

APPLIED FINANCIAL METHODS ON THE EXAMPLE OF SELECTED REITS FROM THE S&P500

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Abstract: *This paper builds on the existing paper "The financial performance of selected REITs from S & P500" (Cicmil, Đaković, & Indić, 2022). This paper included four stocks: 1. Public Storage: PSA, 2. Host Hotels & Resorts: HST, 3. Healthpeak Properties: Peak, 4. AIMCO: AIB, and conducted two performance measurement analyses: DPU (dividend distribution by units) and FFO (fund from operations) in order to investigate whether these two ratios gave significantly different results during the Covid 19 crisis. However, this paper deals with further methods of measuring the performance of REITs, namely P/FFO, payout ratio, debt-ebitda and interest coverage. The objective of this paper is to compare these four stocks and their performance to assess which stock has performed the best in the past.*

Keywords: *REITs, financial performance, stock market, operating assets, EBITDA, payout ratio, interest coverage, debt level*

JEL classification: *G11, G12, G24*

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PRIMENJENE FINANSIJSKE METODE NA PRIMERU IZABRANIH REITs IZ S&P 500

Sažetak: Ovaj rad se nadovezuje na već postojeći rad „*The financial performance of selected REITs from S&P500*“ (Cicmil, Đaković, & Indić, 2022). Navedeni rad je obuhvatao četiri akcije i to: 1. Public Storage: PSA, 2. Host Hotels & Resorts: HST, 3. Healthpeak Properties: Peak, 4. AIMCO: AIB, i sprovodio dve analize merenja performansi: DPU (raspodela dividende po jedinici) i FFO (sredstva iz poslovanja) sa ciljem da se istraži da li su ova dva racija dala značajno različite rezultate tokom krize Covid 19. Ovaj rad se međutim bavi daljim metodama merenja performansi REIT-ova i to P/FFO (odnos cene i sredstava iz poslovanja), payout ratio (koeficijent isplate), debt-ebitda (odnos duga i zarada pre kamata, poreza, amortizacije i depresijacije) i interest coverage (pokriće kamata). Cilj ovog rada je da se napravi komparativan pregled navedene četiri akcije i njihovih performansi, sa nastojanjem da se proceni koja akcija je istorijski pokazivala najbolje performance.

Ključne reči: REITs, finansijske performanse, tržište akcija, sredstva iz poslovanja, EBITDA, koeficijent isplate, pokriće kamata, nivo duga

1. INTRODUCTION

REITs originated in the United States and were introduced by Congress in 1960. The first REITs were led as mortgage REITs, as it was not allowed for the same company to own and manage property. This changed with the tax reform of 1986, which allowed for internally managed REITs. They were created to provide opportunities for private investors to invest in real estate who might not have been able to buy their own property. This allowed private investors to purchase real estate directly without owning hundreds of thousands of dollars in their bank account. This gave them the opportunity to diversify their portfolio and convert illiquid assets into liquid assets. Among other benefits, this made REITs a very popular investment class. They led to the creation of a product that combines the best characteristics of real estate and stock investment. The positive effects were twofold: not only did investors have the opportunity to invest in real estate with less capital, but contractors also had a new source of funding (Cicmil, Đaković, & Indić, 2022).

To be identified as a REIT, a company must comply with the provisions of the Internal Revenue Code (IRC). Specifically, a company must meet the following

conditions to qualify as a REIT (Legal Information Institute, 2021):

- Invest at least 75% of total assets in real estate or cash.
- Earn at least 75% of gross income from rents, mortgage interest that finances real estate, or real estate sales.
- Pay at least 90% of taxable income as dividends to shareholders each year.
- Be a subject that is taxable as a corporation.
- Be managed by a board of directors or a trustee.
- Have at least 100 shareholders after the first year of existence.
- Not hold more than 50% of its shares by five or fewer individuals.

The study aims to examine the effect of four different REITs from the S&P500, namely 1. Public Storage: PSA, 2. Host Hotels & Resorts: HST, 3. Healthpeak Properties: Peak, 4. AIMCO: AIB. To this end, an analysis of historical data trends and calculation of the following measures is performed: P/FFO, payout ratio, debt-ebitda and interest coverage.

