high values in the last studied years due to the increase in the short-term receivables and cash and equivalents (mostly money in the bank account). But since the too high value is much better than too low as it may cause a lower efficiency in using assets but will not endanger the company by not being able to pay off short-term liabilities, this should not be viewed as too big of an issue. When we look at the cash ratio, we see that the ratio went from lower than recommended to much higher values. Values lower than 0.5 are, according to Tuovila (2020), something businesses should avoid.

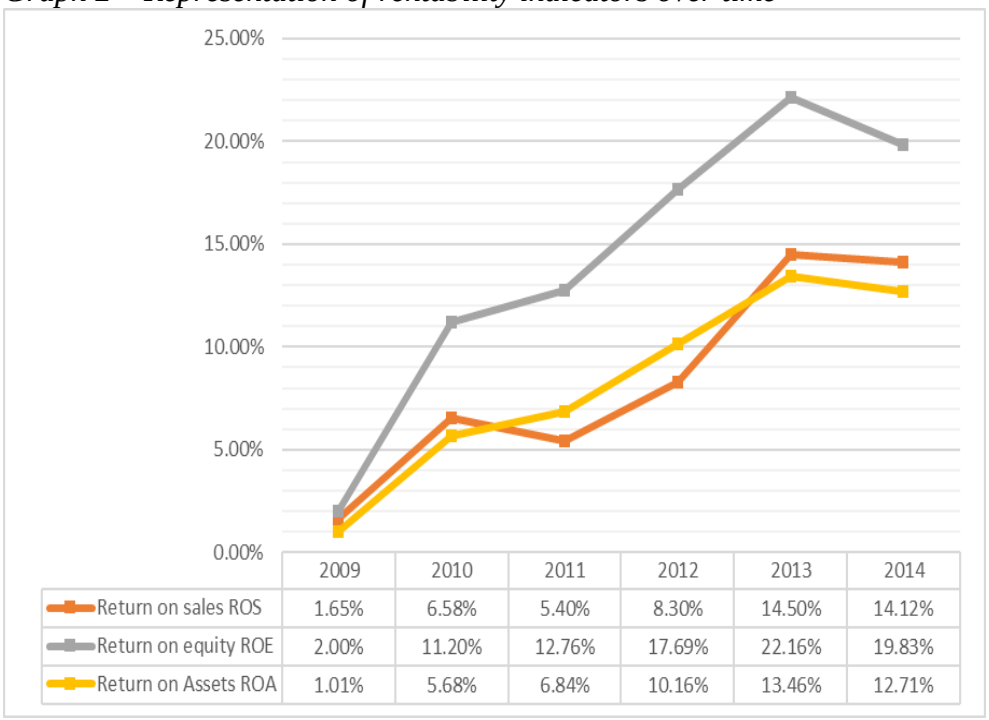
In conclusion, even though the asset turnover was impacted negatively, the liquidity ratios show us that the change was not just negative. MEGA became more secure to cover its short-term debts and liabilities. The reason for this change was the increasing amount of short-term financial assets and short-term receivables which didn't allow MEGA to use these assets and thus we could say that the company couldn't increase its sales appropriately and thus lost its previous efficient use of current assets.

Rentability Indicators

Another important economic indicator that must be analysed is rentability. The indicators that will be studied are; return on sales[6], equity[7] and assets[8]. In the following graph, we can see the development of the indicators in the studied years.

[5] Current ratio = Current assets / short-term liabilities
[6] ROS = EBIT / Sales
[7] ROE = Net Income / Equity
[8] ROA = Net Income / Total Assets

Graph 2 – Representation of rentability indicators over time



	2009	2010	2011	2012	2013	2014
Return on sales ROS	1.65%	6.58%	5.40%	8.30%	14.50%	14.12%
Return on equity ROE	2.00%	11.20%	12.76%	17.69%	22.16%	19.83%
Return on Assets ROA	1.01%	5.68%	6.84%	10.16%	13.46%	12.71%

Reference – Own calculation from business finance data

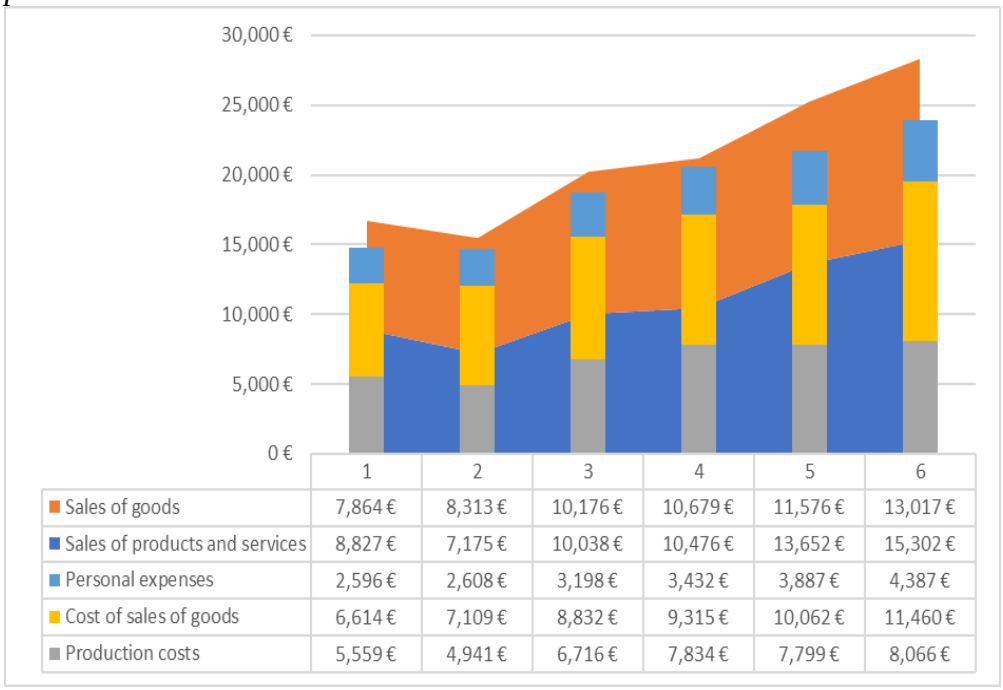
In the previous graph, we can see all rentability indicators are showing a large growth during the studied years. ROS tells us that the sales are increasing, and expenses are being handled better each year and in the later years they are reaching acceptable values. The graph tells us that the rentability increased from almost 2% to 14%.

