



## INVESTIGATING THE IMPACT OF IFRS 16 ADOPTION IN THE SERBIAN HOTEL INDUSTRY<sup>1</sup>

Maja Kljajić\*, Vule Mizdraković

Singidunum University,  
Belgrade, Serbia

### Abstract:

The effects of the implementation of IFRS 16 in the hotel industry, as one of the industries with the highest amounts of leased assets, is the primary focus of this paper. The International Accounting Standards Board adopted International Financial Reporting Standard 16 - Leases in January 2016, replacing International Accounting Standard 17 – Leases, for reporting periods starting on or after 1<sup>st</sup> January 2019. The updated regulations introduce different accounting models for lessees and lessors. The influence of IFRS 16 on a reporting entity is contingent on the quantity of existing operating lease agreements and differs across various industries. The research sample includes financial reports of 64 hotels per reporting period (2020-21), totalling 128 observation units. Data analysis included the application of statistical tests such as Kolmogorov-Smirnov test, Shapiro-Wilk test, and Wilcoxon signed-rank test. The research results indicate that aside from other events, the adoption of IFRS 16 had an impact on the financial performance of observed hotels and their key financial statement items.

### Article info:

Received: February 09, 2024

Correction: March 10, 2024

Accepted: March 19, 2024

### Keywords:

financial reporting,  
IFRS,  
IAS,  
leases,  
lessee

## INTRODUCTION

This paper is a result of a brief presentation and subsequent discussion of a conference paper related to the impact of IFRS 16 on the hotel industry in the Republic of Serbia (Kljajic *et al.*, 2023). The paper was presented during the FINIZ International Scientific Conference held in Belgrade towards the end of 2023. Namely, in an era where accounting standards are continuously evolving to enhance financial transparency and comparability, the introduction of IFRS 16 has brought significant changes to lease accounting practices across industries. For the hotel sector, renowned for its intricate network of lease agreements that span properties, furnishings, and equipment, the adoption of IFRS 16 represents a pivotal juncture where the pursuit of hospitality excellence intersects with the precision of accurate financial reporting. This review paper delves into the multifaceted realm where hospitality operations

<sup>1</sup> Partially presented previously at FINIZ 2023 conference <https://portal.finiz.singidunum.ac.rs/paper/42634>



meet financial statements, with a focus on how the implementation of IFRS 16 has resonated within the hotel industry. This is where the purpose of this paper lies, as the proper implementation of financial reporting standards poses numerous challenges and obstacles. Therefore, the contribution of this paper is reflected in assisting financial reporting practitioners and highlighting the importance of the appropriate implementation of IFRS 16. Based on the previous, the primary research question could be defined as: *Is there an impact of IFRS 16 adoption on the financial performance of hotel industry business entities and their key financial statement items?* The paper is structured as follows: The following section provides an overview of IFRS 16 and the changes in leasing practices it brought. That will be followed by the main challenges and considerations of its implementation, as well as managerial and financial implications. Before conclusions are drawn, a review of the literature in this field will be presented, as well as the results of conducted research.

## IFRS 16 Overview

International Financial Reporting Standard (IFRS) 16 - Leases replaced the previous International Accounting Standard (IAS) 17 - Leases and became effective for annual reporting periods beginning on or after January 1<sup>st</sup>, 2019. Its mandatory application in the Republic of Serbia starts from January 1<sup>st</sup>, 2021, meaning that financial statements prepared for 2021 and later reporting periods must be in accordance with said standard. IFRS 16 establishes guidelines for the recognition, measurement, presentation, and disclosure of transactions related to leasing (IFRS, 2023). The primary distinction between the updated IFRS 16 and the previously used IAS 17 revolves around how operational lease agreements are recorded in the financial records of the lessee (the entity that leased the object of the agreement). Notably, lease costs are no longer recognized on a linear basis, i.e., spreading the lease expenses evenly over the lease term. Upon the adoption of this standard in the financial records, the lessee acknowledges both the right-of-use asset and the lease liability. Specifically, calculating the present value of the lease liability necessitates determining an appropriate discount rate. The implementation of IFRS 16 results in several significant changes: an increase in the lessee's fixed assets and lease liabilities on the balance sheet; a reduction in lease expenses; an increase in depreciation expenses; and a rise in interest expenses on the income statement. Furthermore, the new accounting approach has implications for the cash flow statement as well. The implications of IFRS 16 extend beyond the financial reporting process, resonating throughout various industries. The hotel industry, known for its dynamic lease agreements covering not only physical space but also a wide range of services and amenities, is uniquely positioned for a thorough assessment of the impact of IFRS 16 (IFRS, 2023).

## Hotel Lease Accounting Practices

The hotel industry, characterized by its diverse array of lease agreements, navigates a complex landscape of contractual arrangements that go beyond mere occupancy of physical space (Masic, 2013; Schlup, 2004). Hotel lease agreements encompass not only properties but also an intricate web of services, amenities, furnishings, and equipment. These multifaceted arrangements have been traditionally structured in ways that align with the industry's unique operational requirements. However, the introduction of IFRS 16 prompts a reevaluation of these practices and necessitates an understanding of how they intersect with the principles outlined in the standard (EY, 2016). Hotel lease agreements encompass a variety of arrangements, each tailored to cater to different aspects of the guest experience.



Property leases form the cornerstone of these arrangements, with hotels leasing space to accommodate guests. Additionally, equipment leases are prevalent, covering furnishings, fixtures, and specialized equipment used in hotel operations. Moreover, service agreements, which involve the provision of various services in conjunction with the lease of space, contribute to the intricate tapestry of hotel lease accounting practices. Unlike industries where lease agreements often centre solely on the use of space, hotel leases encompass a range of services that contribute to the overall guest experience. From concierge services and housekeeping, to access to amenities such as pools and fitness centres, hotel lease agreements incorporate a blend of hospitality elements (Gligorijevic & Kostadinovic, 2023). As such, the recognition of lease components and the allocation of payments to various aspects of the agreement can present unique challenges. Furthermore, the often long-term nature of hotel lease agreements introduces considerations related to contract modifications and evolving service offerings.