This study aims to calculate the average values for each stock through the use of the four methods mentioned, which will be used as a benchmark for comparison and decision-making on which stock has performed better or worse compared to the average. The goal is to calculate the average for the industry and determine which stock has produced the best results during the period from 2009 to 2020. Stocks are selected from the S&P 500 to cover the main asset classes in the real estate industry. In addition to these methods, as well as the methods used in the work "The financial performance of selected REITs from S&P500", there are three more significant methods, namely NAV, DDM, and DCF, which will be discussed in one of the next works.

The above refers to the importance and breadth of the REIT sector as well as the range of possible methods, some of which are present in the assessment of any action, while some are closely related and specific only to one sector. The importance is also reflected in the fact that the share of REITs in the S&P 500 increased from 0.2% in 2009 to 2.8% in 2018 (Barwick, 2019). This trend is expected in the coming years, especially in view of market instability.

2. DEFINITION OF USED METHODS

P/FFO can be described as a reliable way of determining the value of a real estate investment fund. It is calculated by adding depreciation and amortization after net income, and then subtracting the gains from the sale of assets (Mause, 2015). Unlike other conventional methods of determining the value of REITs such as EPS (earnings per share) and P/E (price-earnings ratio), FFO is considered the most reliable method for valuing REITs. In most companies,

amortization is an accepted cost that is assigned as part of investment costs. However, in real estate, assets appreciate in value and rarely lose value like other immovable assets such as equipment or machinery. Thus, the P/FFO method represents a replacement for the standard P/E method used in all other cases.

Like any method, P/FFO also has its advantages and disadvantages (Corporate Finance Institute, 2015):

- FFO is a good predictor of REIT value because it adds back the value of amortization to net income.
- FFO eliminates all gains or losses from the sale of assets, as including transactions would lead to discrepancies in the income reported in each period. The company would be represented as too profitable when it made a profit from the sale of real estate in one period, while in other periods, the company would be considered unprofitable when it did not sell any real property.
- P/FFO does not take into account deductions of capital expenditures such as property maintenance. Capital expenditures such as painting rooms and replacing worn-out roofs are important for maintaining high standards in real estate. FFO does not take into account such expenses, and therefore another method has been developed, the adjusted funds from operations (AFFO), which solves the above weaknesses.

The payout ratio (payout ratio) is the percentage of net income that a company pays out as dividends to regular shareholders (Ahern, 2020). For REITs, this percentage must be over 90% of earnings so that REITs do not have to pay taxes. Therefore, the payout ratio, similar to the P/FFO ratio, is calculated based on FFO, or the dividend per share divided by the FFO per share. Based on the height of the payout ratio, companies are divided into two groups:

Companies with a low payout ratio are generally high-growth companies that use the money to invest in other projects or those that do not have a positive cash flow.

The debt-EBITDA ratio shows the level of a company's indebtedness. Since REITs are cost-intensive, a ratio of up to 6 is considered acceptable in practice (Ahern, 2020). A result over this value indicates the possibility of structural problems. It is also necessary to compare with other companies to get a more accurate picture of where the company is in relation to the average. Supplementing this method is the interest coverage ratio method, where a higher amount of this coefficient indicates that the company is more successful

in fulfilling its obligations to banks or other credit institutions. This is particularly important because, as a company with a larger debt, it must be estimated how easily the company can pay its interest expenses. The higher the interest expense, the greater the impact on the company's cash flow.

In this way, the methods are briefly described, the application of which will be described in the next chapter. These methods will be presented through trend analysis. Trend analysis is an analysis of a company's trend by comparing financial statements for market trend analysis or future analysis based on past performance results and represents an attempt to make the best decisions based on the results of the analysis (Cicmil, Đaković, & Indić, 2022). Generally speaking, trend analysis is an analysis method that can be used to predict what will happen with stocks in the future. Trend analysis relies on historical data on stock performance in terms of general market trends and certain market indicators. Therefore, trend analysis will be used for analysis with a focus on the four methods mentioned.

