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Overcoming Borders: a Financial Analysis of Tourism Sector in Italy

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Abstract

Tourism is one of the economic sectors most involved in the movement of people and capital between countries. The analysis is focused on firms that offer accommodation services and, in particular, hotel companies and groups. In the last decade, these realities have hardly suffered from the effects of the economic crisis, aggravated by the overcapacity of national and international supply, and the power of online portals. This research aims to analyze and interpret the financial and economic conditions of this industry, in order to identify the potential entrepreneurial responses able to encourage the return to prosperity. The current results recorded by the sector is affected both by unfavorable conditions of specific competitive factors linked to demand and supply of accommodation services, and by constraints imposed by financial institutions and credit markets. For these reasons, the research aims to deepen the analysis of the relationship between hotels and banks, verifying the correlated impact on firms' performance. The study is based on the use of advanced financial statement analysis techniques, for measuring the main economic ratios and financial flows, and the application of logistic regression models for determining the relationships between variables. The data for the empirical analysis are taken from the Bureau Van Dijk's Aida database and refer to the years 2013-2015. The sample is made up of over 12,000 Italian companies. In this country, tourism is one of the economic sectors with the greatest strategic importance (it contributes to over 10% of national GDP). The sector is characterized by a high degree of fragmentation and the widespread presence of family businesses: about half of the sample has a turnover of less than 500,000 EUR. Alongside these realities, large international groups are active in the hospitality market, especially in the big cities, destinations of both art and business tourism. The competition with the large cross-border hotels' chains emphasizes the importance of access to credit conditions for small to medium businesses. In fact, for SMEs, the actual opportunities to access bank loans at sustainable prices are critical issues for an effective competition with foreign investments. Therefore, starting from the financial and income statements of the hotels included in the sample, the purpose of the research is primarily to provide a critical analysis of the latest developments of this industry in Italy, through the measurement of the key performance indicators. After the application of financial statement analysis techniques, the study aims to verify the relationships between the hotels performances with the borrowing costs (average interest rate applied by banks over time) and the levels of banks' debts. The analysis is based on regression models, which aim to understand the correlations between the bank-firm relationship and the level of economic and financial results achieved. The final objective is to check the nature and the weight of the financial variables in conditioning business performances. The contribution that the work is intended to provide to literature and operating procedures is related to a better and updated knowledge of the hotel industry, as well as the identification of potential evolution in the financial structures of hotel companies. Finance has to be no longer a constraint to business development, but a support for the creation of value, even for small family firms

Keywords: Tourism industry, hotels, access to credit, profitability, financial equilibrium, economic risk, SMEs

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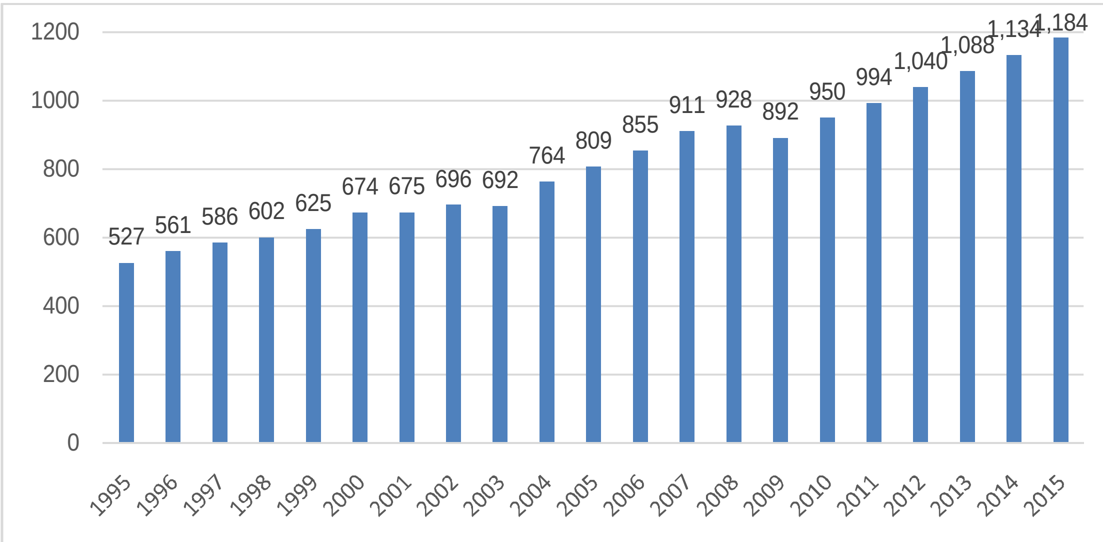
1. Introduction

Tourism is one of the economic sectors most involved in the movement of people and capital between countries.Tourist flows are often cross-border; in addition, investments made by tourism enterprises increasingly cross national boundaries. Cross-border tourism has seen continuous and progressive growth on a global scale, as shown by data on international tourists given in Figure 1. Overall, in the two decades between 1995 and 2015, international travelers more than doubled, from 527 to 1,184 million per year.

Figure 1: World tourism international arrivals (in millions).



Source: World Tourism Organization (2016.a), p.15.

