UDK 338.48:616.2-036.21](497.571)"2019/2022"

The impact of liquidity on the operational stability of leading hotel companies in Istria County during the COVID-19 pandemic

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Summary

This paper aims to determine the impact of the COVID-19 pandemic on the operations of leading tourism companies in Istria County, as well as to examine whether companies with higher levels of current liquidity in the pre-crisis period maintained operational stability more effectively. The research was conducted on a sample of six leading tourism companies in Istria, which account for more than 60% of the total capacity of the Croatian tourism sector, covering the period from 2019 to 2022. The methods used include descriptive statistics, correlation analysis, simple linear regression, and comparative analysis.

The research results indicate that the pandemic caused a sharp decline in the operational profitability of most observed companies in 2020, alongside deteriorating liquidity and rising financial liabilities. However, the recovery in 2021 and 2022 confirmed the resilience of leading tourism enterprises in Istria. Correlation and regression analyses showed no statistically significant link between current liquidity and operational profitability. At the same time, a negative correlation was found between liquidity and both indebtedness and financial leverage; however, a statistically significant relationship was confirmed only for indebtedness in 2020.

This leads to the conclusion that while liquidity played a vital role in preserving financial structure and stability, it was not a decisive factor in maintaining operational stability during the crisis. The contribution of this paper lies in a better understanding of the financial resilience of tourism companies under crisis conditions, suggesting that liquidity is more critical for financial stability than for operational profitability. Future research should include a larger sample of companies and a longer time frame to more accurately assess the role of liquidity in business recovery.

Keywords: *COVID-19 pandemic, Istria County, tourism sector, financial indicators, operational stability*

1. Introduction

Pandemic COVID-19, which emerged at the beginning of 2020, caused profound changes in the global economic and social environment. The health crisis very quickly spilled over into other segments of life, so many countries introduced various protective measures, such as travel restrictions, bans on gatherings, and the temporary closure of part of economic activities. Such circumstances led to a slowdown in economic flows, reduced consumption, and disruptions in the operations of a large number of companies.

Among the sectors that were particularly affected, tourism and hospitality stand out. Therefore, the year 2020 remained recorded as one of the most difficult periods in the history of modern tourism. Namely, in that year international arrivals fell by 74%, and one billion fewer foreign tourist arrivals were recorded in destinations worldwide compared to 2019 (Dobrota, 2021).

The consequences of the pandemic were especially felt in Croatia, whose economy is significantly connected to tourism, since it is well known that the Croatian economy relies to a large extent on the service sector, primarily tourism, which contributes a high 24% of added value to GDP (Benko, Krstanović & Sovulj, 2022).

A special place in Croatian tourism is occupied by Istria County, which for many years has stood out as one of the most developed and most successful tourist regions, where some of the most important hotel companies in the country operate. The emergence of the pandemic at a time when many companies were already carrying out investment cycles further increased the pressure on their financial stability and their ability to conduct regular business operations without disruption.

Starting from the above circumstances, this paper analyzes the performance of the most prominent hotel companies in Istria County during the pandemic period, with the aim of determining to what extent the crisis caused by the COVID-19 pandemic affected their business results.

Previous research has shown that COVID 19 pandemic severyly impacted the operational activities and financial strenght of tourism companes globally, affecting profitability and business activity. The global health crisis significantly undermined the financial viability and operational capacity of tourism businesses, leading to reduced revenue and disrupted activities (Gössling et al., 2021). Furthermore, large-scale hotels with seasonal business models faced heightened vulnerability to liquidity shocks and various operational uncertainties (Fotiadis et al., 2021).

Despite the extensive literature on the general impact of the pandemic on tourism, there is a research gap regarding the relationship between pre-crisis financial strength, especially liquidity and the operational stability of large hotel companies during the pandemic shock. While general studies by authors such as Duro et al. (2021) have separately analyzed tourism vulnerability and performance, this study specifically addresses whether a higher initial liquidity position served as a decisive factor for maintaining operational stability in the Istrian hotel sector.

The aim of the paper is, on the basis of selected financial indicators, to examine the negative effects of the pandemic on the operations of the selected companies, and to determine whether companies that entered the crisis with higher liquidity were able to maintain the stability of their operating business more easily.

The following hypothesis will be tested in the research: A higher level of liquidity in the pre-pandemic period has a significant impact on preserving the operational stability of enterprises in the tourism sector during the COVID-19 pandemic.

For the business analysis, a comparative analysis based on selected financial indicators was used, while correlation analysis and simple linear regression analysis was used to test the hypothesis.

2. Literature overview

In the international literature, it was pointed out very early that the pandemic produced an unprecedented disruption in the tourism sector. Research at the European level showed that the losses were not distributed equally, but more strongly affected destinations and regions that rely more on foreign guests. Curtale et al. (2023) found that during the first year of the pandemic, destinations dependent on foreign tourism experienced greater losses, while domestic and naturally attractive destinations were better able to mitigate the decline in demand.

When it comes to the hotel industry, international research shows that the pandemic was not only a short-term shock, but an event that permanently affected the way of doing business. In a study on the Chinese hotel industry, Hao, Xiao and Chon (2020) pointed out that the pandemic will long-term change business models, investment priorities, and the digital transformation of hotels. This means that the resilience of hotel companies cannot be observed only through short-term recovery indicators, but also through the ability to adapt to new business conditions.

Previous research on the operations of tourism companies in Croatia has mainly focused on the negative consequences that the COVID-19 pandemic caused in the tourism sector and on the adjustment of tourism companies' operations to crisis circumstances. Braje, Dumančić and Hruška (2023) emphasize that the ability of large tourism companies to quickly adapt to crisis conditions proved crucial for preserving Croatian tourism and was a key support for the stability of the national economy, confirming the strength of the synergy between the private and public sectors.

A contribution to the understanding of the operations of hotel companies in Croatia is also given by Roška (2021) in a study conducted on tourism companies listed on the Zagreb Stock Exchange. The results demonstrated that the pandemic had a negative impact on the profitability, business activity, and financial strength of these companies, and this study pointed out that the operations of tourism companies cannot be properly evaluated on the basis of a single indicator, but that it is necessary to observe several financial indicators simultaneously in order to obtain a more complete picture of their operations.

A similar conclusion was reached in the paper by Vareško and Škrinjar (2023), who, using the examples of Arena Hospitality Group and Valamar Riviera, show that the pandemic strongly disrupted the operations, liquidity, and stability of large hotel systems, especially in conditions of already initiated investment cycles.

In addition to financial indicators, part of the research also deals with the efficiency of hotel companies' operations in Croatia. Arbula Blecich (2024) analyzed the operations of large and very large hotel companies in the period from 2017 to 2022 and found a decline in relative efficiency in 2020. The research results indicate that the causes of inefficiency were related to the location of the companies, the structure of demand, and the intensity of the pandemic's impact, with coastal hotel companies being particularly exposed to negative changes in tourism flows.