### **Pre-IFRS 16 Accounting Practices and Transition and Implementation Challenges**

Before the advent of IFRS 16, hotel lease accounting practices typically adhered to the guidance outlined in IAS 17 (IFRS, 2023). Many hotels classified lease agreements as operating leases, resulting in off-balance sheet treatment. While this approach allowed for operational flexibility, it also limited the visibility of lease obligations in financial statements (Liviu-Alexandru, 2018). The dynamic nature of hotel leases, involving both physical space and services, often led to complex assessments of whether leases met the criteria for capitalization. To satisfy the recognition criteria under IFRS 16, a lease agreement needs to meet these conditions (Rihter & Conic, 2022):

- The asset must be specified;
- The lessee must derive most of the economic advantages from utilizing the leased asset; and
- The lessee must possess the authority to dictate how the asset is utilized.

The transition to IFRS 16 has prompted hotels to reassess their lease accounting practices (Zamora-Ramírez & Morales-Díaz, 2018). The complexities introduced by the standard's new recognition criteria have necessitated a comprehensive review of existing lease agreements. This involves identifying lease components, determining lease terms and payments, and applying the appropriate discount rates. The diverse nature of hotel leases, often involving intricate service offerings, amplifies the intricacy of these assessments. Hotels must balance the precision of lease accounting with the fluidity of their operational models. The advantages generated by IFRS 16 include (Liviu-Alexandru, 2018):

- The quality of financial statements for companies that include off-balance sheet leasing contracts will see an enhancement. This will lead to an improvement in the comparability of financial statements between reporting periods as well as business entities among themselves.
- By accurately reflecting assets and liabilities on the balance sheet, the company's transparency is heightened. Consequently, investors and stakeholders can assess the company's financial position and performance more effectively in a qualitative manner. This stems from the comprehensive representation of assets under the tenant's control and utilization for their operations.
- The enhancement in comparability results from the recognition of assets and liabilities for all leases, a uniform assessment approach, and the recognition of only acquired rights and obligations arising from the lease.



## Challenges and Considerations

The implementation of IFRS 16 within the hotel industry is not devoid of challenges. Namely, they arise from the distinctive nature of hotel lease agreements, and the intricate blend of services, and physical space they encompass. As hotels strive to balance the art of hospitality with the precision of financial reporting, several challenges emerge, warranting careful consideration (Stancheva-Todorova & Velinova-Sokolova, 2019). The upcoming figure will illustrate the challenges and considerations of IFRS 16.

Figure 1. IFRS 16 Challenges and Considerations



One of the foremost challenges in implementing IFRS 16 lies in the collection of lease-related data (Magli *et al.*, 2018). Hotels must gather a comprehensive inventory of lease agreements, encompassing both property leases and equipment leases. The diverse array of services embedded within these agreements necessitates meticulous identification of lease components. The inclusion of various service elements, often intertwined with lease payments, demands a granular understanding of contractual terms and an ability to distinguish between lease and non-lease components.

Hotels are increasingly turning to software solutions to aid in the transition to IFRS 16 compliance. These solutions are designed to facilitate data management, lease identification, and the calculation of lease liabilities. However, the integration of such software into existing operational systems presents a challenge (Stancheva-Todorova & Velinova-Sokolova, 2019). Ensuring seamless data transfer, compatibility with accounting platforms, and user training necessitates a strategic approach to software implementation.

The dynamic nature of hotel operations often leads to lease modifications, as service offerings are refined and adjusted to cater to guest preferences. These modifications can introduce complexities in lease accounting, necessitating the reassessment of lease terms, payments, and components. The challenge lies in maintaining accurate and up-to-date records of these modifications while adhering to IFRS 16's recognition criteria.



Hotels engage in an array of lease types, ranging from long-term property leases to shorter-term equipment rentals. This diversity introduces considerations related to lease term determination, lease payments, and discount rate selection. Hotels must grapple with assessing the appropriate lease classification, considering the implications of IFRS 16's finance and operating lease distinction.

For hotels with international operations, IFRS 16 implementation may involve navigating varying local regulations and accounting practices. The challenge lies in achieving consistency in lease accounting across diverse geographical locations while adhering to local reporting requirements (Anicic *et al.*, 2023). With the implementation of IFRS 16 in the Republic of Serbia, there has also been a change in the Regulation on the chart of accounts and the content of accounts in the chart of accounts for other legal entities (Official Gazette of RS No. 89/2020, 2023) new accounts have been provided for recording business transactions related to lease agreements, namely:

- 015 - Intangible assets taken on lease - are intangible assets with the right to use for more than one year that meet the requirements to be recognized as assets in accordance with IFRS 16;
- 025 - Real estate, plants and equipment leased with the right to use for more than one year - are recognized on the lessee's financial statements for those leases or leases that meet the conditions for recognition as assets in accordance with IFRS 16; and
- 416 - Long-term lease liabilities - are presented as obligations arising from financial leasing or leasing obligations in accordance with the accounting policy.

## Managerial and financial implications

The intersection of IFRS 16 with hotel lease accounting extends beyond financial statements, exerting influence on managerial decisions, strategic planning, and operational considerations (IFRS,2023). The recognition of lease obligations on the balance sheet brings forth a cascade of implications that hotels must navigate while ensuring the seamless delivery of exceptional guest experiences. The upcoming figure will illustrate the Managerial and financial implications of IFRS 16.

Figure 2. Managerial and financial implications of IFRS 16





With lease liabilities now visible on balance sheets, hotels may encounter shifts in lease negotiations. Lessors and lessees alike may approach negotiations with an altered perspective, considering the financial implications of lease commitments. This necessitates hotels to engage in more informed discussions and assess the long-term financial impact of lease agreements on their financial statements.

The transparency introduced by IFRS 16 can reshape the way hotels approach financial planning and budgeting (A&S Landscape, 2023). Lease payments that were once buried in operating expenses now command attention as explicit obligations. This can prompt hotels to adopt more meticulous forecasting methods, ensuring that lease obligations are factored into long-term financial planning and budgetary decisions.

The shift in lease accounting under IFRS 16 may prompt hotels to reevaluate their decision-making processes concerning leasing versus purchasing assets. As lease obligations are brought to the forefront, hotels may reassess whether leasing is the most financially prudent option or if ownership would yield greater benefits over the long term.

The intricate interplay between service components and lease agreements necessitates hotels to adjust their operational strategies. Aligning the delivery of services with the delineation of lease components becomes crucial to ensuring that financial reporting accurately represents the economic reality of lease agreements. This entails collaboration between finance and operational departments to ensure consistency.