Italy in particular is the fifth-most visited destination in international world tourism and thethird-most in Europe, with over 50 million arrivals in 2015. As shown by World Tourism Organization data (2016.b, p.6), Italy is preceded in the ranking only by France (84.5 million arrivals), the US (77.5), Spain (68.5) and China (56.9). In the three-year period 2013-2015, international tourist arrivals in Italy increased by over 9%, bringing annual income from these flows to over €35 billion. After deducting costs of travel abroad by Italians, the country's balance of payments for tourism has registered a surplus of €13 billion over the last few years, as shown in Table 1. Overall, the last few years have seen an increase in income from foreign tourists which exceeds the growing expenditures of Italians travelling abroad.

Table 1: Tourism Balance of Payments for Italy[4]; absolute values at current prices (in millions of Euros).

Years	Revenue	Expenditure	Balance
2011	30,891	20,583	10,308
2012	32,056	20,512	11,544
2013	33,064	20,309	12,755
2014	34,240	21,713	12,527
2015	35,556	22,012	13,544
2016	36,359	22,547	13,812

Source: Bank of Italy (www.bancaditalia.it)

Income from both national and international travelersis mainly received by facilitiesprovidingaccommodation services for visitors. With regard tothe tourism sector, our analysis is focused on businesses that offer accommodation services, hotel companies and groups in particular.

[4] With regard to receipts, the Tourism Balance of Payments measures the value of goods and services acquired by non-residents during their stay in Italy. With regard to expenditure, it measures the value of goods and services acquired by Italian residents during their stay abroad.

In spite of the overall increase in tourist flows, in the last decade these businesses have had to face significant challenges linked to growing domestic and international competition as well as to the disruptive influence of online websites, which have the ability to profoundly affecthow accommodation services are offered. Recent data regarding the sector show the impact of both specific competitive factors linked to supply and demand and of constraints imposed by financial institutions and credit markets. For these reasons, research today aims to deepen the analysis of the relationship between hotels and banks by verifying the financial and economic conditions of the accommodation service industry. In the second section of this article, we provide an overview of the hotel industry with the aim of analyzing the main tendencies of this sector, both in Italy and internationally. The third section will present a review of the literature that analyzes industry performance, with the intention of bringing together the various strands of this research. The fourth section describes the reference sample of the analysis conducted as well as the research methodology used. The fifth section presents the main results of this analysis, while the sixth offers some concluding reflections and suggestions for further research.

2. Overview of the hotel sector

Over the last few years, the hotel industry has faced important challenges, which have called into question the stability and profitability of certain companies, but which have at the same time offered significant development opportunities to more competitive ones.

On a global level, it is possible to ascertain the main tendencies of the sector:

1) Growing competition from the non-hotel sector. Over time, the types of accommodation on offer have gradually expanded, exacerbating competition with respect to the hotel sector: these new types range from bed and breakfasts to rural tourism, from sailing boats to cruise ships, from the various proposals for vacation homes to the commercialization of private apartments through the Internet. An analysis of the competition of these other kinds of accommodation–which we can refer to as the non-hotel sector–from a temporal perspective reveals that during the 1970's and 80'sopen-air accommodation facilities, such as camping grounds and tourist resorts, began to play a significant role. The 1990's saw the development of rural tourism, while in the first years of the new millennium it was the turn of bed and breakfasts. Finally, with the advent of Airbnb, a new element was introduced in which the commercialization of accommodation facilities based on renting private apartmentsthrough the Internet follows the logic of the sharing economy.
2) Financialization of the tourism industry.Large multinational financial groups or other kinds of institutional investors, such as pension or investment funds, has increased their involvement in the fields of tourism and leisure with the acquisition of large hotel complexes. This process has furthered the separation of ownership and management of these properties. Management in fact is often entrusted toanother financial group, which in turn confers day-to-day operations to specialized companies. We increasingly find three entities involved in large hotels: the property owner, the property manager and, at the lowest level, the operations manager.
3) Concentration of the sector. Between 2012 and 2017, the global market of hotel chains and groups has seen important acquisitions and mergers. In the past, the structure of this market was substantially stable, with changes brought only by some Chinesegroups. In the last few years, however, large-scale acquisitions and mergers have caused significant changes in the structure of the global market.
4) Intensive development of websites and digital applications for reservations and reviews. This factor has brought significant changes to the competitive landscape, to the nature of demand and to pricing structure. Hotels have not only been victims of these developments but have also actively contributed to the digitalization of the sector.Indeed they have modified their own models of publicizing and promoting their offerings and have also begun looking for new sets of qualifications in the staff they hire.

A specific analysis of the Italian context reveals some of these same principal trends observable on a global level. Although the strength of local family groups still persists in Italy, there has been a significant increase in the number of facilities that belong to international groups and chains. In particular, the strategies of management contracts and franchising have gained traction, especially at the lower end of the chain (see, for example, the hotel groups Four Seasons, Best Western or Choice Hotels International).Separation of ownership from management is thus on the rise, in line with international developments.

Overall, the Italian accommodation industry exerts a strong attraction on large investors and international chains, even within a more traditional context characterized byfamily-managed facilities that are spread over the country.