3. RESEARCH METHODOLOGY

Trend analysis involves collecting information from multiple time periods and plotting the collected information on a horizontal line to determine patterns that can be applied based on the given information (Kumar Strivastav, 2021). In the financial world, trend analysis is used for technical analysis and accounting analysis of stocks. There are three different trends: upward trend, downward, and horizontal. The impact of individual REITs - Public Storage, Host Hotels & Resorts, Healthpeak Properties, and AIMCO - is estimated using trend analysis for the period from 2009 to 2020. Generally speaking, trend analysis relies on historical data on stock performance in relation to the overall market trend and certain market indicators.

The following formulas were used:

- Funds from operations (FFO) is calculated using the following formula:

$$\text{FFO} = (\text{Net income} + \text{Depreciation} + \text{Amortization} + \text{Selling Loss}) - \text{Selling Gains} - \text{Interest income} \quad (1)$$

$$\text{Therefore, } P/\text{FFO} \text{ is calculated as: } \frac{P}{\text{FFO}} = \frac{\text{Price}}{\text{FFO}} \quad (2)$$

The payout ratio is calculated using the following formula:

$$\text{Payout ratio} = \frac{\text{Dividend per Share}}{\text{FFO}} \quad (3)$$

Interest coverage is calculated using the following formula:

$$\text{Interest coverage} = -1 * \frac{\text{Operating Income}}{\text{Interest Expenses}} \quad (4)$$

Debt-EBITDA is calculated using the following formula:

$$\text{Debt} - \text{EBITDA} = \frac{\text{Total debt}}{\text{EBITDA}} \quad (5)$$

4. RESEARCH RESULTS

The first selected action is Equity Residential. Equity Residential is a real estate investment fund that is publicly traded and focuses on acquiring, developing, and managing rental apartment buildings in urban and densely populated suburban markets (Commission, 2021), (Cicmil, Đaković, & Indić, 2022).

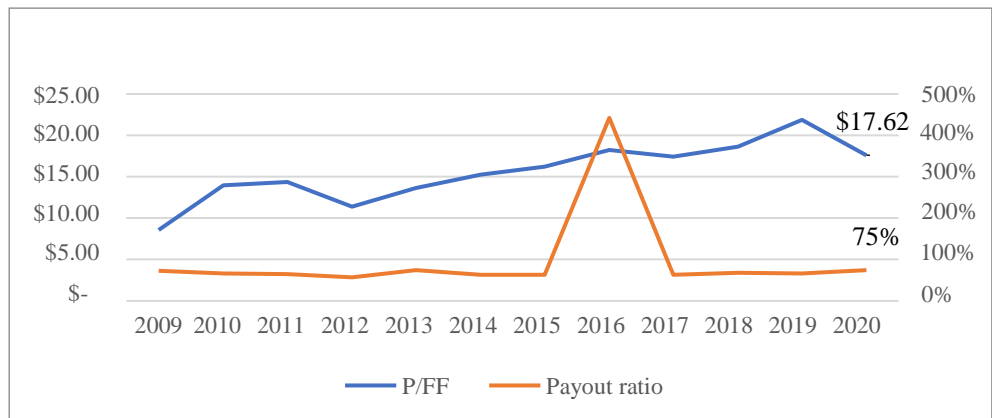


Figure 1. P/FFO & Dividend payout ratio for Equity Residential

Note. Author based on data from the Investing.com platform.

Figure 1 shows the P/FFO and dividend payout ratio for Public Storage for the period from 2009 to 2020. It can be seen that the P/FFO ratio is constantly increasing, indicating stability of the company. Also, the interest coverage ratio has an upward trend which indicates that the company is successful in meeting its obligations. The debt-to-EBITDA ratio with a value of $4.29 < 6$, is another value that indicates a stable company. To get a more accurate picture, it is necessary to compare Equity Residential with other companies in the industry. There are also small changes in value during 2020, but without significant

jumps or drops. Considering it as a separate unit, all parameters indicate that it is a profitable company.