As hotels factor lease obligations into their balance sheet, the allocation of capital and investment decisions may be influenced. Capital-intensive projects may require a more nuanced evaluation, considering their impact on lease liability ratios and other financial metrics. Investment strategies may evolve to balance operational enhancements with financial prudence. Finally, transparent lease reporting under IFRS 16 demands effective communication with stakeholders. Hotels must articulate the implications of lease accounting changes to investors, analysts, lenders, and other interested parties. Clarity in communication is vital to ensure that stakeholders have an accurate understanding of the hotel's financial position and obligations.

## LITERATURE REVIEW

This section starts with research that could serve as a warning of possible ramifications of operating lease capitalization. Grossman & Grossman (2010) examined the consequences of capitalizing operating leases within a dataset of 91 nonfinancial firms from the Fortune 500's top 200 list. They investigated the impact of incorporating total operating lease payments on the current ratio and the ratio of total liabilities to total assets. The findings indicate that, in a significant portion of the companies within the sample, both the current ratio and the total liabilities to total assets ratio have deteriorated. Consequently, this implies that certain entities are in breach of debt agreements, which mandate stringent debt ratio compliance. Also, they found that the most significant percentage rises in current liabilities occurred within different industries.

This is not the first time authors noted the connection between leases and financial ratios (Barone, Birt, & Moya, 2014). Although a subset of these scholars has directed their attention toward examining its influence on stock market prices (Ro, 1978; Bowman, 1980), the majority have concentrated on scrutinizing how capitalizing operating leases affects critical financial ratios (Ashton, 1985; Imhoff, Lipe, & Wright, 1991; Beattie, Edwards, & Goodacre, 1998; Goodacre, 2003; Durocher, 2008; Jesswein, 2009; Grossman & Grossman, 2010; Singh, 2010; Fitò *et al.*, 2013; Nuryani *et al.*, 2015; Magli, Nobolo, & Ogliari, 2018; Rihter & Conic, 2022).





The impact of implementing IFRS 16 will vary based on the utilization of operating lease agreements across different industry sectors. Leases serve as a crucial and flexible method of financing for many entities, with listed companies that adhere to IFRS and U.S. GAAP collectively holding significant amounts of lease commitments. Before implementing the standard, research was undertaken to assess the potential impact of IFRS 16 adoption. Particular attention was given to its influence on the balance sheet, both pre and post-implementation, by business entities. In order to offer insights into the anticipated effects of the implementation of IFRS 16 on the financial reports of Italian entities, Magli *et al.* (2018) conducted empirical research. In this research, data from the 2016 financial statements of 384 entities listed on the Italian Stock Exchange were employed to analyze operating lease commitments. The results offer insights into their impact on the performance and financial position of these entities. The study highlights notable alterations in the financial statements of lessees. To elaborate, the balance sheet will reflect an elevation in leased assets, a growth in financial liabilities, and a decrease in equity. Furthermore, the income statement will show an increase in EBITDA and a rise in finance costs. The implementation of IFRS 16 has been studied in Spanish entities, as well (Zamora-Ramírez & Morales-Díaz, 2018). Authors suggested that the impact of standards is more pronounced compared to European companies, especially in sectors that are heavily affected. The balance sheet had significant changes, with both total assets and liabilities increasing, resulting in heightened leverage ratios. Additionally, there is a notable decline in the interest coverage ratio. Sectors with a larger proportion of leases belonging to professional services, such as retail, hotels and restaurants, and media, had experienced more pronounced effects.

Lemos *et al.* (2023) in their paper demonstrate that, during the initial year of IFRS 16 adoption, the average compliance level with disclosure requirements is approximately 0.66, when it comes to the sampled companies that are listed in Euronext Lisbon. As expected, the results of the multivariate analysis show a significant positive impact of auditor type on the compliance disclosure index. Consequently, authors conclude that entities whose financial accounts are audited by one of the Big Four firms tend to exhibit a higher level of disclosure compared to those audited by other auditing firms.

Rihter & Conic (2022) have pointed out the impact of the new method on the performance of economic entities, particularly its influence on profitability and indebtedness. A rise in lease-related obligations will provide a more accurate representation of companies' indebtedness levels. Additionally, frontloading higher costs during the early lease years will lead to decreased profitability. The primary focus has centred on how the adoption of the standard affects the balance sheet, primarily because of a notable surge in fixed assets and lease-related obligations. The most prominent effects on the balance sheet were identified within the aviation industry, retail sector, and hotel industry.

While authors agree that the change has a negative impact on leverage and current ratio, there is no agreement on whether a change has a positive, negative, or no effect on the market capitalization of companies (Gligoric *et al.*, 2019). In that sense, Chung (2022) asserts that the implementation of IFRS 16 has a detrimental effect on financial health metrics. This adverse impact arises from the reclassification of operating to finance leases, consequently inflating the entity's lease liabilities. The same authors claim that this surge in leverage ratios diminishes the attractiveness of entities engaged in operating leases by constraining their access to future financing opportunities and heightening the risk of violating obligations related to the company's liabilities. Conversely, Honny *et al.* (2022) assert that the leverage ratios resulting from the adoption of IFRS 16 do not exert any influence on the entity's value. Authors claim that the entity's value remains unaffected in this process, as entities have already made their decision regarding reclassification. On the other hand, Agyei-Boapeah *et al.* (2020) affirm that



the introduction of new IFRS 16 adoption enhances entity value in countries with mature financial markets. This enhancement can be ascribed to the diminishment of information asymmetry between owners and the management of the entity, along with the improved availability of external funding. The research results indicate that there is a favourable connection between the rise in lease amounts according to PSAK 73 (IFRS 16 adoption) and firm value in Indonesia throughout the pandemic COVID-19. Furthermore, the study uncovers an adverse association between lease amounts under the previous standard and entity value before the pandemic occurred (Nugroho & Gantowati, 2023). On the contrary, Lau (2023) reports that from 2011 (right after the initial exposure draft that led to IFRS 16) to 2018 (just before IFRS 16 became effective), there was a decline in operating lease intensity. Furthermore, it observes that variations in operating lease amounts from 2011 to 2018 are influenced by gearing, aligning with the debt agreement hypothesis.