To meet the overall demand for accommodation, in 2015 Italy boasted about 30,000 hotel companies, in addition to 135,000 non-hotel firms, for a total of almost five million beds. Of these, more than two million are offered by hotels, subdivided into the different quality categories shown in Table 2. In 2015, about 85 million tourists were registered at Italian hotels. If we count total days spent at these accommodation facilities, we reach a figure of 245 million tourists a year, that is, an average stay of almost three days.

Table 2: Hotel companies divided by category: capacity, occupancy, average length of stay; Italy, 2015.

Type of hotel	Number of establishments	Beds	Arrivals	Nights spent	Average length of stay (days)
5-star & 5-star deluxe hotels	442	70,735	3,470,748	10,558,479	3.04
4-star hotels	5,609	755,629	41,858,772	109,648,235	2.62
3-star hotels	15,355	957,580	34,251,820	104,854,488	3.06
2-star hotels	6,014	191,933	4,812,526	15,111,833	3.14
1-star hotels	2,959	68,830	1,431,525	4,267,496	2.98
Total	30,379	2,044,707	85,825,391	244,440,531	2.85

Source: Istat (http://dati.istat.it).

In recent years, the total number of beds offered by hotels has been more or less stable. By contrast, considerable changes have occurred in the composition of the quality categories. These developments withregard to hotel category are in line with the trends of financialization and concentration of the sector, discussed above. Over the last few years, in fact, the five-star ranking has grown significantly (with increases of 7.8% in the number of companies and of 9.0% inthe number of beds). The four-star categoryhas seen similar growth.On the other hand, there has been a marked decline for one-star (-8.2% in the number of companies and -8.0% in the number of beds) and two-star hotels. Demand for higher categories comes especially from foreign tourists, as shown in Table 3, which gives data on arrivals and nightsspent by category, as well asproviding both overall figures and those regarding only foreign tourists.

Table 3: % variation of arrivals and nights spent recorded in 2013-15, both total and by nationality of origin.

Type of hotel	Italy		Foreign countries		All countries	
	Arrivals	Nights spent	Arrivals	Nights spent	Arrivals	Nights spent
5-star & 5-star deluxe hotels	6.0	3.7	21.8	19.0	16.9	14.6
4-star hotels	11.7	9.2	14.4	9.0	13.2	9.1
3-star hotels	6.5	3.1	-0.2	-4.1	3.7	-0.1
2-star hotels	-5.9	-9.5	-9.0	13.9	-7.2	-11.4
1-star hotels	-9.0	-13.9	-17	-23	-12.6	-17.9
Total	7,5	3,9	7,6	2,5	7,5	3,2

Source: Istat (http://dati.istat.it).

The analyses that follow aim to assess how these trends have affected the financial performance of hotels and the related choices regardingindebtedness.

3. Review of the literature

International literature on hotel company performance has above all sought to single out the factors that are best able to explain and interpret the economic and financial results achieved by this particular sector. The state of the health of hotel companiescan in fact be measured by specific indices and margins, which are able to isolate particular features of this sector. As an example, several authors have pointed out that caution is needed in analyzing the profitability of hotels when using more traditional analytic tools and that it is important to accompany these with other specific measurements.

Such as the rate of occupancy and revenue per each available room (Wiklund and Shepherd, 2005; Kim, 2006; Lee and Kim, 2009). In the analysis of hotel performance, furthermore, some authors emphasize the effectiveness and reliability of subjective measurements recorded by the hotelsthemselves, which are to be combined with observed objective ones (Dess and Robinson, 1984; Stam et al., 2014).

Another strand of the literature,by contrast, focuses on the effects produced by specific factors on hotel company performance. One factor that has been analyzedis that of size, which has often been studied using total balance sheet assets or total revenues as a proxy[5] (Claver-Cortés et al., 2007; Kim et al., 2013b; Pine and Phillips, 2005). According to results obtained from several studies, size seems to have a positive effect not so much on profitability as on the containment of risk (Ben-Zion and Shalit, 1975; Hardwick, 1997; Chen, 2015): a larger size may enable hotels to react more swiftly to changes and external factors, particularly relevant in the case of the tourism sector (Sullivan, 1978; Wyn, 1998). Size may also allow companies to efficiently diversify their services (Titman and Wessels, 1988) and enable them to better withstand economic, social and political shock (Sullivan, 1978; Singh, 2009). Large hotels, however, sometimes suffer from an excessive burden of costs, which might only in part be offset by economies of scale.

Barros et al. (2010) show that, in addition to size, position in the classification of quality categories (the star system) may help explain the variability in performance observed in different types of accommodation facilities. Furthermore, inefficiency appears to be much greater when star rankingis not taken into consideration. This system, indeed, includes a series of minimum requirements for each category, which reflect the technological make-up used in production and in the resulting levels and structures of costs and revenues. International literature further looks at the impact of specific types of investments made by hotel companies, which are able to have an effect on their economic and financial equilibria. First of all, given the importance of human capital in the sector under investigation, the literature has focused on the impact of investments in Human Resource Management tools (Ružić, 2015). The aim here is to assess which measures regarding personnel are able to best improvethe effort, skills, attitudes and behaviors of employees and the possible indirect effectsthat these have on hotel company performance. Other studies have by contrast examined the impact of the leadership styles of senior managers (Schiff and Hoffman, 1996; Patiar and Wang, 2016).Chi and Gursoy (2009) suggest that employee satisfaction, as well as customer satisfaction, indirectly influences financial performance.