Changes in the overall tourism environment also had an important impact on the operations of tourism companies. Šulc and Fuerst-Bjeliš (2021) state that the pandemic in Croatia caused not only a decline in tourist traffic, but also changes in seasonality and the spatial distribution of tourism activity. Similarly, Mikulić, Keček & Žajdela Hrustek (2023) confirm that the negative effects of the pandemic were more pronounced in Adriatic Croatia, where tourism has a stronger role in the regional economy. This is especially important for understanding the operations of hotel companies operating in coastal destinations.

According to Acharya and Steffen (2020), the onset of the pandemic triggered a "dash for cash," where companies struggles to secure a necessary liquidity through credit lines to offset the serous absence of revenue. This phenomenon highlights that internal financial strength and immediate access to liquid assets become the primary determinants of survival during systemic disruptions.

Jiang and Wen (2020) argue that while internal cost-cutting strategies were vital for short-term survival, government aid proved essential for maintaining the operational stability of the hospitality sector.

From the literature review, it follows that tourism and hospitality were among the most affected sectors during the COVID-19 pandemic, while in Croatian conditions particularly vulnerable were large seasonal hotel companies burdened with investment obligations, which justifies a more detailed analysis of their operations with an emphasis on the role of liquidity in assessing resilience to extraordinary disruptions.

3. Research methodology

The subject of the research was to identify the main strengths and weaknesses of the leading tourism companies in Istria County during the COVID-19 pandemic. The aim of the research was, by applying selected financial indicators, to

determine how the COVID-19 pandemic affected the business operations of the observed companies and to determine the importance of liquidity in preserving operational stability in business.

3.1. Research sample and data sources

The research includes six leading tourism companies in Istria County. Although these are companies headquartered in Istria County, they represent more than 60% of the total tourism capacity in the Republic of Croatia, so the conclusions obtained may, to a certain extent, be considered representative of the entire hotel industry sector in Croatia.

The following companies were included in the sample:

- Valamar Riviera d.d. (Poreč)
- Maistra d.d. (Rovinj)
- Plava Laguna d.d. (Poreč)
- Arena Hospitality Group d.d. (Pula)
- Aminess d.d. (Novigrad)
- Valalta d.o.o. (Rovinj)

The analysis covers the period from 2019 to 2022, and the data were collected from the official website of the Zagreb Stock Exchange and the Poslovna Hrvatska database, while the calculations and data processing were carried out in Microsoft Excel.

3.2. Hypothesis

In the research procedure, the following hypothesis was set:

Starting hypothesis H0: A higher level of liquidity in the pre-pandemic period had a statistically significant connection with the operational stability of companies in the tourism sector during the COVID-19 pandemic.

Alternative hypothesis H1: A higher level of liquidity in the pre-pandemic period does not had a statistically significant connection with preserving the operational stability of companies in the tourism sector during the COVID-19 pandemic.

The hypothesis was tested using correlation and regression analysis. For the purposes of the research, a simple linear regression model was developed in which liquidity was used as the independent variable, and operating profitability, indebtedness, and leverage as the dependent variables.

3.3. Methodology and data processing

In order to prepare the dana for analysis and in testing the hypothesis the methods of descriptive statistics, correlation analysis, simple linear regression analysis, and comparative analysis were used. For the purposes of the analysis, key financial indicators of business performance first were calculated, grouped into three categories: liquidity, indebtedness, and profitability, while descriptive statistics was used to present and describe the datasets.

Table 1. Financial indicators

Indicator	Calculation	Recommended values
Current ratio	Current Assets / Current Liabilities	1,5 -2
Debt Ratio	Total Liabilities / Total Assets	< 0,7
Financial Leverage	Total Liabilities / Equity and Reserves	< 1,5
Operating Profit Margin	EBIT / Sales Revenue	> 10%
ROE (Return on Equity)	Net Profit / Equity	> 10%

Source: Prepared by the authors.

The financial indicators shown in table 1. are selected because they reflect a company's resilience during a crisis. Operating profit margin and ROE serve as measures of the efficiency of core business activities under pressure, while liquidity and debt ratios indicate the structural capacity to maintain continuity when revenues drop. Combined, they provide a reliable basis to assess whether a company can sustain its operations and financial balance during an external shock.

Within the correlation analysis, the direction and strength of the relationship between current ratio and the selected indicators were examined. The following pairs were analyzed in particular: liquidity and operating profitability, liquidity and indebtedness and liquidity and financial leverage

In the simple linear regression analysis, current liquidity was used as the independent variable, while operating profitability, indebtedness, and financial leverage were observed separately as dependent variables. The obtained results were presented separately for each pair and for each year of the observed period, in order to more clearly identify the intensity and direction of the impact during the observed period.

Comparative analysis was used for the mutual comparison of the business operations of the observed companies and for the assessment of the extent to which the COVID-19 pandemic affected the operations of each company, as well as which companies adapted more successfully to the newly arisen conditions.

4. Results and discussion

At first a comparative analysis was conducted, followed by a correlation analysis and a simple linear regression. In the analysis, the pre-pandemic year 2019 was taken as the starting point and the final year 2022 as the year of recovery, in order to carry out the analysis and determine the changes in business operations caused by the emergence of the COVID-19 pandemic.

Current ratios (liquidity measures) and grafical presentation of the data are presented in table 2. and figure 3.

As shown in table 2., it is evident that Valalta d.o.o. and Arena Hospitality Group d.d. had the highest liquidity in 2019. Valalta d.o.o. further strengthened it during the crisis, thereby giving priority to preserving solvency over investment activity, while in the case of Arena Hospitality Group d.d. liquidity decreased and moved closer to the reference value of 2, which indicates a more rational allocation of working capital and an adjustment of business operations in the market recovery phase.

Valamar Riviera d.d. and Maistra d.d. entered the crisis with liquidity ratios below the minimum satisfactory level of 1.0. It is interesting that both recorded an increase in liquidity in 2021, which may be attributed to the rescheduling of short-term liabilities and reliance on long-term loans to finance working capital. In 2022, Valamar Riviera d.d. confirms the stabilization of its operations and the establishment of liquidity balance.

On the other hand, after nearly optimal liquidity in the period from 2019 to 2021, the decline in the liquidity of Plava Laguna d.d. in 2022 was probably the result of the intensification of postponed investment cycles and the maturity of financial obligations after the end of the agreed moratorium during the pandemic period.

Aminess d.d. recorded the most pronounced deterioration of the indicator, with a decline to 0.06 in 2021, which indicates a strong imbalance between due liabilities and available current assets during the crisis.

In table 3. are presented the indicators of finantial leverage (power) for the analysed companies. The same data are graphically presented in figure 2.

In the observed sample, Aminess d.d. shows the highest level of financial risk and dependence on external sources of financing.