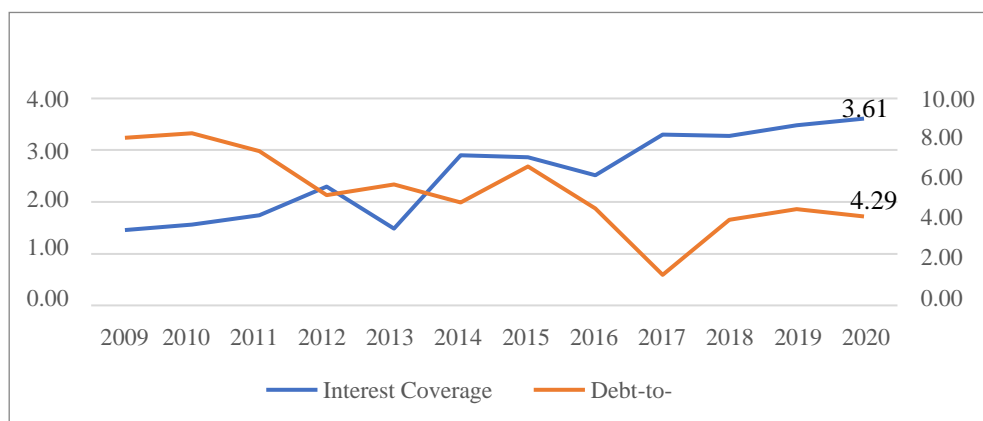


Figure 2. Interest coverage and debt to EBITDA

Note. Author based on data from the Investing.com platform.

Host Hotels & Resorts, Inc. is an American real estate investment fund that invests in hotels. As of February 19, 2021, the company owned 80 luxury hotels with approximately 46,500 rooms in the United States, Brazil and Canada (Cicmil, Đaković, & Indić, 2022).

Figure 3 illustrates the P/FFO and dividend payout ratio for Host Hotels & Resorts. The continuous increase in the dividend payout ratio is noticeable until 2020, after which, as a result of the coronavirus and travel restrictions, both ratios indicate a negative value. Thus, the P/FFO ratio with a value of 10.57 \$ goes into negative value, and no dividends are paid in the given year.

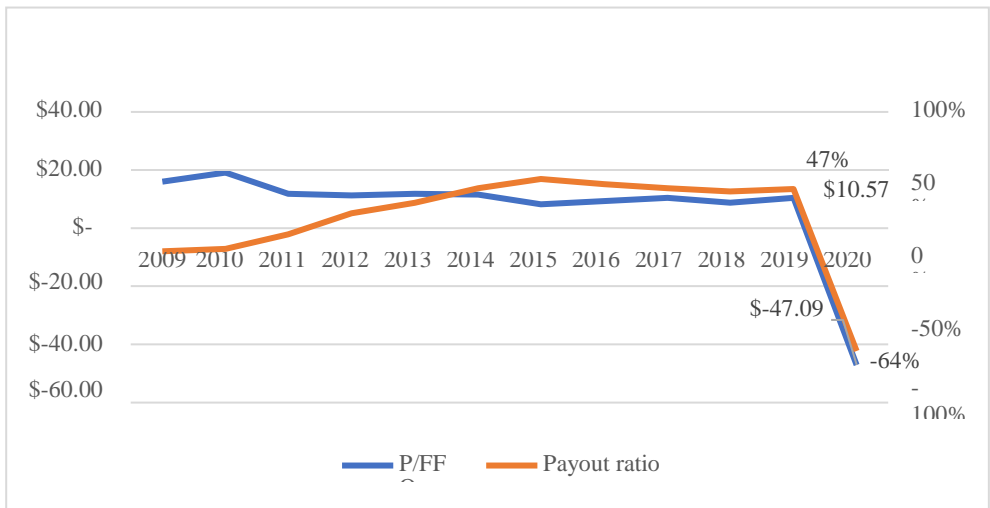


Figure 3. P/FFO & Dividend payout ratio for Host Hotels & Resorts

Note. Author based on data from the Investing.com platform.