More generally, several studies have analyzed the relationship between corporate social responsibility and the economic results achieved by hotels, pointing out that the inclusion of sustainability–with respect to social relations, the environment and governance–as a performance factor may provide interesting opportunities for these companies (Johnson and Kaplan, 1991; Sainaghi, 2010; Leea et al., 2013; Leea et al, 2014). The literature has also looked at the effects of advertising costs on hotel profitability as well asat the conditions of risk and yield from stocks for those hotel companies listed on stock exchanges (Chen, 2015). An additional factor that has been analyzed is that of external connections and partnerships made by hotels (Leana and Pil, 2006; Dai et al., 2015). Indeed many hotels are increasingly involved in the creation of service bundles, offering tourist packages based on an “all-in-one” experience (Maggioni et al., 2014). This tendency has caused hotels to widen the range of their commercial partners to include small- and medium-sized businesses of the local tourism sector, such as organizers of tourist attractions, restaurants and conference centers.In this way external social capital is developed (Rao, 1994), capable of positively affecting the economic results achieved by hotels (Khoury et al., 2013; Hsu et al., 2014; Zimmerman andZeitz, 2002). Other authors have analyzed the relation between company economic performance and other relevant factors, such as the seasonal nature of some businesses, quality standards or ownership forms (Assaf et al., 2012; Bernini and Guizzardi, 2015). A final strand of the literature on hotel performance has investigated the capital structure and financial behavior of hotel companies (Andrew, 1993; Sheel, 1994). Several authors have tested the validity of pecking order and trade-off theories in the context of hotels (Elgonemy, 2002; Devesa and Esteban, 2011; Lee and Qu, 2011; Tsai et al., 2011; Hua et al., 2012; Serrasqueiroa and Nunesa, 2014). These studies, however, have not reached common conclusions with regard to optimal capital structure in this sector.

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[5]Many general financial economics studies use total assets as a proxy for a company’s size, but considering that franchising, a widely adopted growth strategy in the tourism industry, is increasing, total revenues that include franchise fees should more accurately reflect the size of a hotelcompany than total assets.

Overall, it was shown that hotel companies have recourse to debt according to their financial needs, following a hierarchical order in the selection of sources of financing. At the same time, though, these companies aim to keep real debt level at anideal proportion, taking into account relative economic benefits (Özer and Yamak, 2000; UpnejaandDalbor, 2001; Dalbor and Upneja, 2004; Tang and Jang, 2007; Sharma, 2007; Jang et al., 2008; Karadeniz et al., 2009).

From the point of view of financial structure, and specifically of the bank-company relationship, the literature generally shows that two factors in particular influence the financial behavior of hotels. First of all, the hospitality sector is capital-intensive and therefore characterized by a high level of fixed costs. This factor can significantly heighten risk for companies, thereby increasing the volatility of operating margins. In general, uncertainty of demand, combined with high fixed costs, means very high potential operational risk for hotels. All other factors being equal, therefore, companies in the hotel sector encounter major difficulties in obtaining external financing in the form of debt securities. At the same time, however, the capital-intensive nature of these companies allows them to offer large values of fixed capital as collateral to financial companies, providing them with the opportunity of recuperating debt in case of default of the hotel. In other words, high operational risk generally means an increased probability of default for hotels, as is calculated by bank rating models. At the same time, the availability of guarantees leads to a reduction of loss in case of insolvency of the hotel company, therefore mitigating the overall credit risk for the bank. Given these tendencies indicated in the literature, the present study aims to analyze the factors that can influence the financial behavior of hotel companies and their relationships with banks. In particular, this work intends to test the validity of the following hypotheses:

H1: Greater size of hotels contributes to increased recourse to debt
H2: Greater profitability of hotels contributes to greater recourse to debt

The research therefore aims to provide two main contributions to the relevant literature.First of all, analysis of financial performance is not limited to those large companies listed on stock exchanges, but also includes smaller hotels. In addition, this study will specifically focus on the Italian context, and will further be attentive to disparitieswithin different areas of this country. Numerous investigations of hotel companies are concentrated on a specific geographical context in order to examine the social and financial particularities that characterize it. Nonetheless, studies which focus on Italy have not made much of a contribution to the international literature, in spite of the factthat tourism is one of this country'smost strategic economic sectors, accounting for over 10% of national GDP.

4. Data and methodology

The analysis developed in this chapter is based on the balance sheet data of over 12,000 Italian hotels during the three-year period 2013-2015. The sample represents the totality of hotels recorded in the Bureau Van Dijk's Aida database. Compared with the total amount of structures recorded by Istat, the sample analysed represents almost 40% of the universe, peaking at over 60% in certain areas of the territory, as shown in Table 4.

Table 4: Sample and universe structure broken down by territorial area.

Areas	Sample	Istat Universe	Sample	Istat Universe	Representativeness of sample compared with Istat Universe; Line %
	Number of businesses		Column %		
North-West	2,663	6,213	21.9	18.7	42.8
North-East	2,157	13,703	17.7	41.3	15.7
Centre	3,275	6,366	26.9	19.2	51.4
South	2,671	4,689	22.0	14.1	57.0
Islands	1,399	2,228	11.5	6.7	62.8
Overall total	12,166	33,199	100.0	100.0	36.6

This paper presents the results of an analysis of the balance sheets of the companies included in the sample, through calculation and interpretation of the main margins and ratios, with an in-depth examination of financial analyses. In particular, our aim is to verify the companies' ability to meet their commitments, with a balanced structure between equity capital and borrowed capital, the achievement of a satisfactory level of self-financing and the production of an adequate income to remunerate debt capital.