During 2020, the leverage ratio reached a value of 2.18, which implies a very intensive use of external capital in relation to equity. The values remained high even after 2020, which confirms continued financing from external sources and, especially during crisis periods, significantly increases the company's business risk.

In contrast, Valamar Riviera d.d. actively worked on reducing financial leverage and strengthening financing from its own sources after the initial pandemic shock.

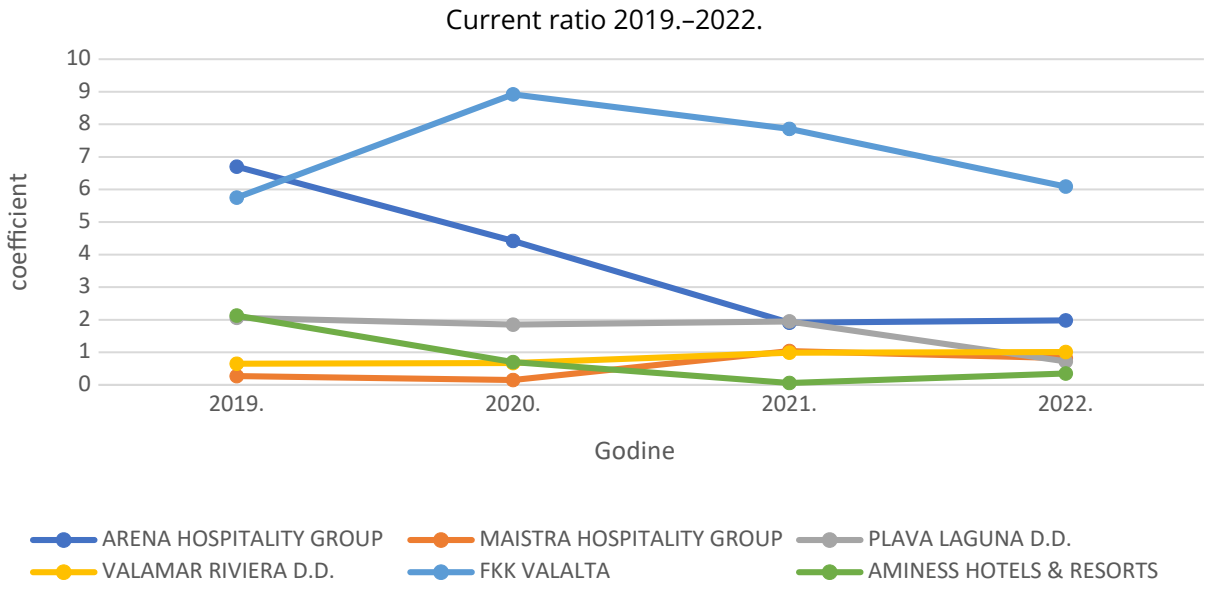
Arena Hospitality Group d.d. and Plava Laguna d.d. maintained a high level of leverage, with ratios ranging from 0.4 to 0.5. Such values indicate a conservative approach to financing, with primary reliance on their own sources.

Table 2. Current ratios

Company/year	2019.	2020.	2021.	2022.
Arena Hospitality Group d.d.	6,70	4,42	1,91	1,98
Maistra d.d.	0,27	0,15	1,04	0,82
Plava Laguna d.d.	2,06	1,85	1,95	0,72
Valamar Riviera d.d.	0,65	0,67	0,99	1,01
Valalta d.o.o.	5,75	8,92	7,86	6,09
Aminess d.d.	2,13	0,70	0,06	0,35

Source: Prepared by the authors.

Figure 1. Current ratios



Source: Prepared by the authors.

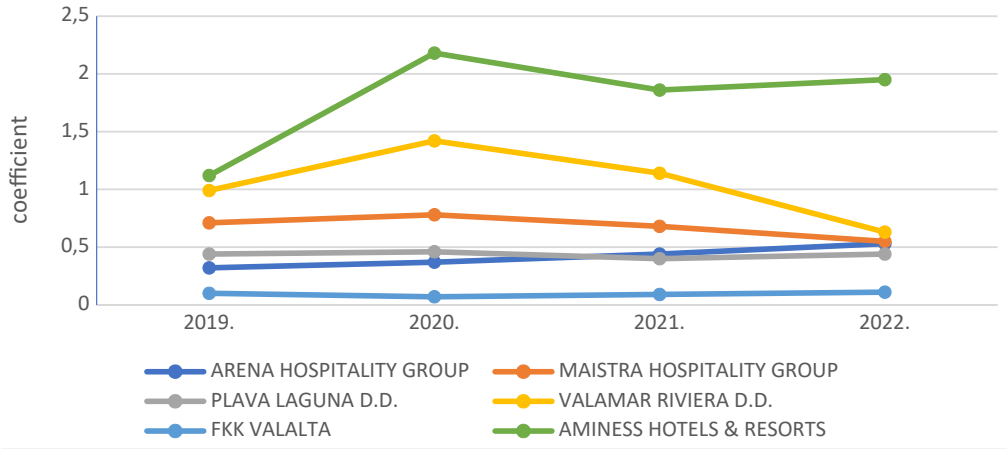
Table 3. Financial Leverage

Company/year	2019.	2020.	2021.	2022.
Arena Hospitality Group d.d.	0,32	0,37	0,44	0,53
Maistra d.d.	0,71	0,78	0,68	0,55
Plava Laguna d.d.	0,44	0,46	0,40	0,44
Valamar Riviera d.d.	0,99	1,42	1,14	0,63
Valalta d.o.o.	0,10	0,07	0,09	0,11
Aminess d.d.	1,12	2,18	1,86	1,95

Source: Prepared by the authors.

Figure 2. Financial leverage

Financial leverage 2019.–2022.



Source: Prepared by the authors.