ROE indicator tells us about the financial performance of the company, by dividing the net income by the company's equity. The previous graph tells us that the financial performance of the company was almost consistently increasing over the years, from 2% to almost 20%.

The last studied rentability indicator is the return on assets. This indicator tells us how profitable a company is compared to its total assets. During the studied years, the company also experienced a large increase, from 1% to almost 13%.

To understand what caused this rapid increase in rentability we can take a look at the following graph explaining the development of sales of goods and own production and also the development of costs.

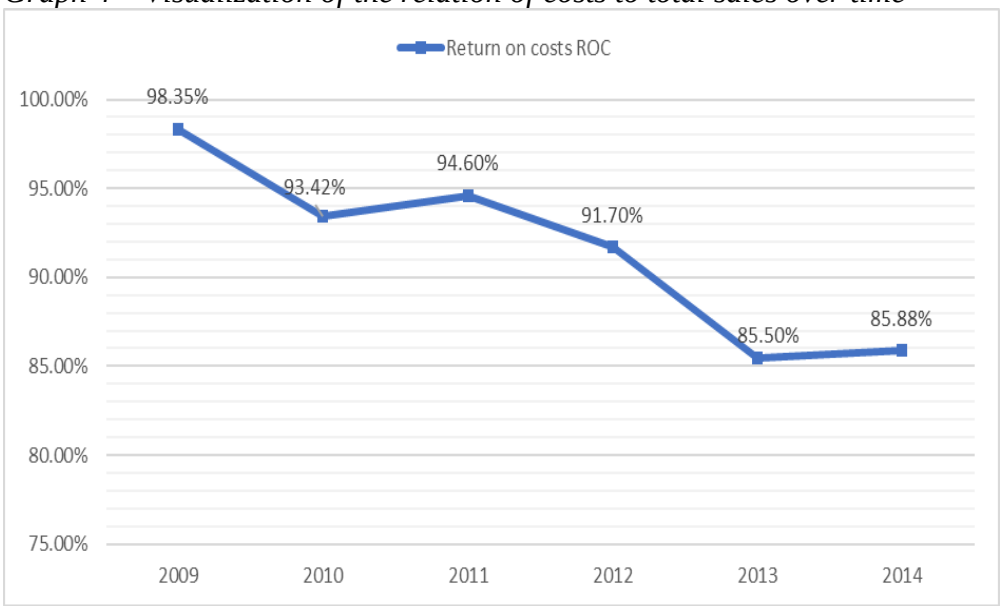
Graph 3 – Visualisation of the ratio between sales of goods and own production and their costs



	1	2	3	4	5	6
Sales of goods	7,864 €	8,313 €	10,176 €	10,679 €	11,576 €	13,017 €
Sales of products and services	8,827 €	7,175 €	10,038 €	10,476 €	13,652 €	15,302 €
Personal expenses	2,596 €	2,608 €	3,198 €	3,432 €	3,887 €	4,387 €
Cost of sales of goods	6,614 €	7,109 €	8,832 €	9,315 €	10,062 €	11,460 €
Production costs	5,559 €	4,941 €	6,716 €	7,834 €	7,799 €	8,066 €

Reference – Own calculation from business finance data

Graph 4 – Visualization of the relation of costs to total sales over time



Reference – Own calculation from business finance data

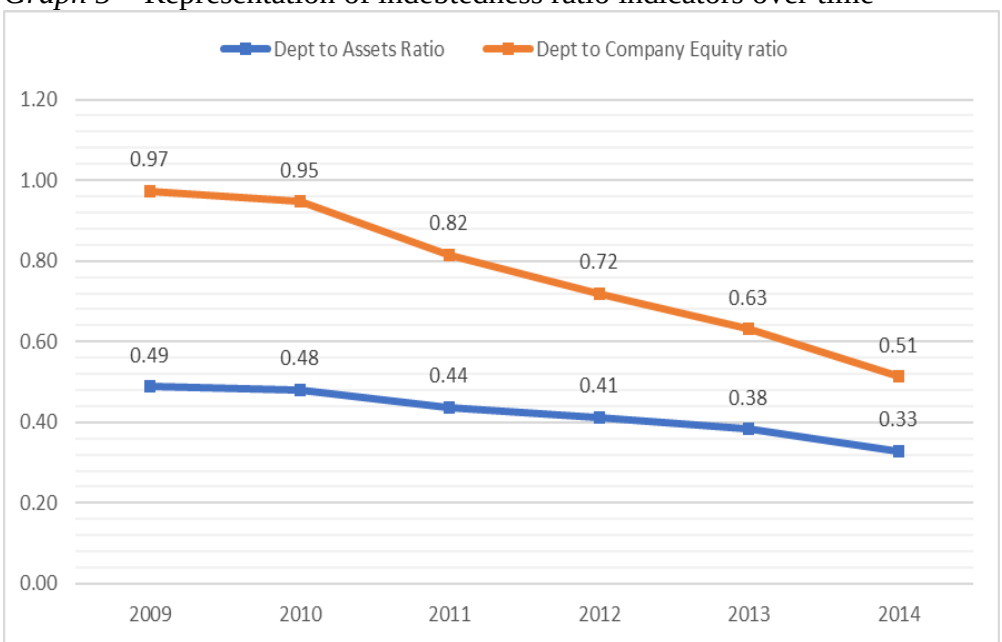
In Graph 3 we can see that both sales of goods and own production were steadily increasing during the studied years. On the other hand, the costs were increasing at a much slower pace, which allowed the rentability indicators to grow. When looked in more detail, we can see that the costs of goods were growing accordingly with the number of sales of goods. However, personal expenses and production costs seem to have been growing at a slower pace, thus allowing to create a higher profit.