With regard to the calculated indexes, both the arithmetic mean for the three years taken into consideration and the median value of the sample were analysed. Since hotel companies are generally very heterogeneous, it was thought useful to consider the two mean and median values jointly so as to obtain useful information on the actual distribution of the companies examined for the different indicators analysed. To facilitate interpretation of the results, the businesses in the sample were divided into classes, based on their level of turnover for 2015.

In this way, it was possible to analyse the trend of indicators for the different market segments and to verify the impact of size on the performances of individual companies. Table 5 shows the number of hotels included in the sample, divided into turnover size classes. Table 6 shows the average number of employees per class and relative performance in the three-years under study. The table reveals a high positive correlation between number of employees and turnover, confirming the effectiveness of the data on revenue from sales and services as a proxy variable to distinguish hotels based on their size class.

Table 5: Number of hotel companies by class of turnover for 2015.

Turnover (thousands of €)	Number of hotels
n.d.	3,063
0-250	3,349
250-500	1,449
500-750	1,056
750-1000	686
1000-1500	870
1500-2000	460
2000-2500	294
2500-4000	438
4000-6000	233
6000-8000	84
8000-15000	98
Over 15000	86
Total	**12,166**

Source: our processing of Bureau Van Dijk Aida data

Table 6: Average number of employees by class of turnover;2013-2015.

Turnover (thousands of €)	Mean value 2013	Mean value 2014	Mean value 2015	Variation 2013-2014	Variation 2014-2015
0-250	2.6	2.1	1.7	-19.23%	-19.05%
250-500	5.6	5.4	5.7	-3.57%	5.56%
500-750	8.1	8.1	8.2	0.00%	1.23%
750-1000	10.6	11.3	10.5	6.60%	-7.08%
1000-1500	13.3	12.8	13.8	-3.76%	7.81%
1500-2000	16.0	16.2	16.4	1.25%	1.23%
2000-2500	20.3	19.8	20.3	-2.46%	2.53%
2500-4000	25.9	26.9	27.8	3.86%	3.35%
4000-6000	36.4	35.7	39.0	-1.92%	9.24%
6000-8000	57.0	53.0	52.7	-7.02%	-0.57%
8000-15000	61.0	61.3	68.4	0.49%	11.58%
Over 15000	230.1	235.1	243.2	2.17%	3.45%
Total	**11.2**	**11.2**	**12.0**	**0.00%**	**7.14%**

Source: our processing of Bureau Van Dijk Aida data

After analysing the main financial indicators, the analysis continues by verifying the relationships between the financial performances of hotel companies and their relative conditions of profitability.

In particular, after providing the main descriptive statistics and an analysis of the correlations between pairs of variables, a multi-index regression equation is submitted to verification, where the level of indebtedness of a company represents the dependent variable and various size and economic indicators the independent variables. The following formula shows the regression equation used in the analysis:

$$\frac{\text{Debt}}{\text{equity}} = \propto \; + \beta_1 \text{ROE} \; + \beta_2 \text{ Cost of money} + \; \beta_3 \text{ROA} + \beta_4 \text{ ROS} + \; \varepsilon$$

The dependent variable is the debt ratio. It provides information on the proportion between recourse to third party financing (debts) and equity capital to finance business activities. The first index in the equation is ROE (Return On Equity), which expresses the overall profitability of equity capital, obtained from the ratio between the final net economic result for a given year and the company's net equity. The second independent variable is represented by the mean cost of money. It is the ratio between the overall amount of financial charges sustained by each hotel and total relative short and medium-long term debts due to banks. The third indicator in the equation is the ROA (Return On Assets), It is the ratio between operating income, derived from the core activity of hotel companies, and total capital invested in the company (Total assets in balance sheet). For a better interpretation of the results produced by core management, the ROS (Return on Sales), which expresses the revenue from sales made by hotels, has also been included. In other words, by calculating the ratio between operating result and net revenues, it is possible to examine the share of profits that remains after covering the costs of core management.

5. Mainresults

Before calculating balance sheet indicators, we analysed, with absolute values, the main sources of financing adopted by hotel companies to cover their finance requirements for investments, distinguishing net worth and net financial position (the sum of all debts of a financial nature due to banks and other lenders, net of liquidity). The mean net worth is high and on the increase in the three year period under review. Considering that total investments on average amount to around 4 million, the presence of a mean net worth of almost 1.5 million indicates a remarkably good level of overall capitalisation. Nevertheless, analysis of the median shows that the net worth of the majority of hotels is significantly lower, equivalent to approximately only 100,000 EUR. Numerous hotel companies are therefore characterised by a low level of capitalisation, due either to their recent set-up and/or to the modest amount of equity capital paid by shareholders. The trend of the level of capitalisation is correlated to the amount of net profits earned by the different segments analysed. The growth of net worth is attributable mainly to setting aside profits as a reserve.
The net financial position also shows very different results in terms of mean and median. The mean indebtedness of hotel companies' amounts to 1.3 million EUR, but over half the businesses analysed have financial debts, net of cash and cash equivalents, amounting to just over 60,000 EUR. All the segments examined, with the sole exception of hotels with a turnover of between 4 and 6 million EUR, showed a reduction in their net financial position for the last year, with an improvement in absolute levels of indebtedness. Table 7 shows the main descriptive statistics of balance sheet data considered significant for the analyses performed.