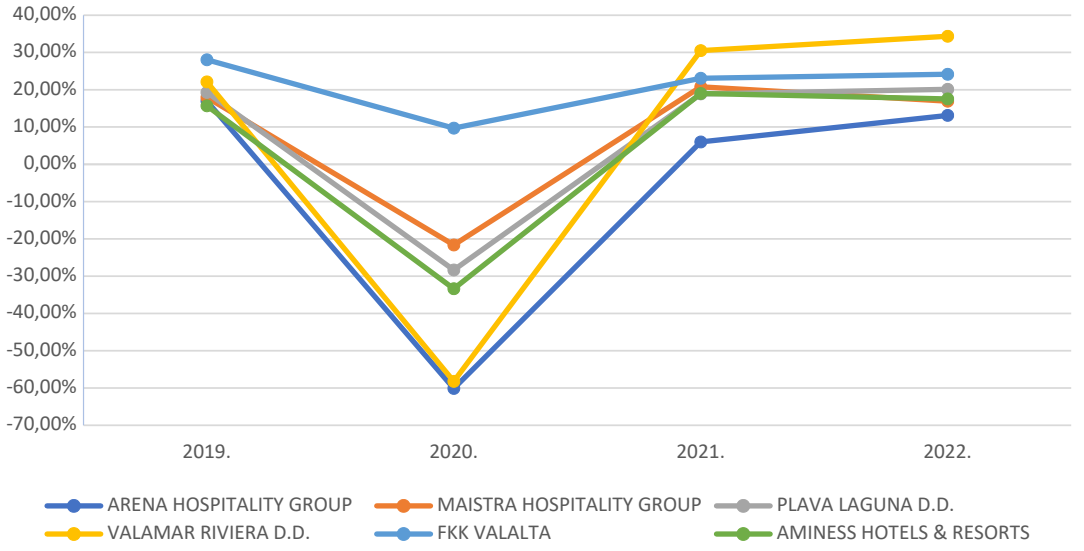
Table 4. Operating profit margin

Company/year	2019.	2020.	2021.	2022.
Arena Hospitality Group d.d.	16,98%	-60,11%	5,99%	13,13%
Maistra d.d.	17,95%	-21,64%	20,80%	16,93%
Plava Laguna d.d.	19,27%	-28,35%	18,88%	20,12%
Valamar Riviera d.d.	22,11%	-58,22%	30,50%	34,34%
Valalta d.o.o.	28,03%	9,70%	23,07%	24,15%
Aminess d.d.	15,70%	-33,37%	19,00%	17,54%

Source: Prepared by the authors.

Figure 3. Operating profit margin

Operating profit margin 2019.–2022.



Source: Prepared by the authors.

Valalta d.o.o., with an extremely low financial leverage value of approximately 0.1 throughout the entire observed period, indicates an almost complete absence of external financing and an almost exclusive reliance on its own sources.

In table 4. are presented the indicators of operating profit margin for the analysed companies. The same data are graphically presented in figure 3.

Valalta d.o.o. stands out as the only company that managed to maintain positive operating profitability continuously throughout the entire observed period, demonstrating exceptional resilience to the effects of unpredictable external disturbances, while the most pronounced fluctuations were recorded in Arena Hospitality Group d.d. and Valamar Riviera d.d. After a stable period in 2019, a sharp decline occurred during 2020; however, already in 2021 and 2022 both companies recorded a strong recovery trend and a return to positive business results.

The other companies also follow a similar pattern in the movement of operating profitability. With a somewhat less pronounced decline, these companies also achieved a gradual and stable recovery during 2021 and 2022.

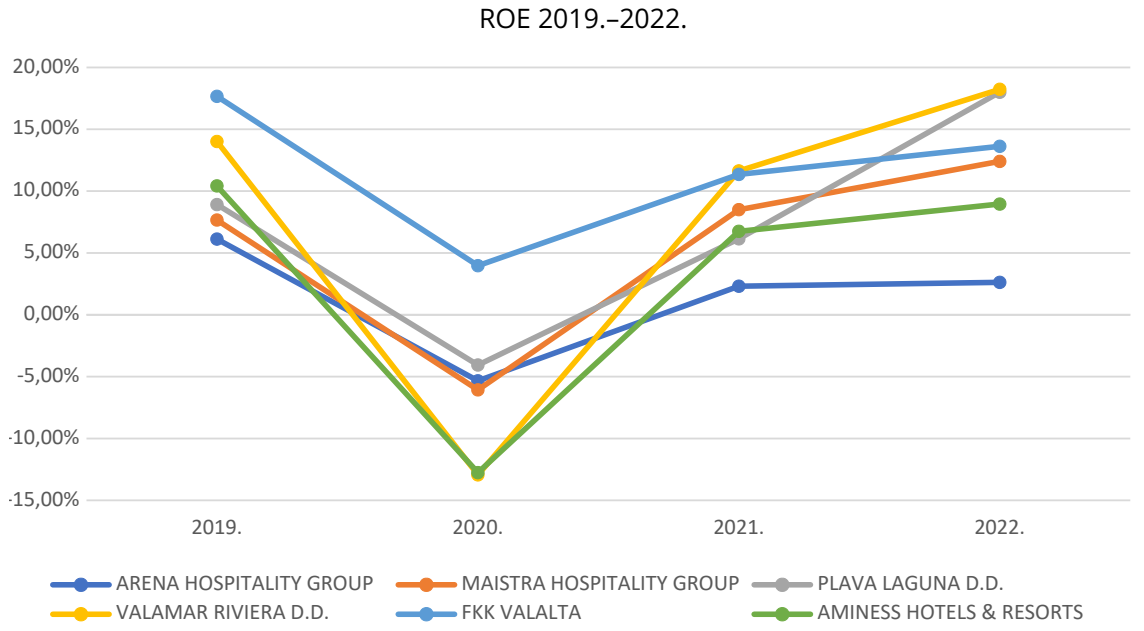
In table 5. are presented the indicators of return on equity for the analysed companies. The same data are graphically presented in figure 4.

Table 5. Return on equity

Company/year	2019.	2020.	2021.	2022.
Arena Hospitality Group d.d.	6,12%	-5,34%	2,31%	2,62%
Maistra d.d.	7,66%	-6,07%	8,50%	12,40%
Plava Laguna d.d.	8,91%	-4,06%	6,14%	17,99%
Valamar Riviera d.d.	14,01%	-12,94%	11,63%	18,23%
Valalta d.o.o.	17,66%	3,97%	11,35%	13,62%
Aminess d.d.	10,42%	-12,76%	6,75%	8,95%

Source: Prepared by the authors.

Figure 4. Return on equity (ROE)



Source: Prepared by the authors.

From the calculations for financial leverage, it is evident that Valalta d.o.o. was the only company that maintained a positive ROE throughout the entire cycle and thus stood out as the most stable entity in the observed period, while the other companies recorded negative values.

Valamar Riviera d.d. recorded the most pronounced decline, but also the strongest post-pandemic growth, and in 2022 achieved an impressive recovery with an ROE value of 18.23%. Plava Laguna d.d., Maistra d.d., and Aminess d.d. followed a similar trend, but with a smaller decline in 2020 and a somewhat lower ROE growth in 2022.

Arena Hospitality Group d.d. recorded a specific movement of the indicator with relatively lower fluctuations. Although the decline in 2020 was milder, the recovery process in 2021 and 2022 took place at a slower pace compared to the other companies.

In table 6. are presented the indicators of debt ratios for the analysed companies. The same data are graphically presented in figure 5.