An additional indicator that we can take a look at is the return on costs in Graph 4, which shows us what the ratio of total costs to total sales is. It is visualised in the previous graph. The graph shows us a rapid decrease in the ratio of costs to sales, which allows MEGA to create higher profits. After implementing the CRM system in 2011 the improvement became marginal which is highly optimistic.

Indebtedness Indicators

Indebtedness is a hot topic for many companies as financing investments by foreign assets is always cheaper than using company equity. However, it brings a lot of risk to the business. The following graph shows the development of the dept to asset ratio and the dept to company equity ratio.

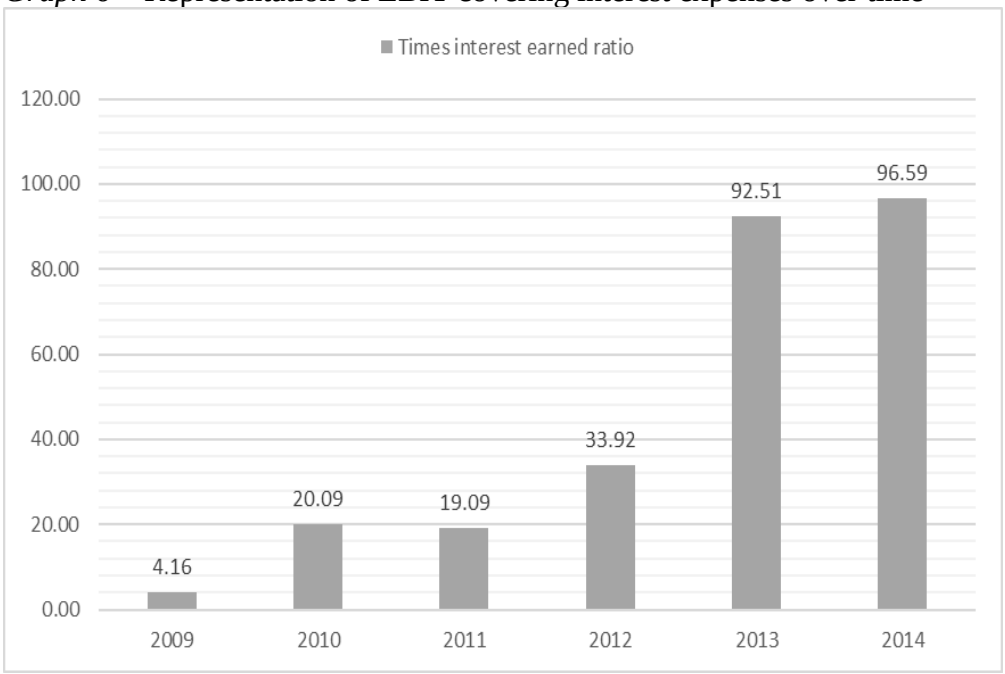
Graph 5 – Representation of indebtedness ratio indicators over time



Reference – Own calculation from business finance data

In both indicators, we see a highly positive development. Especially in the dept to company equity ratio, which was almost halved. This development was caused by the fast increase of assets and company equity and the slower growth of borrowed capital in the studied years.

Graph 6 – Representation of EBIT covering interest expenses over time



Reference – Own calculation from business finance data

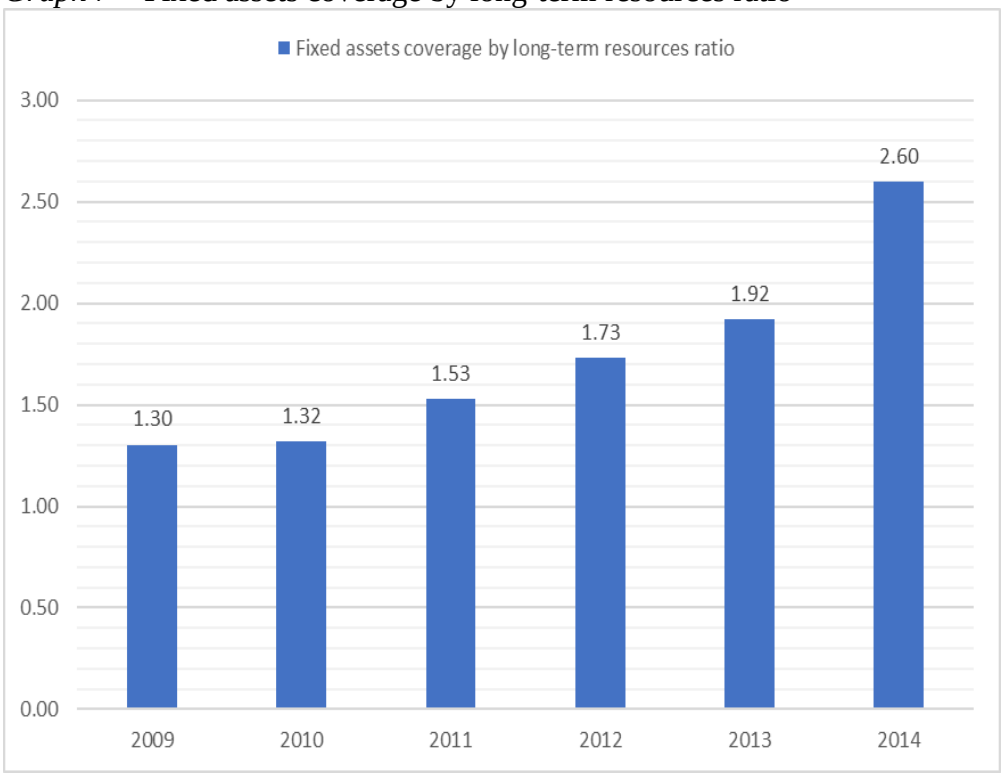
Graph 6 shows us the development of an indicator describing the amount of time interest costs that were earned each year.