Table 7: Descriptive statistics of balance sheet data in absolute values; 2015 (Thousands of Euros).

	Operating cash flows	Sales revenues	Net profit	Total Assets	Net financial position	EBITDA
Mean	124.8937	1284.876	-11.1095	4044.81	1236.424	188.9208
Standard error	10.65308	52.71002	8.857446	196.5474	111.2188	10.63934
Median	27.375	451.844	0.598	962.64	60.681	44.427
Mode	0	0	0	2236.19	0	0
Standard deviation	1016.407	5029.044	845.0858	18752.52	9399.8	1015.095
Sample variance	1033083	25291285	714169.9	352000000	88356244	1030419
Kurtosis	1671.034	1028.76	703.0447	705.9567	3010.763	1411.758
Asymmetry	30.8071	25.7072	1.505397	22.96532	47.32866	30.35637
Interval	81557.32	261830	60988.12	725044.3	683358.9	61059.38
Minimum	-20679.3	0	-30129.4	0.001	-45561.2	-5371.38
Maximum	60878	261830	30858.69	725044.3	637797.7	55688

Source: Our processing of Bureau Van Dijk Aida data.

To assess more exactly the trend of indebtedness of hotel companies, a calculation has been made of the most significant balance sheet indicators. The first indicator analysed is the debt ratio, also known as leverage, which derives from the ratio between total capital invested in the business (total balance sheet assets) and net worth. It shows the level of cover of investments in assets guaranteed by the company's own resources. In the hotel companies in the sample, the debt ratio is on average very high and on the increase. On average, therefore, in recent years total investments have grown more than the increase in net worth. Against the increase in mean indebtedness, it is possible to examine the composition of debts assumed by hotel companies. In particular, calculation of the index of short-term indebtedness enables us to verify the average duration of exposure to banks and other lenders. The data show how the vast majority of financial debts assumed by hotel companies have duration of less than 12 months and are therefore mainly represented by overdrafts and similar technical forms. To verify whether the average duration of loans is consistent with the average duration of investments made by hotel companies, it is necessary to calculate another capital ratio: the liquidity index. This measures time coherence between the degree of liquidity on the assets side of the balance sheet and the degree of collectability on the liabilities side. In particular, the indicator compares current assets, net of stocks, with short-term debts. The median of this index is approximately 0.6, showing that total short-term debts exceed the investments made in high liquid assets. Bank overdrafts are, therefore, used by numerous hotel businesses also to finance medium-long term investments. The indexes calculated so far are a useful tool for analysing the capital structure of hotels, but fail to give a precise indication of their ability to honour payment obligations. They say nothing, for example, about the availability of company resources to pay financial charges to banks. A hotel may be characterised by a low level of indebtedness yet produce such a modest operating result that it is unable to cover the cost, albeit low, of financial charges. Or, conversely, the debt, even though very high, may be economically sustainable by the business. In order to assess the sustainability of a debt, it is necessary to calculate indicators that are able to verify the hotel companies' ability to generate sufficient income and cash flow not only to continue an efficient operating activity, but also to realize adequate debt service.

To this end, it is first necessary to verify whether the cost of the resources obtained as debt financing are adequately covered by the net result of the company's core management. In fact, if the operating margin does not adequately exceed the level of financial charges, due to the excessive cost of the debt compared with the business return or to an unbalanced financial structure, the company may find itself under financial pressure. Therefore, the ratio between gross operating margin and financial charges (interest coverage ratio) has been calculated, expressing the cover guaranteed by the core economic result for the financial charges borne by the company. An EBITDA/OF index of up to 4 pinpoints a precarious financial equilibrium. This means that the company's debt is either too costly or too large in respect of its core activity's earning power. This indicator is useful in defining the maximum level of indebtedness sustainable by the company. It may also serve to enable hotel companies to assess the possibility of further increasing their debt. An increase in the level of indebtedness, in fact, is sustainable only if this index shows a value, indicatively, of over 4. The sample studied is generally well able to provide economic cover for financial charges. The index on average shows results that even exceed 28. This situation is determined by the presence of a few particularly virtuous structures. The value of the indicator for most hotels is in fact considerably lower. The median in 2015 was in fact around 6.7, showing a general situation of financial equilibrium for the sample studied, further confirmed by the growth of the indicator during the three years under review. However, during this period the trend of the index for the different sectors analysed differed widely, as can be seen in Table 8.

Table 8: Mean of finance charge cover index by class of turnover; 2013- 2015.