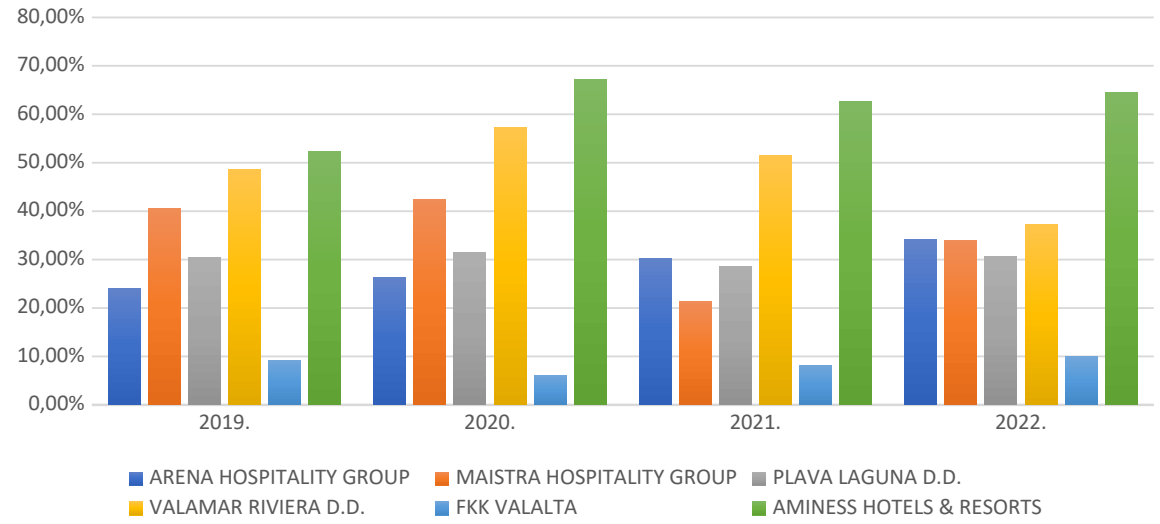
Table 6. Debt ratios

Company/year	2019.	2020.	2021.	2022.
Arena Hospitality Group d.d.	24,12%	26,28%	30,27%	34,15%
Maistra d.d.	40,65%	42,49%	21,29%	34,01%
Plava Laguna d.d.	30,47%	31,54%	28,67%	30,59%
Valamar Riviera d.d.	48,53%	57,39%	51,60%	37,28%
Valalta d.o.o.	9,29%	6,15%	8,22%	9,96%
Aminess d.d.	52,44%	67,16%	62,71%	64,45%

Source: Prepared by the authors.

Figure 5. Debt ratios

Debt ratio 2019.–2022.



Source: Prepared by the authors.

In the case of Aminess d.d., the most pronounced trend of reliance on external sources of financing was recorded. The peak of indebtedness was associated with the crisis period during 2020 and 2021, when the coefficient values reached 67%. Such indicators suggest the necessity of external financing in order to maintain liquidity and business continuity during the pandemic.

Arena Hospitality Group d.d. recorded a linear and gradual increase in the share of debt in total sources, which indicates a controlled increase in indebtedness during the pandemic, while maintaining a stable level of solvency.

The business operations of Plava Laguna d.d. are characterized by exceptional stability of the capital structure. The company showed high resilience to external shocks without significant changes in in indebtedness.

Valalta d.o.o. had the lowest indebtedness values during the entire observed period. A high share of equity capital and significant liquidity reserves resulted in a minimal share of external sources, which positions Valalta as the most financially independent company with exceptionally high financial stability.

In the tabular presentation of the correlation, only those indicators that contribute to testing the hypothesis of the impact of liquidity on the operational stability of business were included. Therefore, the selected pairs were liquidity and operating profitability, liquidity and indebtedness, and liquidity and leverage, which credibly present the operational stability of business. This approach enabled greater clarity of the analysis and avoided the repetition of data.

In table 7. are presented important correlations between liquidity measures an operating profitability.

The analysis of the correlation coefficients between liquidity and operating profitability throughout the observed period indicates that in the pre-crisis year 2019 a moderate relationship was found, r = 0.40, while the outbreak of the pandemic in 2020 led to a significant decrease in this relationship. The drop in correlation to a significantly lower level, r = 0.24, indicates that during the first year of the pandemic high liquidity was not able to compensate for the interruption of business operations and the losses caused by the closure of facilities, that is, it was not sufficient to preserve operating profitability under the conditions of systemic disturbance caused by the COVID-19 pandemic.

This leads to the conclusion that, regardless of the level of liquidity in the pre-crisis year 2019, it was not a decisive factor in preserving operating profitability during the first year of the crisis. Even companies that entered the pandemic shock with high liquidity suffered a strong decline in operating profit because revenues were significantly reduced under the influence of external factors, while operating costs remained.

In contrast, the increase in the coefficient to r = 0.78 in 2022 suggests that liquidity becomes a significant factor only in the phase of market normalization.

Table 7. Correlation coefficient between current liquidity measures and operating profitability

	Correlation coefficient		
Year	Current liquidity – Operating Profit Margin	Current liquidity – Debt ratio	Current liquidity – Financial leverage
2019.	0,40	-0,75	-0,69
2020.	0,24	-0,81	-0,77
2021.	0,43	-0,78	-0,73
2022.	0,78	-0,74	-0,71

Source: Prepared by the authors.

While the impact of liquidity on operating profitability weakened in 2020, the liquidity coefficient showed a strong negative correlation with the indebtedness coefficient and leverage, r = -0.81 and r = -0.77. Therefore, the greater the company's debt burden and leverage, the faster liquidity was lost for servicing existing obligations. This indicates that, in the absence of regular operating revenues, liquidity became more strongly connected to liabilities, that is, the existing excess liquidity was used to a greater extent for debt servicing, and it proved to be an extremely important item in debt management.

Liquidity thus helped, to a certain extent, to prevent companies from borrowing excessively and increasing their dependence on external capital, thereby creating the precondition for the faster recovery of business operations recorded in 2022.

It can be concluded that liquidity in the hotel industry did not significantly help in maintaining profitable operations, but it proved to be a significant factor in preserving the capital structure and managing debt, which ultimately enabled the companies to recover quickly and achieve relevant profits in business already in 2022.

In order to obtain the important correlations between liquidity and operative profitability for a whole sample, a simple linear regression analysis was conducted separately for each year, with indebtedness, operating profitability, and financial leverage as the dependent variables and current ratio used as the independent variable. There were conducted three simple regression analysis (Table, 8., 9. and 10.).

The results of the regression analysis demonstrated that the relationship between liquidity and operating profitability was positive in all observed years, but weak and not statistically significant. This leads to the conclusion that higher liquidity was not a sufficient factor for preserving operating profitability, especially under the conditions of a strong external shock such as the one caused by the COVID-19 pandemic. In other words, although more liquid companies had a more favorable starting position for maintaining stable operating performance in the initial period, this advantage was not strong enough for its effect on operating profitability to be statistically confirmed.