To summarize, the consequences of adopting IFRS 16 can vary depending on the nature of operating lease contracts or industry, yet they consistently exhibit significant effects, as highlighted in various studies. These effects encompass (Dayag *et al.*, 2023):

- A rise in financial liabilities, owing to the recognition of lease liabilities that equal to the present value of future payments (Sacarin, 2017; Maali, 2018; Yu, 2019);
- A decrease in return on assets (ROA) as a result of the increase of total amount of assets, as indicated by research conducted by (Tai, 2013; Wong & Joshi, 2015; Nuryani *et al.*, 2015; Ozturk & Sercemeli, 2016; Joubert *et al.*, 2017; Veverkova, 2019; Raoli, 2021);
- An increase in the debt-equity ratio due to the increase in the total amount of liabilities (Wong & Joshi, 2015; Nuryani *et al.*, 2015; Ozturk & Sercemeli, 2016; Magli *et al.*, 2018; Morales-Diaz & Zamora-Ramirez, 2018a); and
- An increase in EBITDA resulting from the increase of depreciation and interest expenses in place of lease expenses (Stancheva-Todorova & Velinova-Sokolova, 2019).
- These effects are anticipated to be more pronounced in industries that heavily depend on operating leases and, consequently, in entities that extensively incorporate such leases into their operations, as noted (Karwowski, 2018).

## RESEARCH METHODOLOGY

To address the research question outlined in the Introduction section, a study was undertaken using the financial statements of specific hotels. The research sample comprises a total of 64 entities, specifically Serbian 4 and 5-star hotels, totalling 128 observation units. The study covers two years, spanning from 2020 to 2021, chosen to appropriately analyze the financial performance of hotel industry business entities and their crucial financial statement items. It is important to mention that the IFRS 16 standard was released on January 1, 2016 and came into effect on January 1, 2019. Its obligatory implementation in the Republic of Serbia commenced on January 1, 2021. Therefore, particular emphasis will be placed on the years 2020 and 2021 to address the research question: *Is there an impact of IFRS 16 adoption on the financial performance of hotel industry business entities and their key financial statement items?*

The research utilized data obtained from the Serbian Business Registers Agency (SBRA) website, based on the ID numbers of the sampled entities. Consistency was maintained by observing the same hotels across various periods, enabling a comparison of the research findings. The selection of luxury hotels was conducted through Booking.com, a prominent global tourism agency. The results were





refined to include only 4 and 5-star hotels, as other accommodation types are not required to register as business entities, and thus, are not obliged to prepare and disclose financial statements. The majority of categorized hotels are 4-star, with approximately one-quarter falling under the 5-star classification.

The financial statement items will be displayed in the database using their respective Automatic Data Processing numbers (*in Serbian: Automatska Obrada Podataka – AOP*), which are part of the national nomenclature system. Balance sheet items are represented by Automatic Data Processing numbers ranging from 0001 to 0465, income statement items from 1001 to 1071, and statement of cash flow items from 3001 to 3047 (Mizdrakovic *et al.*, 2020). Having in mind new accounts created because of the application of IFRS 16 for recording business transactions under lease agreements, the following financial statements items will be used in the research:

- Account number 015 (Intangible assets taken on lease) – AOP 0007 (Intangible assets leased and intangible assets under development);
- Account number 025 (Real estate, plants and equipment leased with the right to use for more than one year) – AOP 0013 (Real estate, facilities, and equipment taken on lease and real estate, facilities, and equipment under development);
- Account number 416 (Long-term lease liabilities) – AOP 0424 (Long-term loans, borrowings, and obligations arising from leases in the country) and AOP 0425 (Long-term loans, borrowings, and obligations arising from leases abroad).

## DATA DISTRIBUTION AND APPLIED TESTS

A normality test is a statistical method used to determine whether a dataset closely conforms to a normal distribution. This is crucial because many statistical methods rely on the assumption of normality within the data. The choice of a particular test usually depends on factors such as sample size and the desired degree of conformity to normality. Given the relatively modest size of the research dataset, comprising 128 units of observation, in comparison to larger datasets exceeding 2,500 units of observation, the customary normality tests tailored for smaller datasets, the Kolmogorov-Smirnov test and the Shapiro-Wilk test were employed (Jovancai Stakic *et al.*, 2023). The former is a relatively robust, nonparametric assessment that compares the sample data against a theoretical normal distribution, evaluating the cumulative distribution function of the sample against that of the normal distribution. The test statistic is used to measure the most significant disparity between the two cumulative distribution functions. In contrast, the Shapiro-Wilk test demonstrates lower sensitivity to deviations from normality than the Kolmogorov-Smirnov test, making it more suitable for smaller sample sizes. This test relies on the *W* statistic, a measure of the deviation of the sample from normality, ranging between 0 and 1, where values closer to 1 indicate a better fit to a normal distribution. The *W* statistic yields a *p*-value, indicating the probability of observing a sample as extreme as the one under examination, assuming normality. A small *p*-value suggests that the sample is unlikely to come from a normally distributed population, prompting rejection of the normality hypothesis. It is advisable to use quantile plots for interpreting test outcomes and identifying outliers and non-normal patterns within the data. Specifically, these plots assist in determining whether transformations or non-parametric methods are necessary to more accurately approximate the underlying distribution.



To validate the hypothesis, the Wilcoxon rank-sum test, a non-parametric statistical analysis, was employed alongside the normality tests. This test is typically used when the data does not meet the assumptions required for a parametric test like the t-test, or when dealing with small sample sizes. It is used to compare the medians of two independent yet related samples. The methodology involves assessing the ranks of values from each sample and determining whether there is a significant difference in the medians between the two groups. Finally, the research data will be analyzed, and all statistical tests will be conducted using IBM SPSS (Statistical Package for the Social Sciences).

## RESEARCH RESULTS AND DISCUSSION

Following the previously defined methodology and research question, descriptive statistics analysis of the observed data has been conducted. The following table shows the results.

**Table 1.** Descriptive statistics of the observed data – new accounts related to IFRS 16

|                    | AOP 0007  | AOP 0013      | AOP 0424      | AOP 0425      |
|--------------------|-----------|---------------|---------------|---------------|
| Mean               | 20,352.00 | 1,274,718.84  | 4,354,947.74  | 16,273,078.00 |
| Standard Error     | 9,836.57  | 624,209.31    | 1,039,025.17  | 5,795,619.07  |
| Median             | 14,173.50 | 217,193.00    | 2,591,696.00  | 21,916,423.00 |
| Standard Deviation | 24,094.58 | 3,531,061.10  | 5,785,047.32  | 10,038,306.69 |
| Kurtosis           | 4.97      | 20.43         | 2.30          | /             |
| Skewness           | 2.13      | 4.32          | 1.70          | -1.73         |
| Range              | 68,071.00 | 18,732,579.00 | 22,017,271.00 | 17,536,487.00 |
| Minimum            | 77.00     | 1,131.00      | 14,688.00     | 4,683,162.00  |
| Maximum            | 68,148.00 | 18,733,710.00 | 22,031,959.00 | 22,219,649.00 |
| Count              | 6.00      | 32.00         | 31.00         | 3.00          |

*Source: Author's calculations*

Taking into account items AOP 0007 and AOP 0013, descriptive statistics indicate that 38 hotels in the Republic of Serbia either lease or rent real estate, facilities, and equipment. On the other hand, items AOP 424 and AOP 425 show that out of these 38 hotels, 4 hotels lease real estate to other entities, and therefore, they do not have obligations arising from leases.