From the graph, we can see the values increased rapidly. The reason for this is the same as for the development of the previous indebtedness indicators.

Other Financial Indicators

One of the most frequently used financial indicators to understand the health of company finances is the coverage of fixed assets by long-term resources, which we can see in Graph 7.

Graph 7 – Fixed assets coverage by long-term resources ratio

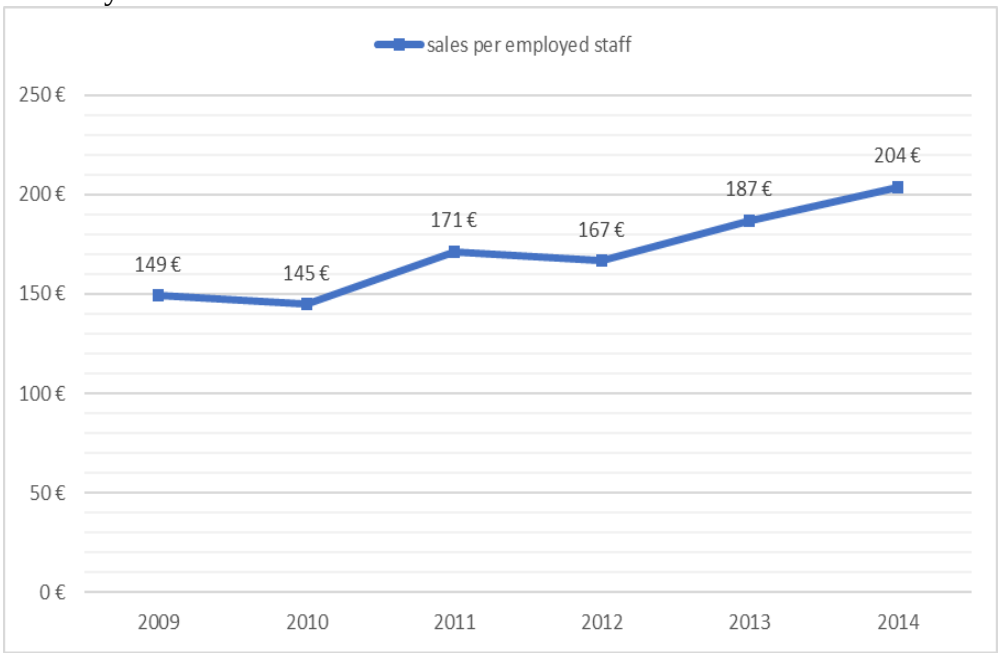


Reference – Own calculation from business finance data

The graph shows us that the development of this indicator was highly positive. That applies especially to the years after 2010 that brought the value to double as much as in the year 2009. This is good for the security of the firm as it is recommended to never cover assets by short-term assets.

In 2011 MEGA representatives said in an interview that the CRM system allowed them to see more information regarding the work of their employees, management, and expensive product specialists, which allowed them to manage the work of each person more effectively (Žáková, 2011, pp. 10). Other than that, they acknowledged that the CRM helped with overall workflow, getting in contact with relevant documents and being able to see all price offers and real-time company data helped them with more efficient decision making. To see how the effectiveness has developed, we have to take a look at the sales per static indicator such as the amount of workforce there is in the company, and thus see if it leads to a higher effectiveness per worker. To see this progress, we can look at the sales per employee in the following graph.

Graph 8 – Visualisation of the progress of sales per employee throughout the studied years in thousands of euros.



Reference – Own calculation from business finance data

In Graph 8 we can see that the sales per employee were increasing rather fast during the years when the CRM system was actively used (2011 to 2014). This growth corresponds to the statement of MEGA representatives that commented on the positive effects of the CRM system on managing and making employees more effective.

CONCLUSION

Even though it is often hard to associate the development of various financial indicators to their real cause, or to quantify the impacts of the implementation of the CRM system, we can still say that the CRM system must have made a positive impact in many ways. First of all the statements from company representatives about increasing effectiveness of managing workers and field specialists have shown the positive development of sales per worker, thus we can assume the statements are indeed true. Then right after the company began to use CRM system, the ratio of production costs to sales was decreasing which is highly positive. Another positive fact is that the indebtedness ratios was getting much better after the usage of the CRM system. The same goes for the fixed assets coverage by long-term assets and

the increasing number of times interest costs were earned each year. Lastly, the liquidity and rentability ratios were corrected and uplifted to much more acceptable values. One thing that we learned that was not positive was the development of asset turnover which was getting lower, mostly because of the higher amount of short-term receivables and stocks. However, that also impacted the previously mentioned indicators positively.

In conclusion, it is hard to determine what exactly has the implementation of the CRM system affected and in what way. However, the analysis shows some highly positive progress that could be associated to the CRM system. Also, the CRM system most likely brought more positive effects to the development of MEGA`s financial health. However as the years go, it gets more difficult to see the difference that the CRM has made as we cannot compare it to any recent year without such CRM system.

REZIME
FINANSIJSKA ANALIZA EFEKATA IMPLEMENTACIJE CRM SISTEMA U ČEŠKOJ KOMPANIJI MEGA A. S.