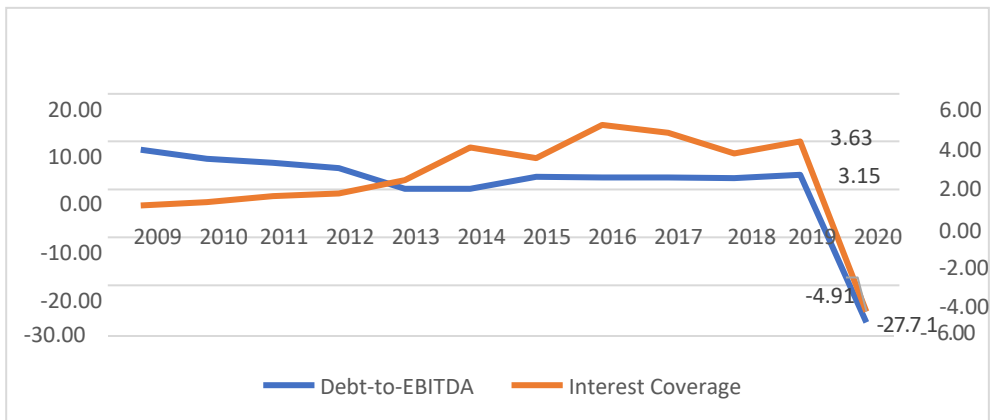


Figure 4. Interest Coverage and Debt to EBITDA

Note. Author based on data from the Investing.com platform.

Diagram 4 shows the same results but depicted through different ratios. With negative values in 2020, the company failed to settle its obligations as the revenues were negative.

Healthpeak Properties, Inc. is a real estate investment trust that invests in real estate related to the healthcare industry, including senior housing and medical offices (Commission, 2021).

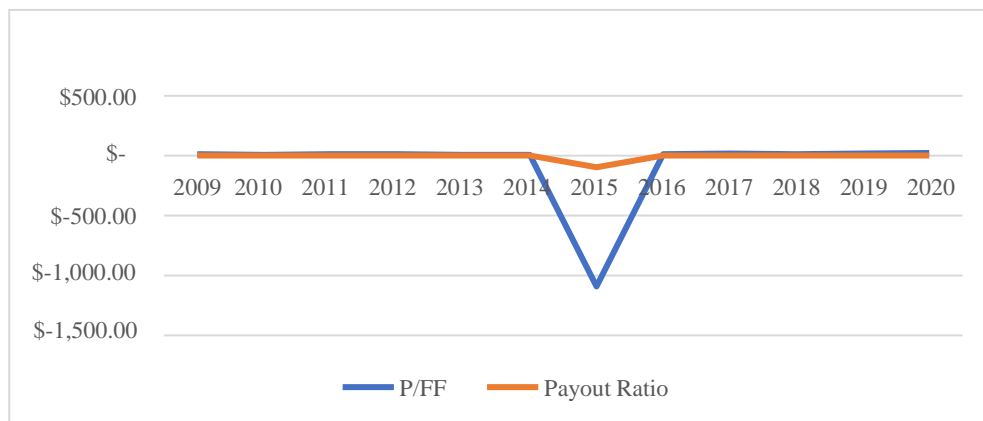


Figure 5. P/FFO & Dividend payout ratio for Healthpeak Properties

Note. Author based on data from the Investing.com platform.

Figure 5 illustrates the trend of P/FFO ratio and dividend payout ratio. The diagram shows structural problems with the company in 2015, when the P/FFO ratio had a negative value, as shown in Diagram 6, that the company had a large growth in debt relative to earnings before interest, taxes, depreciation and amortization, or a large drop in earnings. The cause should be further investigated in the company's financial reports. After recovery in 2016, all ratios return to their standard average values, at the level of those in 2014, which can be concluded that the company was able to overcome the problems in 2015. Public Storage is an American international self-storage company headquartered in Glendale, California, which operates as a real estate investment trust (REIT) (REIT) (Commission, 2021).