Turnover (thousands of €)	Mean value 2013	Mean value 2014	Mean value 2015	Variation 2013-2014	Variation 2014-2015
0-250	26.68	30.72	35.64	15.14%	16.02%
250-500	22.29	22.99	28.57	3.14%	24.27%
500-750	19.49	18.86	23.65	-3.23%	25.40%
750-1000	17.43	21.54	23.50	23.58%	9.10%
1000-1500	18.63	22.24	26.46	19.38%	18.97%
1500-2000	18.38	24.88	23.66	35.36%	-4.90%
2000-2500	24.25	23.64	23.14	-2.52%	-2.12%
2500-4000	26.78	23.87	25.55	-10.87%	7.04%
4000-6000	20.27	25.42	31.95	25.41%	25.69%
6000-8000	29.68	27.85	30.50	-6.17%	9.52%
8000-15000	21.29	24.95	30.81	17.19%	23.49%
Over 15000	19.65	16.44	27.81	-16.34%	69.16%
Total	**22.57**	**24.59**	**28.28**	8.95%	15.01%

Source: Our processing of Bureau Van Dijk Aida data.

In general, the previous indicator provides information on the capacity of hotel companies to remunerate financial resources acquired against payment without incurring losses. This situation may be determined by the positive trend recorded in the performance of mean operating profitability, but also by the low level of onerousness of the debt assumed. In this regard, the average bank interest rate is less than 5% with a median below 4%. All the segments analysed, with the sole exception of small hotels, record a fall in the pricing conditions of bank loans during the three-year period, as shown in Table 9.

Table 9: Mean cost of money by class of turnover (figures in %); 2013- 2015

Turnover (thousands of €)	Mean value 2013	Mean value 2014	Mean value 2015	Variation 2013-2014	Variation 2014-2015
0-250	5.15	5.08	4.52	-1.36%	11.02%
250-500	5.40	5.59	5.42	3.52%	-3.04%
500-750	5.38	5.46	5.23	1.49%	-4.21%
750-1000	5.57	5.54	5.22	-0.54%	-5.78%
1000-1500	4.95	5.15	4.92	4.04%	-4.47%
1500-2000	4.97	4.97	4.81	0.00%	-3.22%
2000-2500	5.11	4.93	4.81	-3.52%	-2.43%
2500-4000	4.94	5.08	5.01	2.83%	-1.38%
4000-6000	4.49	4.68	3.99	4.23%	-14.74%
6000-8000	5.17	5.15	4.99	-0.39%	-3.11%
8000-15000	4.77	4.73	4.39	-0.84%	-7.19%
Over 15000	5.69	4.87	3.93	-14.41%	-19.30%
Total	**5.23**	**5.23**	**4.90**	**0.00%**	**-6.31%**

Source: Our processing of Bureau Van Dijk Aida data.

Table 10 shows the main descriptive statistics for the calculated indicators.

	Debt/Equity ratio	Short termdebtindex	Debt Ratio	Cost of borrowedmoney	Degree of cover of interest payable	Return on total assets (ROA)	Return on sales (ROS)	Return on Equity (ROE)	Liquidity index
Mean	3.96931204	0.629876216	16.4161809	4.901506	28.27557	-0.1633781	2.6514665	2.82050225	1.0693
Standard error	0.35184757	0.003739249	1.475439371	0.059318	0.767422	0.3088147	0.1494821	0.38365677	0.014987
Median	0.25	0.7	3.29	3.91	6.72	1.37	3.89	1.09	0.63
Mode	0	1	1	0	1.81	0	6.64	0	0.04
Standard deviation	29.7243528	0.355681027	140.7402119	3.89382	59.61244	29.449333	12.750748	33.8510521	1.394794
Sample Variance	883.537152	0.126508993	19807.80725	15.16183	3553.643	867.26319	162.58157	1145.89373	1.945451
Kurtosis	324.680719	-1.450199024	1266.341089	2.019553	13.68885	176.71429	2.5539484	4.00720506	11.1288
Asymmetry	11.2656805	-0.328822274	28.37178413	1.42268	3.582661	-8.0458292	-1.2207087	-0.6614605	3.004164
Interval	1497	1	8881.77	20	399.54	1323.73	79.99	297.49	9.99
Minimum	-543.29	0	-1148.88	0	0	-800	-49.99	-149.98	0
Maximum	953.71	1	7732.89	20	399.54	523.73	30	147.51	9.99

Table 11 shows the main results of the analysis of the degree of correlation between the different calculated variables. As pointed out in the previous analyses, the level and conditions of indebtedness are strongly tied to the size class of the hotel. Overall, the intermediate turnover classes, between 2 and 8 million EUR, are the hotel categories with the most equilibrated financial structure and the best capacity for sustaining debt efficiently.

Table 11: Analysis of correlation between balance sheet indexes; 2015.

	Liquidity index	Short term debt index	Debt ratio	Cost of borrowed money	Degree of cover of interest payable)	Debt/Equity ratio	Return on total assets (ROA)	Return on sales (ROS)	Return on Equity (ROE)
Liquidity index	1								
Short term debt index	-0.09952	1							
Debt Ratio	-0.02077	-0.02857	1						
Cost of borrowed money	-0.0142	0.318369	-0.004623843	1					
Degree of cover of interest payable	0.181158	0.236215	0.000706149	-0.1112	1				
Debt/Equity ratio	-0.02711	-0.09797	0.633163184	-0.05682	-0.0548	1			
ROA	0.070642	-0.01524	0.005237324	-0.01452	0.146255	0.01002877	1		
ROS	0.109827	-0.10839	-0.006001602	-0.0577	0.062086	0.04689416	0.5080847	1	
ROE	0.060474	0.101569	-0.040082011	0.056463	0.171481	-0.0290015	0.3563038	0.392587	1

The regression analysis has not, however, brought to light a strong tie between the level of indebtedness of hotel companies and relative indexes of an economic nature (ROE, ROA, ROS and cost of money). As illustrated in Table 12, the regression coefficients are very modest. Furthermore, the equation explains the limited percentage of volatility in the level of indebtedness.