Table 2. Descriptive statistics - share of observed items in fixed and total assets

|                    | Share of intangible assets taken on lease in total fixed assets | Share of intangible assets taken on lease in total assets | Share of REPE taken on lease in total fixed assets | Share of REPE taken on lease in total assets |
|--------------------|---|---|--|--|
| Mean               | 0.25%   | 0.17%   | 12.05%   | 6.73%  |
| Standard Error     | 0.13%   | 0.09%   | 3.77%  | 2.01%  |
| Median             | 0.12%   | 0.10%   | 4.02%  | 3.22%  |
| Standard Deviation | 0.0030  | 0.0020  | 0.2132   | 0.1136                                       |
| Sample Variance    | 0.0000  | 0.0000  | 0.0454   | 0.0129                                       |
| Kurtosis           | 4.7223  | 3.8367  | 8.0434   | 16.2064                                      |
| Skewness           | 2.1617  | 1.9159  | 2.8646   | 3.7082                                       |
| Range              | 0.70%   | 0.50%   | 89.17%   | 60.12%                                       |
| Minimum            | 0.08%   | 0.02%   | 0.06%  | 0.05%  |
| Maximum            | 0.78%   | 0.52%   | 89.22%   | 60.18%                                       |
| Count              | 5   | 5   | 32   | 32   |

Source: Author's calculations

The research results indicate that the share of intangible assets taken on lease in both total fixed assets and total assets is at a low level, with percentages of 0.25% and 0.17% respectively. On the other hand, the share of real estate, property and equipment (REPE) taken on lease in both total fixed assets and total assets is at a higher level, with percentages of 12.55% and 6.73%, respectively.

Based on the previous review of the literature, the following variables were selected for analysis: ROA, EBITDA, % Change in Financial Liabilities, and Debt to Equity. Using these observed variables, the impact of the adoption of IFRS 16 for the preparation of financial statements for the reporting period 2021 will be observed. First, normality tests will be performed, and the following table shows results for reporting periods 2020 and 2021.

Table 3. Tests of Normality

| Year |                                   | Kolmogorov-Smirnov |    |       | Shapiro-Wilk |    |       |
|------|-----------------------------------|--------------------|----|-------|--------------|----|-------|
|      |                                   | Statistic          | df | Sig.  | Statistic    | df | Sig.  |
| 2021 | ROA                               | 0.151              | 64 | 0.001 | 0.873        | 64 | 0.000 |
|      | EBITDA                            | 0.273              | 64 | 0.000 | 0.630        | 64 | 0.000 |
|      | % Change in Financial Liabilities | 0.260              | 64 | 0.000 | 0.638        | 64 | 0.000 |
|      | Debt to equity                    | 0.377              | 64 | 0.000 | 0.358        | 64 | 0.000 |
| 2020 | ROA                               | 0.310              | 64 | 0.000 | 0.527        | 64 | 0.000 |
|      | EBITDA                            | 0.367              | 64 | 0.000 | 0.342        | 64 | 0.000 |
|      | % Change in Financial Liabilities | 0.234              | 64 | 0.000 | 0.610        | 64 | 0.000 |
|      | Debt to equity                    | 0.442              | 64 | 0.000 | 0.203        | 64 | 0.000 |

Source: Authors' calculations



With both the Kolmogorov-Smirnov and Shapiro-Wilk tests yielding a p-value of 0 (i.e.,  $p < 0.05$ ), it was improbable that the sample originated from a population with a normal distribution. Therefore, the assumption of normality was discarded.

Considering the previous findings, the Wilcoxon rank test has been chosen to assess the null hypothesis. Table 4 displays the results of this test for each observed variable.

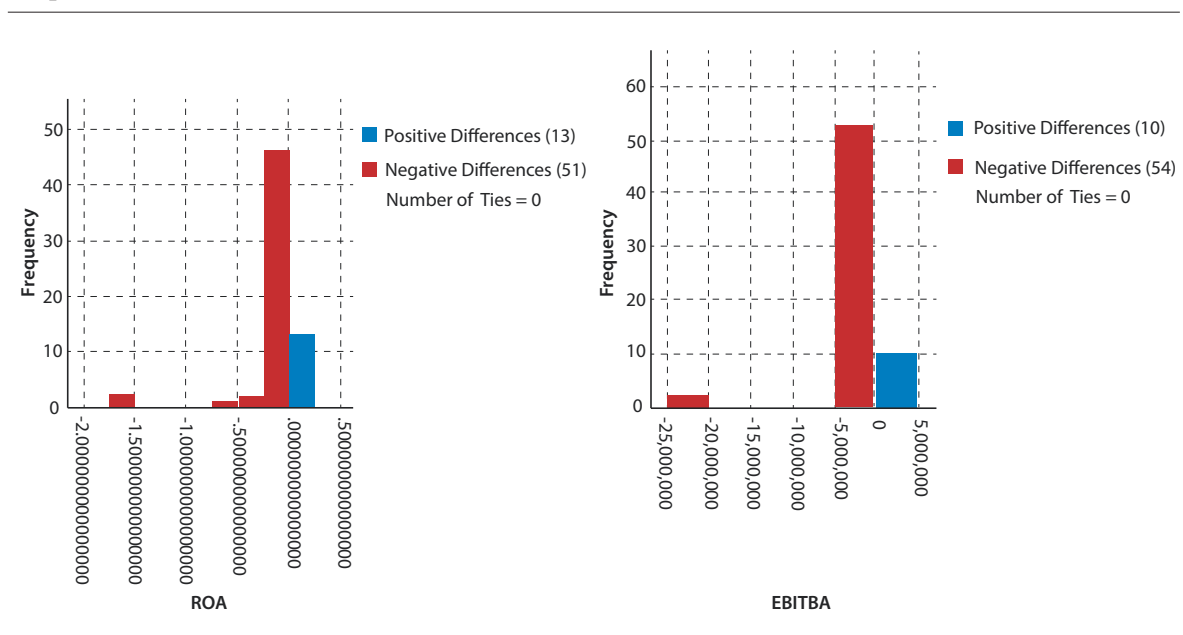
**Table 4.** Null hypothesis test using Wilcoxon rank test