Rad je fokusiran na analizu finansijskih ishoda implementacije CRM sistema u češkoj kompaniji MEGA, a. s. Rad ukratko informiše o istoriji MEGA, a. s. i njihov proces implementacije CRM sistema. Na osnovu ovih saznanja urađena je dalja analiza finansijskih indikatora. Proračuni su napravljeni na osnovu finansijskih podataka kompanije. Zaključak je zasnovan na svim kvantitativnim i kvalitativnim podacima koji su korišćeni za istraživanje u ovom radu. Došlo se do zaključka da iako, je veoma teško kvantifikovati rezultate implementacije CRM sistema, uočeno poboljšanje u različitim pokazateljima. To uključuje, produktivnost po zaposlenom kao i nekoliko indikatora rentabilnosti.

Ključne reči: CRM, češka kompanija, finansijski pokazatelji, finansijska analiza

REFERENCES

1. Bardicchia, M. (2020). Digital CRM: Strategies and Emerging Trends: *Building Customer Relationship in the Digital Era*. pp. 12.
2. Justice.CZ. Sbírka listin: MEGA, a.s. Justice.cz: *Veřejný rejstřík a Sbírka listin* [online]. [cit. 2021-12-13]. From: https://or.justice.cz/ias/ui/vypis-sl-firma?subjektId=231974

3. lumenlearning.com. *Liquidity Ratios* [online]. 2021 [cit. 2021-12-15]. From: https://courses.lumenlearning.com/boundless-finance/chapter/liquidity-ratios/
4. MEGA, A.S. MEGA group: *Technological companies with worldwide reach* [online]. December 2021 [cit. 2021-12-13]. From: https://www.mega.cz/group/
5. Salesforce. *What is CRM. Sales Force* [online]. 2021 [cit. 2021-12-09]. From: https://www.salesforce.com/eu/learning-centre/crm/what-is-crm/
6. Shaw, R. (1991). *Computer-Aided Marketing & Selling*. Butterworth Heinemann. ISBN 978-0-7506-1707-9.
7. Torggler, M., 2009. *The functionality and usage of CRM systems*. environment, 41, ppp. 300-308.
8. Tuovila, Alicia. *Cash And Cash Equivalents* (CCE). *Investopedia.com* [online]. 2020 [cit. 2021-12-15]. From: https://www.investopedia.com/terms/c/cashandcashequivalents.asp
9. Žáková. Z. 2011. *Pro společnost MEGA se CRM stane klíčovým systémem ve firmě*. Dynamický svět [online]. Microsoft. [cit. 2022-02-21]. From: https://adoc.pub/dynamicky-svt-pro-mega-se-crm-stane-kliovym-systemem-ve-firm.html

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Scientific Review Article

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Katarina Soleša[1]
Business Academy University,
Faculty of Economics and Engineering Management in Novi Sad

SOLVENCY OF THE CORPORATE ENTERPRISE

ABSTRACT: Modern business is characterized by turbulence and unpredictability. The position of a company is influenced by internal and external factors. Management has significant opportunities to influence internal factors while it cannot influence external ones. The prerequisite for quality management is timely insight into the strengths and weaknesses of the company. In order for a corporate company to be successful, it is necessary to analyze all elements that guarantee general material stability, good reputation and prospects, as well as a good competitive position in the market, good development and production programs that guarantee a long life cycle and its right strategy. Solvency refers to business analysis that aims to determine and assess the quality of business. It shows how successful a certain company is, so it serves to assess the current financial situation as well as to assess future business and development. The aim of the research is to point out the importance of solvency assessment and to explain how information is collected so that it can be used to avoid business risks.

Key words: solvency, financial indicators, corporate enterprise

[1] katarina.solesa@fimek.edu.rs

INTRODUCTION

Solvency information is the basis for analyzing the economic and financial behavior of a corporate company and is a necessary element in making business decisions, hence the importance of this research. Solvency as an assessment of success requires taking into account two important principles, namely security and profit. A business must be profitable to cover costs and losses, to provide an adequate amount of reserves for future unforeseen events. If a corporate company seeks to have the trust of the public and if it wants to continuously conduct its business, then it must do business with certainty.

Solvency represents the company's ability to cover all liabilities in the long run and short-term perspectives. Solvent company is able to continue operations into the predictable future (Mavlutova et.al., 2021). There are different understandings and approaches to the concept of solvency, and therefore there are different methodologies and ratings of solvency. It is widely considered that the most rational approach is to take into account all the elements in order to evaluate the company as a whole.

THE NOTION OF CORPORATE SOLVENCY

Solvency assessment is necessary in order to determine the financial situation in the company. It is necessary to perform a detailed analysis based on financial statements and compare the results based on reference values and thus determine the creditworthiness and situation in the company (Vojinović, Prokić, 2017). Thus it indicates the position of the company, the activities that the company performs, the reputation of the company. On the basis of solvency, the possibility of procuring sources of financing is considered.

The concepts of liquidity and solvency are closely interrelated but not identical (Smirnova, Buhrimenko, 2021). The debtor may not be liquid at a given time, but they can still be considered solvent. It should be borne in mind that a company with large assets can always increase coverage over debt. Hence, the solvency of a company always includes the possibility of realization, ie collectability of receivables, solvency of the company, security of placement in that company, creditworthiness (Pejić, Radovanović, Stanišić, 1991).

According to Rodić, the solvency of a company is "a quantitative and qualitative expression of the company's business ability and the security of its business" (Rodić, Andrić, Vukelić, Vuković, 2015).

According to Malešević, the solvency of a corporate company can be assessed:

• As good - good solvency is characterized by companies that meet strict criteria such as: financial and profit stability, the inclusion of issued shares on the lists of stock exchanges.

• Eligible - companies that can perform business activity with unhindered financing or payment of obligations to creditors and suppliers on time.

• Minimum - companies that have a minimum creditworthiness can borrow money or credit only with the pledge or guarantee of a third party (Malešević, Malešević, 2011).