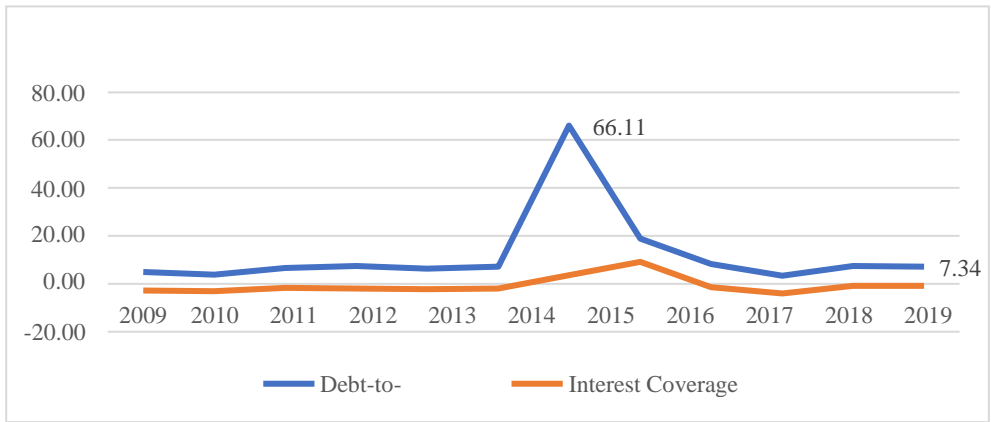


Figure 6. Interest Coverage and Debt to EBITA

Note. Author based on data from the Investing.com platform.

Figure 7 shows a stable increase in P/FFO ratio, as well as a continuous payout of dividends throughout all years.

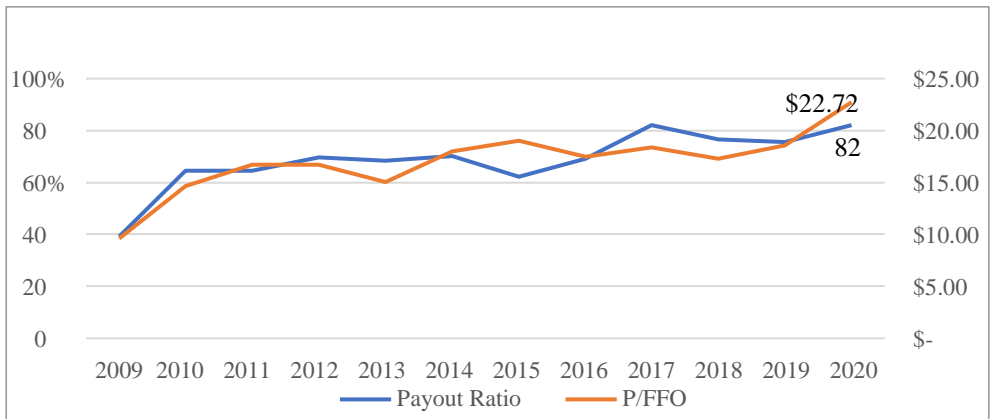


Figure 7. P/FFO & Dividend payout ratio for Public storage

Note. Author based on data from the Investing.com platform.

Figure 8 shows an increase in debt over the years with a maximum value in 2020 and a minimum value in 2014. Both values are below 6, which is

considered a benchmark for comparison in the real estate world. The interest payment throughout all years is high and positive, indicating that the company does not have problems paying its obligations to creditors and other institutions.