|  | Null Hypothesis   | Sig.  | Decision                    |
|--|---|-------|-----------------------------|
| Asymptotic significances are displayed | The median of differences between ROA and ROA equals 0.   | 0.000 | Reject the null hypothesis. |
|  | The median of differences between EBITDA and EBITDA equals 0.   | 0.000 | Reject the null hypothesis. |
| The significance level is .050         | The median of differences between % Change in Financial Liabilities and % Change in Financial Liabilities equals 0. | 0.000 | Reject the null hypothesis. |
|  | The median of differences between Debt to equity and Debt to equity equals 0.                                       | 0.034 | Reject the null hypothesis. |

Source: Authors' calculations

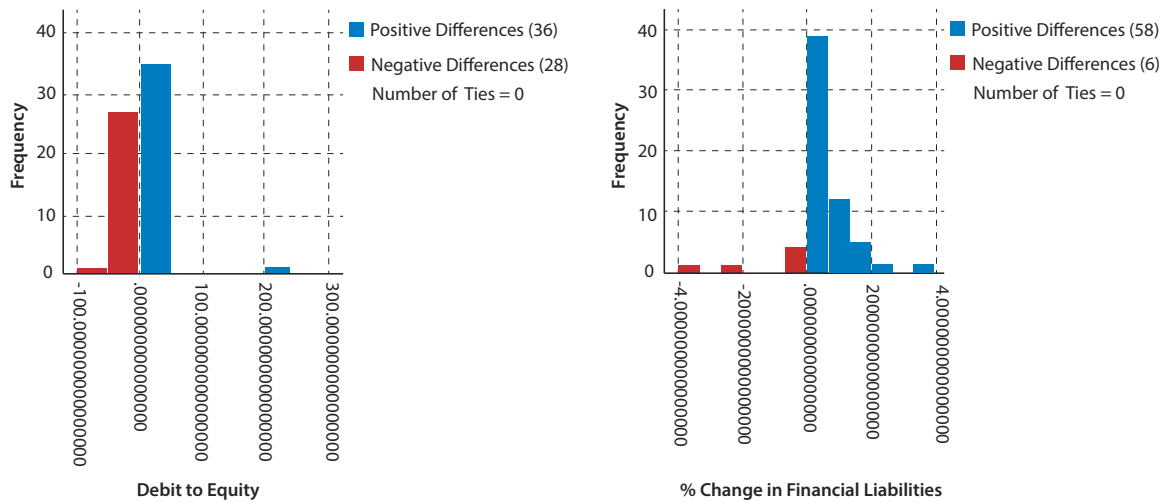
As evident, the p-value is less than 0.05 in all cases, indicating a statistically significant relationship between the observed data groups. Hence, it can be concluded that the adoption of IFRS 16 had an impact on the financial performance of hotel industry business entities and their key financial statement items, given the notable difference between ROA, EBITDA, % Change in Financial Liabilities, and Debt to equity values before and after the implementation of IFRS 16 in the Republic of Serbia. Positive and negative differences in median values of observed variables for each case have been presented in the following graph.

**Graph 1a.** Differences in median values of observed variables





**Graph 1b.** Differences in median values of observed variables



As observed, differences in median values are far from being equal to 0, hence previous results. The first two observed variables, ROA and EBITDA, had more negative than positive differences, meaning that those variables recorded a decrease in value. The other two variables, the Percentage change of financial liabilities and Debt to equity, had more positive than negative differences, meaning financial liabilities and debts increased, which is in line with previous research in the field (Wong & Joshi, 2015; Nuryani *et al.*, 2015; Ozturk & Sercemeli, 2016; Magli *et al.*, 2018; Morales-Diaz & Zamora-Ramirez, 2018a).

## CONCLUSION WITH FUTURE IMPLICATIONS

In summary, the shift to IFRS 16 in the hotel industry represents a significant transformation in lease accounting practices, with far-reaching implications. Proper implementation is paramount for accurate financial reporting and transparent communication with stakeholders. It's worth noting that the standard IFRS 16 was issued on January 13<sup>th</sup>, 2016, and became effective on January 1<sup>st</sup>, 2019, with mandatory application in the Republic of Serbia starting from January 1<sup>st</sup>, 2021. The primary challenge for hotels is to strike a balance between their dedication to delivering exceptional guest experiences and the precision required by IFRS 16. The intricacies of hotel lease agreements, often involving service components that contribute to guest satisfaction, must be accounted for in a manner that maintains transparency and meets financial reporting obligations. The primary emphasis of this paper is on the impact of implementing this standard in the hotel industry, which is recognized as one of the sectors with the highest volume of leased assets. The research sample comprised of 64 entities, specifically 4 and 5-star Serbian hotels, totaling 128 observation units. Data analysis involved conducting statistical tests such as the Kolmogorov-Smirnov test, Shapiro-Wilk test, and Wilcoxon signed-rank test. The findings of the research indicated that the adoption of IFRS 16 had an impact on ROA, EBITDA, percentage Change in Financial Liabilities, and Debt to Equity as main financial performance indicators, before and after the initial adoption of IFRS 16 in the Republic of Serbia. Future work could involve determining the impact of using IFRS 16 on a broader range of financial indicators for selected hotel companies.