Business analysis provides information for assessing business in the past, but also for business planning. The focus of the analysis is the assessment of the solvency of business processes in the company. At the same time, it is very important to discover the causes, the unfavorable consequences of which may endanger a company's business activity (Bogićević, Stanisavljević, Janjić, 2017).

Solvency depends on various external and internal factors. Unfavorable business conditions such as credit restrictions, high interest rates, illiquidity, policies, exchange rate regime, affect the fact that the company must have a good business policy. It is necessary for the company to constantly adapt to market conditions and to pursue an active policy.

According to Narandžić, "solvency is a qualitative and quantitative expression of a company's business ability and the security of its business" (Dickov, Narandžić, Perović, 2004).

Solvency measurement is expressed through information and data that are important to stakeholders. In order to properly determine and measure solvency, it is essential that the financial statements be credible and complete. It is also necessary to comply with the standards for the preparation of financial statements. Therefore, there is a problem with data quality. Sometimes management does not present the actual situation in the reports and the problem in such reports is a realistic assessment of net assets and business results.

There are traditional and modern solvency assessment models. The traditional model is most often used in practice. This model of solvency assessment is performed on the basis of the following indicators: financial indicator, asset position, yield position, management, market value of the share. The modern credit rating model is Altman's Z-score model (Filipović, Mirjanić, 2016).

“The key link in financial diagnostics is the solvency characteristics of the economic entity, the support of which is the basis of the financial health of an enterprise. In the event of insolvency, the enterprise cannot develop and expand its business” (Karzaeva, Karzaeva, 2019).

SOLVENCY ASSESSMENT METHODOLOGY

The methodology for standardizing solvency indicators was established in 2002 (APR). Since then, it has complied with European Union directives, international accounting standards and financial analysis rules. The methodology for assessing the ability of a corporate company to settle its liabilities in the form of scoring system was established in 2007. It is based on the quantitative evaluation of the company's financial performance.

Since the methodology for establishing solvency data and indicators and providing solvency assessment was established, the necessary adjustments have been made only to bring the methodology in line with changes in accounting regulations. The assessment of the solvency of the company in the form of scoring has been determined according to the same model since 2008 (APR). The third version of the assessment in the form of scoring was issued in 2020 and was determined on the basis of improved analyzes adapted to modern business trends.

The methodology for determining the solvency data of companies, cooperatives, institutions and entrepreneurs and assessing the solvency of companies determines the manner of disclosing solvency data, the content of the solvency report, the procedure for determining solvency estimates and the content of scoring. The data are kept in the solvency database in the Register of Financial Statements (Službeni glasnik RS, no. 127/2014, 101/2016 and 111/2017).

In our country, the methodology for solvency assessment, ie business indicators that are used to assess solvency are: indicators of financial stability, liquidity, business performance and other indicators. Data from financial statements are the basis for calculating these indicators.

NARROWER AND WIDER CONCEPT OF SOLVENCY

There are two basic concepts of solvency, the narrower and the broader. The narrower concept boils down to financial solvency based on creditworthiness indicators that can be obtained from the data provided by the financial statements. This approach is also called ratio analysis.

In addition to financial indicators, the broader concept also includes the assessment of the level of integration of business functions, ie market position, organization of the company, personnel structure, business functions, technological and information equipment and others. This approach is more comprehensive than when solvency is seen as financial solvency.

The broader concept encompasses a range of determinants that indicate advantages, disadvantages, opportunities, and adverse circumstances. This

approach is also called SWOT (Strength, Weakness, Opportunities, Treats). This analysis serves to reconcile external possibilities and internal potentials. It indicates how to use strengths and potentials and identify weaknesses and find ways to reduce them, it indicates opportunities and opportunities as well as potential threats that should be avoided (Ivaniš, 2007).

In making important decisions, financial market participants should take into account, in addition to financial analysis, other relevant qualitative and quantitative information, such as performance trends, industry or industry data (national and global), data on unrecognized intangible assets, risk factors and information on strategy and quality of management and leadership (Zajmi, 2019).

SOLVENCY REPORT

The solvency report is a set of solvency data that is the basis for determining the business performance and financial position of a corporate enterprise. The report is made for a period of three years. The report can be standardized or prepared for general purposes and can be specialized or prepared for specific purposes in accordance with special regulations and market needs.

The parts of the report are as follows: basic information, summary balances, credit rating indicators, data on the audit of financial statements, data on insolvency days, data on the ban on disposing of funds in bank accounts (Službeni glasnik RS, br. 127/2014, 101/2016 i 111/2017).

The basic data for determining solvency are: data on establishment, founders and founding capital, data on activity, size, management, privatization, payment operations, liquidity and bankruptcy and other data.

Summary balance sheets are used to calculate indicators and determine the success of the company. The audit data on the financial statements contain the latest audit report. This data is taken from the database of scanned reports kept in the Register of Financial Statements. Data on insolvency days contain data for the last six months, before the month in which the solvency report is issued. These data are obtained from the National Bank of Serbia. Data on the ban on disposing of funds are data on the ban on banks. This information contains the date of the ban on disposing of funds and the total amount of blocked funds.

SOLVENCY INFORMATION BENEFICIARIES

It is important to determine solvency so that the public, owners and employees have an insight into the company's operations. Information on the financial environment and financial situation of the company is important for deciding on the acquisition, use and return of funds. Based on the analysis of financial statements, information is obtained that is important for management, creditors, owners and employees.

Balance sheet analysis provides management with the necessary data that is important for business. Special attention should be paid to the balance sheet based on the insight into liquidity and solvency. Management seeks to prevent insolvency and provide sufficient funds to meet due obligations. The insolvency of the company can affect creditors to give up planned placements, which would negatively affect the overall business activity of the company. Success and failure are considered on the basis of the income statement (Vukasović, Vojinović, 2010). Based on solvency, the company's management plans strategies, organizes business and influences the way resources are managed. The management of the company is interested in all aspects of business.