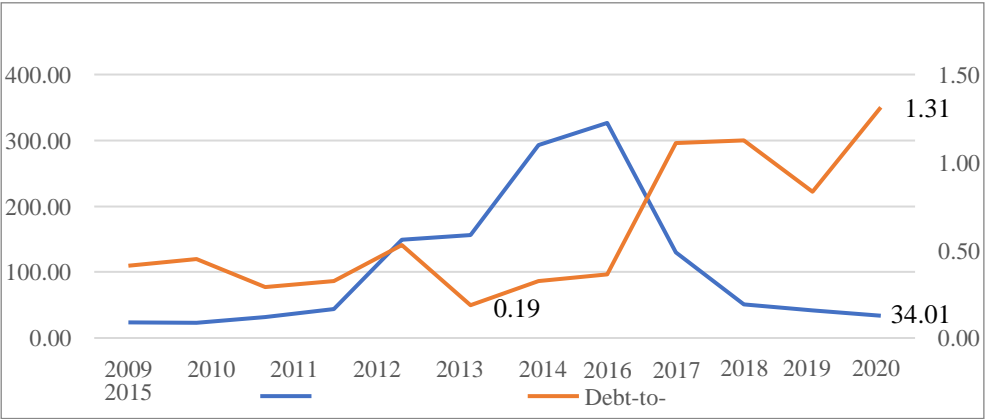


Figure 8. Interest Coverage and Debt to EBITDA

Note. Author based on data from the Investing.com platform.

Before comparing all four stocks with one another, it is necessary to explain the following two items:

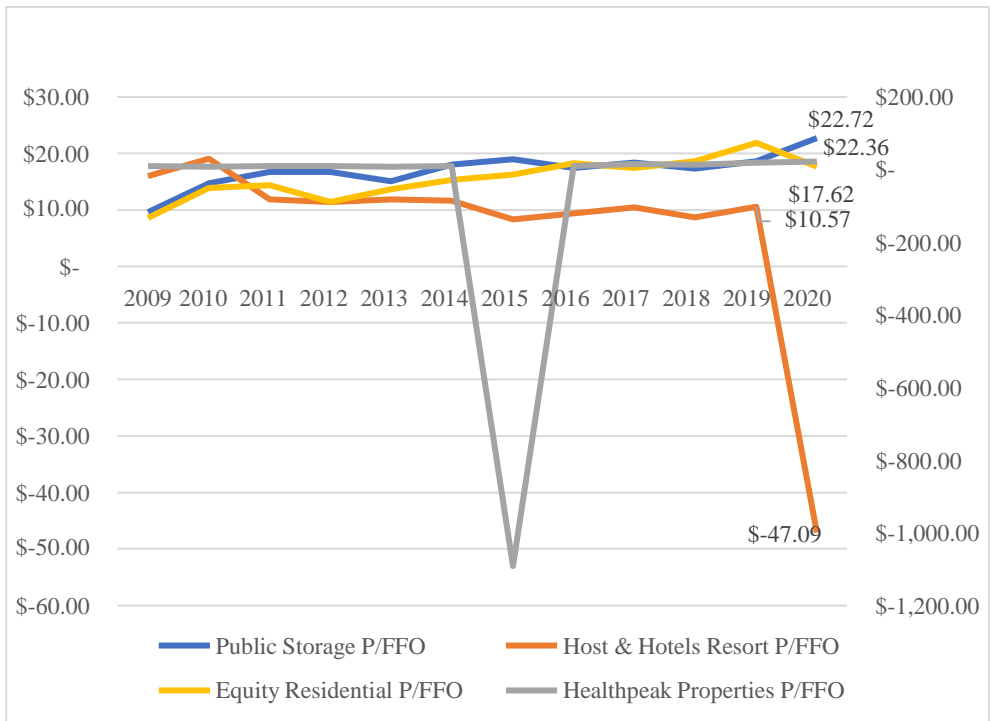


Figure 9. P/FFO for all four stocks

Note. Author based on data from the Investing.com platform.

Figures 9 and 10 show a comparative analysis between stocks. Figure 9 shows that the P/FFO ratio for the entire sector ranges between 10 and 20 dollars per share, with the exception that Host & Hotels Resort suffered a large loss in 2020, which strongly affected this ratio. By looking at this indicator, we can say that the other three stocks have stable business operations. Also, Healthpeak Properties had a negative value of this indicator in 2015, which indicates a possible instability of this company.