## REFERENCES

- A&S Landscape. (2023, September 11). *IFRS 16: A New Lease of Life for School Finances?* <https://www.aandslandscape.co.uk/ifrs-16-a-new-lease-of-life-for-school-finances/>
- Agyei-Boapeah, H., Machokoto, M., Amankwah-Amoah, J., Tunyi, A., & Fosu, S. (2020). IFRS adoption and firm value: African evidence. *Accounting Forum*, 44(3), 238-261. <http://doi.org/10.1080/01559982.2020.1766755>
- Anicic, J., Ceha, M., Anicic, D., Ceha, N., & Nestorovic, O. (2023). High-quality financial reporting in the function of company growth in Serbia. *The European Journal of Applied Economics*, 20(2), 111-130. <https://doi.org/10.5937/ejae20-42729>
- Ashton, R. (1985). Accounting for finance leases: A field test. *Accounting and Business Research*, 15(59), 233-238. <http://doi.org/10.1080/00014788.1985.9729269>
- Barone, E., Birt, J., & Moya, S. (2014). Lease accounting: A review of recent literature. *Accounting in Europe*, 11(1), 35-54. <http://doi.org/10.1080/17449480.2014.903630>
- Beattie, V., Edwards, K., & Goodacre, A. (1998). The impact of constructive operating lease capitalization on key accounting ratios. *Accounting and Business Research*, 28(4), 233-254. <http://doi.org/10.1080/00014788.1998.9728913>
- Bowman, R. (1980). The debt equivalence of leases: An empirical investigation. *Accounting Review*, 55(2), 237-253.
- Brown, P. (2011). International financial reporting standards: What are the benefits? *Accounting and Business Research*, 41(3), 269-285. <http://doi.org/10.1080/00014788.2011.569054>
- Chung, H. (2022). The effects of new accounting standards on firm value: The K-IFRS 1116 lease. *International Journal of Financial Studies*, 10(3), 68. <http://doi.org/10.3390/ijfs10030068>
- Dayag, A., Latosa, J., & Dimatulac, O. (2023). PFRS 16 Compliance: How operating lease capitalization affects financial ratios of selected Philippine public companies. *International Journal of Finance & Banking Studies*, 12(1), 74-84. <http://doi.org/10.20525/ijfbs.v12i1.2634>
- Durocher, S. (2008). Canadian evidence on the constructive capitalisation of operating leases. *Accounting Perspectives*, 7(3), 227-256. <http://doi.org/10.1506/ap.7.3.2>
- EY. (2023, September 10). *The IASB's new lease standard - The impact for lessees 2016*. [https://assets.ey.com/content/dam/ey-sites/ey-com/en\\_gl/topics/accounting/ey-the-iasbs-new-leases-standard.pdf](https://assets.ey.com/content/dam/ey-sites/ey-com/en_gl/topics/accounting/ey-the-iasbs-new-leases-standard.pdf)
- Fitò, M., Moya, S., & Orgaz, N. (2013). Considering the effects of operating lease capitalisation on key financial ratios. *Spanish Journal of Finance and Accounting*, 159(1), 341-368. <https://doi.org/10.1080/02102412.2013.10779750>
- Gligoric, M., Mizdrakovic, V., Mitrasinovic, I., & Boskovic, V. (2019). Audit timeliness and market capitalization: Evidence from an emerging market. *Industrija*, 47(4), 21-45. <https://doi.org/10.5937/industrija47-24095>
- Gligorijevic, Z., & Kostadinovic, I. (2023). Tourism of the Republic of Serbia: Characteristics and strategic goals of development. *International Review*, 1-2, 51-58. <https://doi.org/10.5937/intrev2302059G>
- Goodacre, A. (2003). Operating lease finance in the UK retail sector. *The International Review of Retail, Distribution and Consumer Research*, 13(1), 99-125. <https://doi.org/10.1080/0959396032000065373>
- Grossman, A., & Grossman, S. (2010). Capitalizing lease payments. *The CPA Journal*, 80(5), 6-11. [https://leasingnews.org/PDF/cpa\\_journal510.pdf](https://leasingnews.org/PDF/cpa_journal510.pdf)
- Honny, D., Gamayuni, R., & Putri, W. (2022). The effect of financial performance on firm value after the implementation of PSAK 73 concerning capitalization of leases. *Asian Journal of Economics and Business Management*, 1(3), 257-266. <https://doi.org/10.53402/ajebm.v1i3.239>
- IFRS. (2023, October 15). From IFRS 16 Leases. <https://www.ifrs.org/issued-standards/list-of-standards/ifrs-16-leases/>
- Imhoff, E., Lipe, R., & Wright, D. (1991). Operating leases: Impact of constructive capitalization. *Accounting Horizons*, 5(1), 51-63.
- Jesswein, K. (2009). Analyzing creditworthiness from financial statements in the presence of operating leases. *Academy of Accounting and Financial Studies Journal*, 13(1), 75-90.