The low values of the coefficient of determination throughout the entire observed period indicate that the relationship between liquidity and operating profitability was extremely weak and generally negligible. This relationship was somewhat stronger in 2020, but it was still weak. Therefore, although the direction of the relationship was positive, neither the strength of the relationship nor its statistical significance allows confirmation of the hypothesis in the part relating to the preservation of operating profitability.

The regression analysis presented in Table 9. shows a negative relationship between current liquidity and indebtedness in all observed years, that is, a strong and inversely proportional relationship, which indicates that an increase in liquidity was accompanied by a systematic decrease in indebtedness.

Table 8. Regression analysis of liquidity and operating profitability (dependant variable is operative profitability and independant variable is liquidity/current ratio)

Year	R	R^2	Coeffecient (β)	SE	t-value	p-value
2019	0.2652	0.0703	0.4458	0.8105	0.5501	0.6115
2020	0.5446	0.2966	4.1698	3.2111	1.2986	0.2639
2021	0.0928	0.0086	0.2634	1.4131	0.1864	0.8612
2022	0.1428	0.0204	0.4942	1.7134	0.2885	0.7873

Source: Prepared by the authors.

Table 9. Regression analysis of liquidity and debt (dependant variable is indebtness and independant variable is liquidity/current ratio)

Year	R	R^2	Coeffecient (β)	SE	t-value	p-value
2019	-0.7803	0.6088	-4.7277	1.8949	-2.4950	0.0671
2020	-0.8645	0.7474	-5.6570	1.6444	-3.4401	0.0263
2021	-0.7515	0.5647	-5.3498	2.3483	-2.2782	0.0850
2022	-0.7778	0.6050	-6.2855	2.5396	-2.4750	0.0686

Source: Prepared by the authors.

Table 10. Regression analysis of liquidity and financial leverage (dependant variable is finantial leverage and independant variable is liquidity/current ratio)

Year	R	R^2	Coeffecient (β)	SE	t-value	p-value
2019	-0.7386	0.5456	-0.1095	0.0500	-2.1914	0.0935
2020	-0.6791	0.4611	-0.1580	0.0854	-1.8501	0.1380
2021	-0.7055	0.4977	-0.1604	0.0805	-1.9908	0.1173
2022	-0.5654	0.3197	-0.1671	0.1219	-1.3709	0.2423

Source: Prepared by the authors.

The most pronounced and statistically significant relationship was recorded in 2020, that is, in the first and most intensive year of the crisis, which leads to the conclusion that liquidity played an important role in preserving lower indebtedness and the financial stability of companies, since it reduced the need for additional borrowing under conditions of a sharp decline in revenues. In the other years, the p-value was above the level of significance, so it can be concluded that liquidity significantly affected indebtedness in the first year of the pandemic, while in the other years its effect was smaller, but still relevant.

The results of the regression analysis in Table 10. also indicate a negative relationship between current liquidity and financial leverage throughout the entire observed period, which means that more liquid companies were less dependent on financing from external sources in relation to their own capital. Furthermore, the p-values in all years were higher than 0.05, so this relationship cannot be considered statistically significant. Therefore, although the values of the coefficient of determination showed a stable level of correspondence, due to the lack of statistical significance it is not possible to claim with sufficient certainty that liquidity affected financial leverage in the observed sample.

Based on the conducted analyses, it can be concluded that the stated starting hypothesis H0 is not accepted. Although in 2020 a statistically significant effect of liquidity on indebtedness was established, p = 0.0263, this result is not sufficient to confirm the hypothesis. Given that for operating profitability no statistically significant relationship with liquidity was found in any observed year, nor for financial leverage, it can be concluded that liquidity did not have a statistically significant effect on preserving the operational stability of business during the observed period.

4.1. Discussion

The results of the conducted comparative analysis clearly show a "V"shaped recovery, which reflects the strong connecion with the global crisis on the tourism sector, but also agility in returning to pre-crisis levels.

During 2020, most of the analyzed business entities faced significant disturbances in liquidity due to the accelerated outflow of cash. In order to preserve current liquidity, the companies were forced to use short-term loans, which were subsequently refinanced into long-term liabilities. Such debt restructuring, together with a moratorium on the repayment of existing loans, made it possible to reduce the burden of short-term liabilities and establish a more stable level of financial balance. In terms of profitability, 2020 was extremely unfavorable, with almost all companies recording a net loss, with the exception of Valalta d.o.o., which was the only company that maintained a positive business result.

While Aminess used external sources as the primary tool for overcoming pandemic challenges, the other companies, especially Plava Laguna and Valalta, maintained a high degree of self-financing, mostly through accumulated profit, which indicates their strategic orientation toward long-term financial stability and the minimization of financial risk, and this proved to be a correct business policy precisely in crisis conditions such as the COVID-19 pandemic.

The comparative analysis also shows that smaller companies such as Valalta d.o.o. proved to be the most resilient to crises. A simpler business model, low fixed costs, flexibility, and the ability to adapt quickly made it possible to maintain a positive result even in the crisis year 2020, while the other larger systems, due to their complexity and large number of facilities, were more exposed to liquidity risk during the COVID-19 pandemic. A drastic decline in revenues together with high fixed costs resulted in losses and impaired liquidity, which required the restructuring of existing debt from short-term into long-term debt, as well as the agreement of a moratorium on the repayment of existing loans.

Based on the conducted regression analysis, the stated starting hipotehsis H0, that a higher level of liquidity in the pre-pandemic period has a significant impact on preserving the operational stability of companies in the tourism sector during the COVID-19 pandemic, is not accepted, and the alternative hypothesis H1 is accepted. The key reason for this conclusion lies in the fact that no statistically significant relationship was established between current liquidity and operating profitability in any of the observed years, together with low coefficients of determination, which indicate that liquidity was not a factor that significantly affected changes in profitability. Also, the results of the performed regression analyses of the impact of liquidity on indebtedness and leverage reveal a negative relationship between these variables, with a statistical significance $p = 0.0263$, recorded only for indebtedness and only in 2020, while in the other years this was not the case, nor was statistically significant for financial leverage during the entire observed period, since the p-value was greater than 0.05.

Since a statistically significant result was established in only one observed year and only for one of the analyzed indicators, the obtained results do not provide a sufficient basis for accepting the stated starting H0 hypothesis. Accordingly, and given the fact that the starting H0 hypothesis was confirmed only to a negligible extent, its final rejection is required, and the alternative hypothesis H1 is accepted, which states that a higher level of liquidity in the pre-pandemic period does not have a significant effect on preserving the operational stability of companies in the tourism sector during the COVID-19 pandemic.

In other words, this research did not confirm that companies with higher current liquidity were better able to maintain the stability of operational business during the COVID-19 pandemic. However, the obtained results do show that liquidity was important for preserving financial stability, but not as a statistically confirmed factor in preserving the stability of operational business.