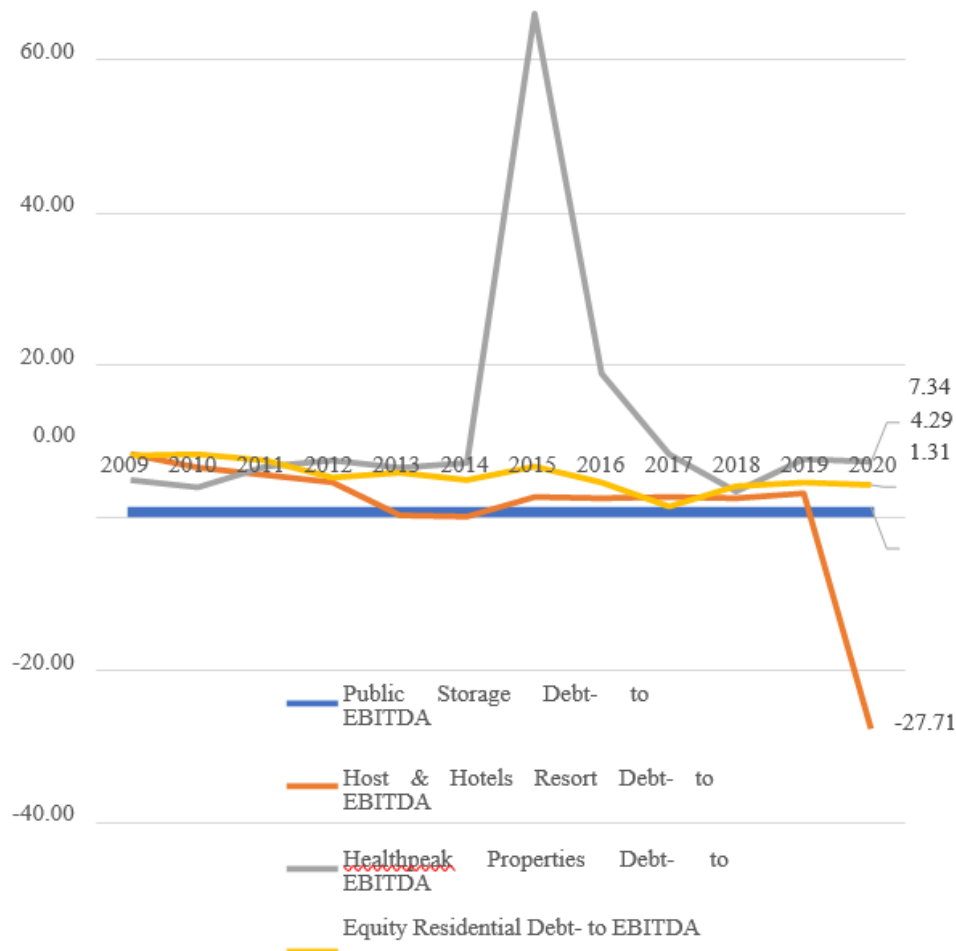


Figure 10. Debt-to EBITDA for all four stocks

Note. Author based on data from the Investing.com platform.

Figure 10 shows similar results to figure 9, with Host & Hotels Resort as losers in 2020 and Healthpeak Properties as the worst in terms of debt and earnings. Therefore, as previously shown in the diagram, the most stable stocks are those of Public Storage, with a low level of debt and Equity Residential, with a P/FFO ratio of 22.72\$ and 17.62\$ per share.

5. CONCLUSION

The work deals with the topic of studying the evaluation of REITs using various methods. The goal of the work is to determine which sector of REITs represented by individual stocks is the most stable during the period from 2009 to 2020. A total of five methods were covered, focusing on the price of REITs, operating funds, as well as debt and debt repayment capabilities.

The results showed that the storage sector represented by the Public Storage stock was the most stable and resistant to market events, resulting in a continuous growth of the P/FFO ratio, and successfully maintaining a low level of debt and meeting its obligations to creditors throughout all the years. After the storage sector, the residential real estate sector is similar, with similar movements of all ratios as in the storage sector. The health sector can also be characterized as a more stable but significantly more indebted sector or stock. The hotel sector was shown to be the least stable and secure, even leading to the downfall of the image of REITs as a safe source of dividends.

For further research, it is possible to include more stocks from one sector, thereby avoiding the possibility of choosing the wrong company, as well as including the years thereafter, especially 2022, which was a turning point leading to an increase in interest rates. It would be interesting to see how REITs reacted to the increase in interest rates and whether properties in the portfolio lost value.

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