- Joubert, M., Garvie, L., & Parle, G. (2017). Implications of the new accounting standard for leases AASB 16 (IFRS 16) with the inclusion of operating leases in the balance sheet. *Journal of New Business Ideas and Trends*, 15(2), 1-11.
- Jovancai Stakic, A., Mizdrakovic, V., & Kljajic, M. (2023). Credit Risk Analysis of Serbian Luxury Hotels: Impact of COVID-19. *Menadzment u hotelijerstvu i turizmu*, 11(2), 75-87. <https://doi.org/10.5937/menhottur2302075J>
- Karwowski, M. (2018). Business model and lease accounting according to IFRS 16. *International Journal of Economics, Business and Management Research*, 2(1), 128-139.
- Kljajic, M., Mizdrakovic, V., Mizdrakovic, M., & Hadrovic Zekic, B. (2023). Balancing hospitality and reporting: analyzing the impact of IFRS 16 in the hotel industry. *FINIZ 2023 - Sustainable development as a measure of modern business success* (pp. 22-29). Belgrade: Singidunum University. <https://doi.org/10.15308/finiz-2023-22-29>
- Lau, C. (2023). The economic consequences of IFRS 16 adoption: The role of gearing restriction in debt covenants. *Journal of Applied Accounting Research*, 24(3), 464-482. <https://doi.org/10.1108/JAAR-08-2021-0208>
- Lemos, K., Monteiro, S., & Oliveira, V. (2023). Explanatory factors of the compliance with IFRS 16 (Leases) disclosure requirements: Evidence from the Portuguese stock market. *The Journal of Globalization, Competitiveness, and Governability*, 17(2), 101-115.
- Liviu-Alexandru, T. (2018). The Advantages that IFRS 16 Brings to the Economic Environment. *“Ovidius” University Annals, Economic Sciences Series*, 18(1), 510-513.
- Maali, B. (2018). The effect of applying the new IFRS 16 “Leases” on financial statements: An empirical analysis on the airline industry in the Middle East. *Organisational Studies and Innovation Review*, 4(1), 1-9.
- Magli, F., Nobolo, A., & Ogliari, M. (2018). The effects on financial leverage and performance: The IFRS 16. *Canadian Center of Science and Education*, 11(8), 76-89. <https://dx.doi.org/10.5539/ibr.v11n8p76>
- Masic, S. (2013). The Performance of the Serbian Hotel Industry. *Singidunum Journal*, 10(2), 24-31. <https://doi.org/10.5937/ejae10-4481>
- Mizdrakovic, V., Stanic, N., Mitic, V., Obradovic, A., Kljajic, M., Obradovic, M., & Stanisic, N. (2020). Empirical data on financial and audit reports of Serbian business entities. *FINIZ 2020 - People in the Center of Process Automation* (pp. 193-198). Belgrade: Singidunum University. <https://doi.org/10.15308/finiz-2020-193-198>
- Morales-Diaz, J., & Zamora-Ramirez, C. (2018a). Effects of IFRS 16 on key financial ratios of Spanish companies. *Studies of Applied Economics*, 36(2), 385-406. <https://doi.org/10.25115/eea.v36i2.2536>
- Nugroho, F., & Gantowati, E. (2023). Effect of the new standard of leasing (PSAK 73 Adopts IFRS 16) on firm value during the COVID-19 pandemic. *International Journal of Professional Business Review*, 8(6), e02455-e02455. <https://doi.org/10.26668/businessreview/2023.v8i6.2455>
- Nuryani, N., Hengb, T. T., & Juliesta, N. (2015). Capitalization of operating lease and its impact on firm's financial ratios. *Social and Behavioral Sciences*, 211(1), 268-276. <https://doi.org/10.1016/j.sbspro.2015.11.034>
- Official Gazette of RS No. 89/2020. (2023, September 5). Regulation on the chart of accounts and the content of accounts in the chart of accounts for other legal entities. <https://www.paragraf.rs/propisi/pravilnik-kontnom-okviru-sadrzini-racuna-kontnom-okviru-druga-pravna-lica.html>
- Ozturk, M., & Sercemeli, M. (2016). Impact of new standard “IFRS 16 Leases” on statement of financial position and key ratios: A case study on an airline company in Turkey. *Business and Economics Research Journal*, 7(4), 143-157. <https://doi.org/10.20409/berj.2016422344>
- Raoli, E. (2021). Transition to the new lease accounting model (IFRS 16) and companies' performance evidence from Italian listed companies. *Academy of Accounting and Financial Studies Journal*, 25(3), 1-18.
- Rihter, J. D., & Conic, N. (2022). *Značajne izmene u računovodstvenom evidentiranju zakupa u skladu sa MSFI 16. Računovodstvena znanja kao činilac ekonomskog i društvenog napretka* (pp. 86-98). Kragujevac: Univerzitet u Kragujevcu, Ekonomski fakultet.
- Ro, B. (1978). The disclosure of Capitalized lease information & the stock prices. *Journal of Accounting Research*, 16(2), 315-340. <https://doi.org/10.2307/2490570>
- Sacarin, M. (2017). IFRS 16 “Leases” – consequences on the financial statements and financial indicators. *Audit Financiar*, 15(1), 114-122. <https://doi.org/10.20869/AUDITF/2017/145/114>



- Schlup, R. (2004). Hotel management agreements: Balancing the interests of owners and operators. *Journal of Retail & Leisure Property*, 3(1), 331-342.
- Singh, A. (2010). Proposed lease accounting changes: Implications for the restaurant and retail industries. *Journal of Hospitality & Tourism Research*, 36(3), 335-365. <https://doi.org/10.1177/1096348010388659>
- Stancheva-Todorova, E., & Velinova-Sokolova, N. (2019). IFRS 16 leases and its impact on the company's financial reporting, financial ratios and performance metrics. *Economic Alternatives*, 1(1), 44-62. [https://www.unwe.bg/uploads/Alternatives/4\\_EA\\_1\\_2019\\_en.pdf](https://www.unwe.bg/uploads/Alternatives/4_EA_1_2019_en.pdf)
- Tai, B. (2013). Constructive capitalization of operating leases in the Hong Kong fast-food industry. *Accounting and Financial Reporting*, 3(1), 128-142.
- Veverkova, A. (2019). IFRS 16 and its impact on the aviation industry. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 67(5), 1369-1377.
- Wong, K., & Joshi, M. (2015). The impact of lease capitalization on financial statements and key ratios: Evidence from Australia. *Australian Accounting, Business and Finance Journal*, 9(3), 27-44. <http://dx.doi.org/10.14453/aabf.v9i3.3>
- Yu, J. (2019). Investigation of IFRS 16 effect on the airlines. *Journal of Finance and Accounting*, 7(5), 132-135.
- Zamora-Ramírez, C., & Morales-Díaz, J. (2018). Effects of IFRS 16 on key financial ratios of Spanish companies. *Studies of Applied Economics*, 36(2), 385-405. <https://doi.org/10.25115/eea.v36i2.2536>



## ISTRAŽIVANJE UTICAJA PRVE PRIMENE MSFI 16 U HOTELSKOJ INDUSTRIJI U SRBIJI

### Rezime:

Efekti primene MSFI 16 u hotelijerstvu, kao jednoj od delatnosti sa najvećim iznosima iznajmljenih sredstava, primarni su fokus ovog rada. Odbor za međunarodne računovodstvene standarde je usvojio Međunarodni standard finansijskog izveštavanja 16 – *Lizing* u januaru 2016. godine, zamenjujući Međunarodni računovodstveni standard 17 – *Lizing*, za izveštavanje koje počinje na dan ili nakon 1. januara 2019. godine. Ažurirana regulativa uvodi nove načine računovodstvenog evidentiranja lizinga kod zakupca i zakupodavca. Uticaj MSFI 16 na izveštajni entitet zavisi od količine postojećih ugovora o operativnom lizingu i razlikuje se u različitim delatnostima. Uzorak istraživanja obuhvata finansijske izveštaje 64 hotela za izveštajne periode 2020-21, ukupno 128 jedinica posmatranja. Analiza podataka je uključivala primenu statističkih testova kao što su Kolmogorov-Smirnov test, Šapiro-Vilkov test i Vilkoksonov test rangiranja. Rezultati istraživanja ukazuju da je pored ostalih posledica, usvajanje MSFI 16 uticalo na finansijske performanse posmatranih hotela i njihovih ključnih stavki finansijskih izveštaja.

### Ključne reči:

finansijsko izveštavanje,  
MSFI,  
MRS,  
lizing,  
zakupac