Table 12: Main results of the regression analysis; 2015.

	Coefficients	Standard error	Stat t	Statistical significance value	Below 95%	Above 95%
Intercept	3.511510762	0.454205123	7.731112	1.87957E-14	2.620606044	4.402415479
Return on Equity (ROE)	0.028432219	0.010559075	2.692681	0.007162531	0.007721026	0.049143412
Cost of borrowed money	0.000730094	0.057272564	0.012748	0.989830683	-0.111607691	0.113067878
Return on total assets (ROA)	0.01748702	0.065887986	0.265405	0.790731716	-0.111749563	0.146723602
Return on sales (ROS)	-0.071420238	0.038771717	-1.84207	0.065651186	-0.147469371	0.004628895

It can therefore be affirmed that unlike the level of turnover, the degree of profitability of a business is not a factor able significantly to influence the level and sustainability of the hotel companies' debt.

6. Conclusions

During 2015 the average turnover of hotels increased significantly as opposed to previous years, denoting the ability of businesses in the sector to follow the partial recovery of the economic cycle. Only the class of hotels with a turnover below 250,000 EUR recorded a sharp fall in average revenues in recent years. This first figure draws attention to the fact that the smaller structures, on average with 2-3 employees, have suffered more heavily from the negative macroeconomic effects of recent years. By contrast, as the mean turnover rises, increasingly significant revenue rates are recorded. Hotels with turnovers exceeding 2.5 million in the last year considered showed net revenue increase rates on average above 10%, arriving at 16% in the turnover class between 4 and 6 million EUR. By contrast, the net profit of hotel companies is on average negative, although there has been a significant recovery during the three years under review.

The economic results of company core management, while largely positive and on the increase, are not sufficient to cover the costs of other management areas, such as taxes, finance and extraordinary charges. By dividing the hotels into size classes, it emerges that the only class which remained profitable during the entire three-year period is the one with revenues between 6 and 8 million EUR. This is also the class that showed the best increase in the last year. By contrast, the only segment whose overall economic conditions deteriorated in 2015 is the one with turnovers between 8 and 15 million EUR, where very significant average losses are still being recorded. Larger structures, therefore, have greater difficult in covering costs outside the company's core management.

Since the economic performances of hotel companies are especially penalised by management areas outside their core management, it is important to verify the role played by financial management. Analysis of economic results was therefore flanked by an empirical verification of the financial situation of hotel companies. In this way, it is possible to link profit performance to the risks faced by hotels. By way of example, an increase in leverage, and consequently in levels of indebtedness, may produce a positive impact (multiplier effect) on the profitability of businesses; in the same way, however, an increase in debt, particularly of a financial nature, entails a greater risk for the business, in view of its greater dependence on the banks. Attention to the level of company indebtedness is important also because it typically influences the cost of debt financing following the increase in risk for lenders. The analysis conducted in the paper reveals that the sample studied has a high and unbalanced level of indebtedness towards short-term loans. Numerous hotels are financing long-term investments with bank overdrafts, running serious risks of liquidity. The cost of the debt, however, is on average rather modest and favours a good level of cover for financial charges borne by the hotels. Financial stability is therefore on the whole satisfactory.

Performances are not, however, uniform within the sample. Empirical verification has revealed in particular that the sector is structured with three macro-classes: a first segment consisting of very small structures with turnovers below 250,000 EUR; a second segment represented by medium-size structures, with total revenues of up to 6 million EUR: lastly a third segment which consists of larger structures, with turnovers exceeding 15 million EUR. Analyses have shown that the greatest difficulties are encountered by the small businesses segment, which account for around a quarter of the sample analysed. In the recent past, they recorded a fall in turnover and average number of employees and an increase in the debt ratio. The analyses show an inverse relationship between company size and degree of dependence on debt financing. But during the last year the smaller businesses too showed various important signs of improvement, suggesting that there are good opportunities for the near future; the increment in EBITDA and better margins of efficiency are the most important foundations for recovery of the hotel industry, including the smaller structures.

Given the high operational risk that characterizes hotels, due to the capital-intensive nature of the hospitality sector, it is necessary for all businesses in the sector to pay great attention to the sustainability of debt, in order not to arrive at an excessive increase in financial risk, to the detriment of the overall risk. The analyses conducted show a modest relationship between the level of indebtedness of hotel companies and their relative economic performances. Notwithstanding, any possible future increases in the average cost of debt may negatively influence the level of sustainability of financial charges, today one of the sector's strong points. A better debt structure with a reduction in short-term indebtedness in favour of medium-long term financing is one of the financial strategies for the hotel companies to pursue, so that the financial management can continue effectively to sustain the economic performances achieved.

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