The results of this analysis correspond with several international studies on financial resilience in the hospitality sector. Research by Wieczorek-Kosmala (2021) on European hotels showed that while liquidity was essential for covering fixed costs and basic survival, it did not drive profitability during lockdowns. This supports the finding in this study that liquidity had no statistically significant effect on operating profit during the initial shock of 2020.

Furthermore, Ntounis et al. (2022) note that pre-pandemic business precarity significantly influenced the capacity to absorb such shocks. This supports the conclusion that Istrian companies with stable capital structures were better positioned for long-term business operations. While the English study provides a framework for

comparing recovery across sectors, the Istrian data confirms that while liquidity is a vital tool for maintaining solvency, profitability remains tied to market restrictions.

By distinguishing the role of liquidity in servicing debt from its impact on direct operational profitability, this study offers a framework for comparison with other turistic seasonal destinations with similar operational business trends. Such comparability is important to determine if the resilience of large hotel systems in Istria follows global trends or results from regional factors, such as high capitalization and conservative financing.

Interpreted within the theoretical framework of organizational resilience as defined by Ntounis et al. (2022), the findings suggest that Istrian hotel companies demonstrated adaptive rather than purely absorptive resilience: liquidity helped absorb the initial shock through debt restructuring and capital preservation, while the recovery trajectory was driven by the capacity to reorganize operations once market conditions normalized.

This is consistent with the "dash for cash" phenomenon described by Acharya and Steffen (2020): the conversion of short-term into long-term debt and the negotiation of loan moratoria observed in Istrian companies reflects defensive liquidity management that preserved financial structure but could not offset the collapse in demand-driven revenues, thereby supporting Wieczorek-Kosmala's (2021) argument that financial slack functions as a risk preparedness mechanism rather than a direct performance driver during forced operational closures.

Finally, the superior operational resilience of Valalta d.o.o. — a smaller, structurally simpler entity — compared to larger systems supports the view advanced by Fotiadis et al. (2021) that scale does not guarantee resilience; rather, operational flexibility and a low fixed-cost structure can serve as more effective crisis buffers in highly seasonal tourism markets than financial size alone.

Conclusion

Although 2020 brought a historic decline in profitability, the rapid recovery in 2021 and 2022 testifies to the robustness of the tourism sector in Istria. The analysis confirms that the business model of the tourism sector in Istria is sustainable, since it enabled the companies to overcome the crisis period without major consequences, and also to recover quickly and continue with profitable operations.

The conducted comparative analysis suggests that financial stability before the outbreak of the COVID-19 pandemic was an important factor in the speed of post-pandemic recovery. Companies that entered the pandemic with a higher share of their own sources of financing, lower indebtedness, and more stable liquidity absorbed the initial shock of the crisis more easily. On the other hand, companies with greater reliance on external sources of financing and a weaker liquidity position were exposed to a heavier burden of financial obligations and had greater difficulty maintaining business stability during the crisis period.

High capitalization and low indebtedness in 2019 ensured the necessary financial stability, which, together with government measures to preserve jobs, made it possible to bridge the liquidity gap during 2020 and 2021.

The results of the correlation and regression analysis showed that current liquidity was not a statistically significant factor in preserving operational stability in business, which is why the stated starting H0 hypothesis is not accepted. However, at the same time, a negative relationship between liquidity and indebtedness and financial leverage was established, which leads to the conclusion that liquidity had an important role in preserving the financial stability of companies. In other words, liquidity did not prove to be a direct factor in preserving operating profitability in the year of the strongest shock, but it was important in maintaining financial balance, managing liabilities, and preventing further deterioration of the capital structure.

Based on all of the above, it can be concluded that the COVID-19 pandemic represented a serious test of the resilience of the tourism sector in Istria, but also that the leading tourism companies, despite significant losses, showed the ability to adapt and recover. In this way, the paper contributed to a better understanding of the role of liquidity and financial stability in crisis conditions and showed that, for the long-term resilience of tourism companies, the crucial factor is a combination of a sound capital structure, responsible

liability management, and the ability to adapt quickly to changes in the business environment. The obtained results also indicate that liquidity had a more pronounced role in preserving a more stable financial position of companies than in the direct preservation of their operating profitability.

In theoretical sense this study contributes to the literature on financial resilience in tourism by demonstrating that the relationship between pre-crisis liquidity and operational stability is context-dependent: liquidity functions differently as a driver of financial structure preservation versus operational profitability, and financial buffers alone cannot substitute for demand-driven revenue recovery during systemic, sector-wide crises. The study further extends the framework of Wieczorek-Kosmala (2021) by confirming, in a specific regional context, that liquidity in capital-intensive seasonal tourism businesses operates primarily as a debt-management and capital-structure stabilization instrument rather than a guarantor of operational profitability. Additionally, the evidence from Istria complements existing research on Mediterranean tourism resilience by showing that conservative financing strategies and high equity ratios function as effective structural buffers against exogenous shocks.

In practiacal sense for hotel managers and financial decision-makers, the findings underscore the importance of maintaining adequate pre-crisis liquidity not as a profitability guarantee but as a debt-management buffer, and of integrating liquidity stress-testing into annual financial planning to identify minimum thresholds necessary for financial stability during periods of revenue disruption. Companies with high equity ratios and low indebtedness — such as Plava Laguna and Valalta — absorbed the crisis shock more effectively, which points to proactive deleveraging as a strategic priority in stable operating periods. For policymakers, the evidence suggests that government interventions — including loan moratoria and wage subsidy programs — were at least as decisive as internal financial strength in enabling operational continuity. Crisis response toolkits for the hospitality sector should therefore prioritize rapid deployment of liquidity support and accessible loan restructuring programs, while regulatory frameworks that support smaller, operationally flexible tourism businesses may further enhance the overall resilience of the sector.

Despite the insights provided, this study has some limitations that should be noted. First, the small sample size, consisting only of large hotel companies, may not reflect the resilience patterns of small and medium-sized enterprises. Second, the focus on a single region limits the generalizability of these findings to destinations with different economic or geographic characteristics. Third, the analysis covers a limited time period centered on the COVID-19 pandemic, which may not account for long-term structural shifts in the sector. Finally, the research relied on a restricted set of financial indicators, primarily liquidity and solvency, potentially overlooking other variables such as asset turnover, cost structures, or investment efficiency that also affect organizational resilience.

Future research should expand on these findings by incorporating additional variables. Examining the impact of government support measures would clarify the role of external aid in relation to internal financial strength in maintaining stability during crises. Furthermore, examining digitalization and shifts in demand structure could reveal how operational adaptations influence performance. To achieve a more robust analysis, an expansion of the econometric model is recommended. Future studies should employ multiple regression to control for critical factors such as company size, the intensity of the capital expenditure cycle, and the specific structure of accommodation capacities. Finally, comparative studies across other Mediterranean destinations are needed to determine if these results align with broader industry trends or remain specific to Istria's regional financial model.