Many banks ask companies for creditworthiness information when approving loans. Banks require that financial reports be submitted regularly so that they always have an insight into the company's operations. Creditors, such as banks, in addition to analyzing financial statements, monitor and control the accounting methods and procedures used in calculating profits. Financial statements are a source of information that creditors use in order to assess the financial capacity of the company.

Permanent capital is engaged by individual owners, partners or several shareholders. The larger the form of business organization, the greater the possibility that the capital will be hired by more investors, ie investors whose goal is to increase the invested capital. They are interested in capital protection and the right to profit distribution. Shareholders are interested in the return on their capital (Vukasović, Vojinović, 2010).

Owners and employees participate in the distribution of profits. The owners are interested in their invested capital, profitability and security. “Profitability is the central indicator of a company’s performance. The optimal level of profitability measures the long-term success and thus its survival.” (Milošev, 2021).

Workers' salaries depend on the achieved business results. Employees are interested in productivity, profitability, company development. The short-term lender is interested in information on liquidity while the long-term lender is interested in information on indebtedness.

FINANCIAL ANALYSIS IN THE FUNCTION OF SOLVENCY ASSESSMENT

Business management and enterprise development is the basic task of management. Business analysis is very important and shows the information needed to manage the business. The complete analysis strives to collect all information and data (Vukasović, Vojinović, 2010). Financial analysis refers to value information and data. Financial analysis focuses on quantitative financial information and is also called financial statement analysis.

The term analysis comes from a Greek word whose meaning is disassembly, decomposition of a complex object into its constitutive elements. A broader interpretation of this term refers to two procedures, namely: the process of analysis, which is a qualitative aspect of analysis, and the procedure of comparison or comparison of constitutive elements of the analyzed object - quantitative aspect of analysis (Dickov, Narandžić, Perović, 2004).

There are various financial analyzes in economic theory:
- those that indicate various aspects of the financial condition, position and financial structure of the company, activities in the financial field,
- and analyzes that, through financial terms and relations, indicate the overall activity of the company and its position (Vučičević, 2012).

"The main goal or meaning of the analysis is to provide information on its solvency or development trend based on the determined quality and quantity of the analyzed object." (Pejić, Radovanović, Stanišić, 1991). Financial analyzes are performed on the basis of financial reports in order to review and assess the financial situation of the company. Financial analysis is the basic starting point for financial planning (Hrustić, 2004). It is based on balance sheets and is aimed at examining the financial position and earning capacity of the company. The financial statements arise from the company's accounting as a regular conclusion of the books of account. With the help of financial reports, the financial position and business success are considered. There are several types of financial statements, and the most important are: balance sheet, income statement, statement of changes in equity, statement of cash flows, statement of other results, notes to the financial statements and statistical annex. The balance sheet and income statement are the basic ones. Balance sheets include the balance and changes in funds, sources of funds, income, expenses, financial result. Operating result is obtained as the difference between operating income and operating expenses. Based on balance sheet data, management makes important business decisions. The analysis of the balance sheet can predict risks, consider creditworthiness indicators, market position. The balance sheet gives an overview of assets (assets), liabilities and capital (equity) at a particular time. The income statement gives an overview of the financial result in a certain period of time.

The statement of cash flows shows the inflows and outflows of cash based on the business, investment and financial activities of the company. This report aims to confront cash inflows and outflows to ensure adequate liquidity of the company. The capital balance shows the distribution of profits on dividends and retained earnings (Pešalj, 2006).

The analysis is performed for the purpose of business continuity. It is a process from which information about financial activities is constantly generated. For analytical needs, an information base must be prepared according to the requirements of financial analysis. In order to perform a successful analysis, it is necessary to prepare financial reports, ie it is necessary to consider the usability of balance sheet data, then to consolidate the balance sheet and income statement, as well as to classify balance sheet data. After that, it is necessary to choose adequate instruments of analysis and analytically significant balance relations.

For the analysis of the financial situation, business indicators are used, which are expressed in the form of financial coefficients or ratios. (Barać, Ivaniš, Jeremić, 2004). "Ratio is the index by which one variable is measured in relation to the other variable and is usually calculated as a percentage or rate" (Vesić, Gavrilović, Petronijević, 2019). Financial indicators are calculated to obtain information on liquidity, indebtedness, profitability and efficiency. Based on the information obtained, the company makes decisions. Consequently, one of the important tools for decision making are financial indicators, or "the set of the financial analysis indicators and modelling the phenomena specific to enterprises are important instruments for justifying financial decisions, which can contribute to increasing the capacity of the economic agents to create value in conditions of efficiency" (Burja, Burja, 2010). The basic purpose of the analysis is to provide information on solvency. It must serve to prepare business decisions, thus influencing the financial policy of the company.

CONCLUSION

Solvency is the practice of predicting the survival and development of a company. It is a presentation of its quantitative and qualitative abilities, first of all yield, then property, and financial abilities. Solvency indicates the company's ability to perform its business successfully. It refers to business analysis that aims to determine and assess the quality of business. Solvency measurement is expressed through information and data obtained from financial statements. In order to properly determine and measure solvency, it is essential that the financial statements be of good quality and complete. In

this paper, special attention has been paid to financial analysis in the function of credit rating.

By studying the existing literature in the field of financial analysis, it was possible to conclude that the assessment of quantitative solvency indicators is extremely important for current and future business operations. Based on the solvency assessment, information is obtained that is important for various stakeholders and primarily for business owners and managers. Depending on the users of information and their interests, the importance of certain segments of the overall financial analysis is emphasized. Significance is observed from the aspect of business management and enterprise development. Financial analysis follows the management process and precedes the planning process. The financial plan must take into account the good qualities of the company and its weaknesses. Financial analysis indicates the weaknesses of the company, which is important to analyze in order to take corrective action in a timely manner. Also for the needs of management or decision-making, financial analysis creates an information base.