References

Acharya, V. V., & Steffen, S. (2020). The risk of being a fallen angel and the corporate dash for cash in the midst of COVID. The Review of Corporate Finance Studies, 9(3), 430-471. https://doi.org/10.1093/rcfs/cfaa013

Arbula Blecich, A. (2024). The performance of Croatian hotel companies – DEA window and Malmquist productivity index approach. Zbornik radova Ekonomskog fakulteta u Rijeci, 42 (1), 9-38.

Benko, L., Krstanović, K., Sovulj, L. (2022). Procjena učinaka pandemije koronavirusa na turističke dolaske i noćenja u Republici Hrvatskoj te na vrijednost CROBEXturist indeksa Zagrebačke burze. EFZG Working Paper Series, (1), 1–33.

Braje, I. N., Dumančić, K. & Hruška, D. (2023). Building resilience in times of global crisis: the tourism sector in Croatia. European Political Science, 22, 406–415.

Curtale, R., Batista E Silva, F., Proietti, P., & Ribeiro Barranco, R. (2023). Impact of COVID-19 on tourism demand in European regions-An analysis of the factors affecting loss in number of guest nights. Annals of Tourism Research Empirical Insights, 4(2), 100-112. DOI: 10.1016/j.annale.2023.100112 (online)

Dobrota, A. (2021). Turizam 2021. u brojkama – drukčija očekivanja gostiju i planovi za putovanja u 2022. godini, Cimerfraj.hr, preuzeto 21. 02. 2026. s: https://www.cimerfraj.hr/aktualno/turizam-2021-u-brojkama

Duro, J. A., Perez-Laborda, A., Turrion-Prats, J., & Fernández-Fernández, M. (2021). Covid-19 and tourism vulnerability. Tourism Management Perspectives, 38, 1-12. DOI: 10.1016/j.tmp.2021.100819

Fotiadis, A., Polyzos, S., & Huan, T. C. T. (2021). The good, the bad and the ugly on COVID-19 tourism recovery. Annals of tourism research, 87, 1-14. DOI: 10.1016/j.annals.2020.103117

Gössling, S., Scott, D., & Hall, C. M. (2021). Pandemics, tourism and global change: a rapid assessment of COVID-19. Journal of Sustainable Tourism, 29(1), 1–20. https://doi.org/10.1080/09669582.2020.1758708

Hao, F., Xiao, Q., & Chon, K. (2020). COVID-19 and China's Hotel Industry: Impacts, a Disaster Management Framework, and Post-Pandemic Agenda. International Journal of Hospitality Management, 90, 1-11. DOI: 10.1016/j.ijhm.2020.102636

Jiang Y., Wen J. (2020), "Effects of COVID-19 on hotel marketing and management: a perspective article". International Journal of Contemporary Hospitality Management, 32 (8): 2563–2573. https://doi.org/10.1108/IJCHM-03-2020-0237

Mikulić, D., Keček, D., & Žajdela Hrustek, N. (2023). Effects of COVID-19 on Adriatic and Continental Croatia tourism: a regional input-output perspective. Economic Research-Ekonomska Istraživanja, 36(2), 1-21. https://doi.org/10.1080/1331677X.2022.2142811

Ntounis, N., Parker, C., Skinner, H., Steadman, C., & Warnaby, G. (2022). Tourism and hospitality industry resilience during the COVID-19 pandemic: Evidence from England. Current Issues in Tourism, 25(1), 46–59. https://doi.org/10.1080/13683500.2021.1883556

Roška, V. (2021). COVID-19 tourist seasons and business activities of listed hotel companies in Croatia. WSEAS Transactions on Business and Economics, 18, 1209-1301. DOI: 10.37394/23207.2021.18.120

Šulc, I., & Fuerst-Bjeliš, B. (2021).Changes of tourism trajectories in (post)covidian world: Croatian perspectives, Research in Globalization, 3, 1-9. https://doi.org/10.1016/j.resglo.2021.100052

Vareško, A. i Škrinjar, S. (2023). Utjecaj pandemije COVID 19 na poslovanje Arena Hospitality Grupe i Valamar Riviere. Zbornik Istarskog veleučilišta - Rivista dell' Università Istriana di scienze applicate, 2 (1), 82-89.

Wieczorek-Kosmala, M. (2021). COVID-19 impact on the hospitality industry: Exploratory study of financial-slack-driven risk preparedness. International Journal of Hospitality Management, 94. https://doi.org/10.1016/j.ijhm.2020.102799

ZSE (Zagrebačka burza). Preuzeto 20.02.2026. s https://zse.hr/

Utjecaj likvidnosti na operativnu stabilnost vodećih hotelskih tvrtki u Istarskoj županiji tijekom pandemije bolesti COVID-19

Sažetak

Ovim radom nastojalo se utvrditi kakav je utjecaj pandemija COVID-19 imala na poslovanje vodeća turistička društva u Istarskoj županiji, kao i ispitati jesu li poduzeća s višom razinom tekuće likvidnosti u pretkriznom razdoblju lakše održala stabilnost operativnog poslovanja. Istraživanje je provedeno na uzorku od šest vodećih turističkih društava u Istri koja ujedno čine više od 60 % ukupnog kapaciteta turističkog sektora RH, te obuhvaća razdoblje od 2019. do 2022. godine. Korištene su metode deskriptivne statistike, korelacijska analiza, jednostavna linearna regresijska analiza i komparativna analiza. Rezultati istraživanja pokazali su da je pandemija u 2020. godini uzrokovala snažan pad operativne profitabilnosti većine promatranih društava, uz pogoršanje likvidnosti i rast financijskih obveza, dok je oporavak u 2021. i 2022. godini potvrdio otpornost vodećih turističkih poduzeća u Istri. Korelacijska i regresijska analiza pokazale su da između tekuće likvidnosti i operativne profitabilnosti nije postojala statistički značajna povezanost, dok je istodobno utvrđena negativna povezanost likvidnosti sa zaduženošću i financijskom polugom, pri čemu je statistički značajan odnos potvrđen samo kod zaduženosti u 2020. godini, što upućuje na zaključak da je likvidnost imala važnu ulogu u očuvanju financijske strukture i financijske stabilnosti, ali nije bila presudan čimbenik za očuvanje stabilnosti operativnog poslovanja tijekom kriznog razdoblja. Doprinos rada očituje se u boljem razumijevanju financijske otpornosti turističkih poduzeća u kriznim uvjetima, pri čemu rezultati upućuju na važniju ulogu likvidnosti u očuvanju financijske stabilnosti nego operativne profitabilnosti. Buduća istraživanja trebala bi obuhvatiti veći broj poduzeća i dulje vremensko razdoblje, kako bi se preciznije procijenila uloga likvidnosti u oporavku poslovanja.

Ključne riječi: *COVID-19 pandemija, Istarska županija, turistički sektor, financijski indikatori, operativna stabilnost*