REZIME
BONITET KORPORATIVNOG PREDUZEĆA

Savremeno poslovanje odlikuje turbulentnost i nepredvidivost promena. Na položaj preduzeća utiču interni i eksterni faktori. Menadžment ima značajne mogućnosti delovanja na interne faktore dok na eksterne ne može uticati. Pretpostavka kvalitetnog upravljanja jeste blagovremena spoznaja snaga i slabosti preduzeća. Kako bi jedno korporativno preduzeće bilo uspešno potrebno je blagovremeno analizirati sve elemente koji garantuju opštu materijalnu solidnost, dobru reputaciju i perspektivu, kao i dobru konkurentsku poziciju na tržištu, dobre razvojne i proizvodne programe koji predstavljaju garanciju za dug životni ciklus preduzeća i njegovu ispravnu strategiju i orijentaciju. Bonitet se odnosi na analizu poslovanja koja ima za cilj da utvrdi i oceni kvalitet poslovanja. Pokazuje koliko je određeno preduzeće uspešno, pa otuda služi za sagledavanje postojećeg finansijskog stanja kao i za ocenu budućeg poslovanja i razvoja.
Cilj istraživanja je da se ukaže na značaj ocene boniteta i da se objasni na koji način se prikupljaju informacije pomoću kojih se mogu izbeći rizici u poslovanju.

Ključne reči: bonitet, finansijski pokazatelji, korporativno preduzeće

REFERENCES

1. Agencija za privredne registre (10.01.2022), Preuzeto sa: www.apr.gov.rs/регистри/финансијски-извештаји/апр-бонитет.1842.html
2. Barać, S., Ivaniš, M., Jeremić, Lj. (2004). *Upravljanje finansijama*, Fakultet za finansijski menadžment i osiguranje, Univerzitet Singidunum, Beograd, pp. 179
3. Bogićević, M., Stanisavljević, M., Janjić, V. (2017). *Računovodstvena podrška preduzetništvu*, Zbornik radova ITOP17 (57-62), Čačak, Univerzitet u Kragujevcu, Fakultet Tehničkih nauka u Čačku, pp. 59
4. Burja, C., & Burja, V. (2010). Performance analysis model for companies using the liquidity, solvency, profitability correlation, *Revista economică,* 6(53),. pp 122-128
5. Dickov, V., Narandžić, B., Perović, V. (2004). *Ekonomika moderna*, Fakultet tehničkih nauka, Univerzitet u Novom Sadu, Novi Sad, pp.102
6. Hrustić, H. (2004). *Finansijski menadžement*, Viša poslovna škola, Novi Sad, pp .21
7. Ivaniš, M. (2007). *Osnovi finansija,* Univerzitet Singidunum, Beograd, pp. 196
8. Karzaeva, N., & Karzaeva , E. (2019). Methods for assessing solvency in the financial diagnostics system of an economic entity, *International Transaction Journal of Engineering*, Management, & Applied Sciences & Technologies, 10(19), pp 96-108
9. Malešević, E., Malešević, Đ., *Upravljanje investicijama*, Proleter, Bečej, 2011.
10. Mavlutova, I., Babenko, V., Dykan, V., Prokopenko, N., Kalinichenko, S., & Tokmakova, I. (2021). Business Restructuring as a Method of Strengtening Company's Financial Position, *Journal of Optimization in Industrial Engineering*,29(14), pp. 105-115
11. Metodologija za utvrđivanje podataka o bonitetu privrednih društava, zadruga, ustanova i preduzetnika i davanje ocena boniteta privrednih društava, Službeni glasnik RS, br. 127/2014, 101/2016 i 111/2017
12. Milošev, I. (2021). Profitability and optimal debt level of large firms in Serbia. *Ekonomija: teorija i praksa*, 14(4), pp. 1-19. https://doi.org/10.5937/etp2104001M
13. Pejić, L., Radovanović, R., Stanišić, M. (1991). *Ocena boniteta preduzeća*, NIP „Privredni pregled", Beograd, pp 73
14. Pešalj, B. (2006). *Merenje performansi preduzeća*, Ekonomski fakultet, Beograd, pp 56
15. Rodić, J., Andrić, M., Vukelić, G., Vuković, B. (2015). *Analiza finansijskih izveštaja*, Proleter, Bečej, pp. 322

16. Smirnova, P., & Buhrimenko, R. (2021). Scientific approach transformation for liquidity and solvency assessment, *Concepts, strategies and mechanisms of economic systems management in the context of modern world challenges*, VUZF University of Finance, Business and Entrepreneurship (Sofia, Bulgaria), pp 35-44
17. Vojinović, Ž., Prokić, Đ. (2017). Ocena boniteta preduzeća: studija slučaja, *Kultura polisa*, 14 (32), 375-386.
18. Vučičević, D. (2012). Teorijski aspekti i osnovne postavke finansijske analize, *Škola biznisa*, 2, 82-96.
19. Vukasović, D., Vojinović, Ž. (2010). *Finansijska analiza*, Nezavisni univerzitet Banja Luka, pp.16
20. Zajmi, S. (2019). Principi transparentnog finansijskog izveštavanja kao osnov kontrole kvaliteta finansijskih izveštaja, *Poslovna ekonomija*, 13(2), pp. 60-68
21. Vesić, T., Gavrilović, M., Petronijević, J. (2019). The influence of liquidity and profitability on the banking sector performances – the example of Serbia, *International Review,* 1-2, pp.75-81
22. Filipović, L., Mirjanić, B. (2016). Financial analysis and credit slovency evaluation of a selected enterprise case study of a company "Aleva Novi Kneževac", *Ekonomija: teorija i praksa,* 9 (3), pp. 16-31.

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