The profitability of Italian hotels during and after the 2008 Economic Crisis

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Abstract

Italy is an exclusive country in the world, comprised of a rich mix of history, art, culture and natural attractions that attract a high flow of tourists from all over the world. In Italy, in 2017, about 33,000 hotels operated, which characterize an evolving offer that tends to favour hotels with better services than in the past, also in response to the growing competition from less expensive non-hotel businesses. This paper is dedicated to the study of income dynamics of larger Italian hotels with a turnover of over € 800,000, analyzing the ten-year trend of five balance sheet indices of a significant sample of companies. The results show that the international economic crisis has reduced profitability immensely, especially in 2009, but also that the reaction of companies has allowed restructuring that facilitated a significant recovery in the following years. In particular, the analysis showed a greater profit on sales and a lower incidence of extra-management costs, presumably resulting from lower passive interests.

Keywords: Hotel, tourism, Italy, profitability, 2008 Crisis, profitability ratios.

Introduction

Italy is a very fashionable country in the world, through its rich mix of history, art, culture and natural attractions. The attraction of tourist flows remains high: in 2017, the Italian tourism industry confirmed its fundamental role, continuing the positive trend of the previous years (ONT, 2018). Tourism contributes to 13% of GDP, favoring employment and economic development, despite the growing competition from developing countries that progressively enter the circuits of travelers, offering their natural beauties, enhanced by low-cost investments due to a lot of man-power available at very low prices.

However, the Italian tourist supply remains unique, taking advantage of a positive reputation, but it is affected by a considerable level of age and obsolescence of the medium/low size accommodation facilities, that negatively affects the quality / price ratio. Among these, the hotels, traditional protagonists of hospitality, object of this study that presents a first analysis of their profitability. Hotels, in Italy and abroad, operate respecting a specific civil and fiscal regulation that influences their management (Desinano, 2010; Molinari, 2017; Cipolla & Biasion, 2010; Bonfiglietti, 2018; Ricci et al., 2007; Liberatore, 2001; Benevolo & Grasso, 2010). The study is limited to the larger structures that are obliged to deposit the balance sheet and register a turnover of more than 800,000 euros, recorded in the Aida database, as better explained below. The balance sheets of the considered sample are subjected to analysis to highlight the

trend of the main profitability indices in the year of the crisis, 2008, and in subsequent periods to verify the trend, effect of management decisions induced by the different international economic and financial situation. The static balance sheet analysis provides important indications on the balance sheet, financial and economic balances, especially comparing companies in the same sector over time. This aim has led Italy and many other countries to draft balance sheets according to common rules, to promote comparability.

Objectives of the study

The main purpose of this paper is to investigate, through a balance sheet analysis with indices, the profitability of Italian hotels, during and after the international economic crisis (2008-2017). The hypotheses to be verified are:

- H1: the global economic crisis has reduced company profitability;
- H2: the reaction of Italian accommodation facilities aimed at survival has enabled restructuring to encourage the recovery of profitability in subsequent years.

From these conditions to be verified, three obvious research questions derive:

- RQ1: what was the evolution of the main profitability indicators?
- RQ2: companies that survived the crisis have increased their profitability?
- RQ3: in the event of an affirmative answer to RQ2: what are the main factors that have allowed the increase in profitability?

In addition to the available statistical data on the number of business initiatives completed and launched, average data deriving from the financial statements are presented to verify the effects of the crisis on a specific segment of the Italian hotel supply. The choice of this type of company is motivated by the fact that the Italian hospitality industry is considered one of the best on the international scene.

Methodology and structure of the paper

The subject of the research was the balance sheet of a sample of medium-large companies with turnover of over 800,000 euros, in ten consecutive years. This sample had a variable number in relation to the years and the indexes, as subsequently detailed. The choice of balance sheets was based on the Ateco 2007 classification which in Italy divides the various economic activities into different classes and sub-classes. With regard to Class I: *Activities of accommodation and restaurant services*, group 55 relates only to hotels and similar facilities. It is divided into:

55.1 - Hotels and similar facilities;
55.2 - Holiday accommodation and other facilities for short stays;
55.3 - Camping areas and areas equipped for campers and caravans;
55.9 - Other accommodations.

The 55.1: has a single subclass with the same name, within which the code 55.10.00 is dedicated only to the hotels, object of this study, defined as follows: provision of short-term accommodation

in hotels, resorts, motels, aparthotels (hotels & residences), guesthouses, hotels equipped to host conferences (including those with mixed accommodation and meal and beverage provision). Therefore, the supply of furnished or unfurnished houses and apartments for longer stays, generally on a monthly or annual basis, and activities related to multiple ownership, to which other codes are dedicated, are excluded. The balance sheets of the selected group of companies are available in the AIDA database of the Bureau van Dick company, which contains comprehensive information on companies in Italy, with up to ten years of history.

The following income indices were taken from this computerized archive:
- ROE (Return on Equity);
- ROA (*Return on Assets*);
- ROI (*Return On Investment*);
- ROS (Return on Sales);
- Incidence rate for extra charges and income.

These indices refer to 4.840 Italian hotels in the period 2008-2017. However, it is first necessary to specify that the indices for each of the years considered are not always available. Therefore, before each processing, we indicate the number of available values for each year, also calculating, for the decade considered: the range of variation (Max-Min), the arithmetic mean, the median, the average deviation (average of absolute deviations from the average), the variance (the average of the differences from the average to the square), the standard deviation or mean square deviation, and the pentenist distribution of values. Where the arithmetic mean is representative of the trend, the trend and some statistical analysis are presented graphically. Obviously, data are commented upon, identifying possible connections with the economic crisis.

The quantitative study of balance sheet data is preceded by the revision of the international literature and a brief presentation of the quantitative evolution of the sector. In addition to summarizing the results of the research, the conclusions outline the limits, the possible future developments and the different implications.

Literature Review

The international literature available on the issue of hotel profitability has mainly investigated its origin, focusing some factors or attempting a multifactorial approach. The writings consider profitability derives mainly from elements attributable to marketing and/or only the sector studies which are relevant were used. There are researches on particular aspects and others that deal with wider issues. Among the first documents, for example, Taylor *et al.* (2018) who analyzed the relationship between hotel profitability and culinary innovation proposed to guests. However, rightly, they believe that the segment of the market, type of hotel, location of the hotel, number of rooms, and average daily rate are all found to be important factors in determining profitability and should be included in models of profit. In this multi-factor vision we find the Lado-Sestayo & Vivel-Búa study (2018) which, by analyzing the determinants of hotel profitability through the application of a model of least squares modeling, have shown that the characteristics of the hotels, their location, competitive environments and tourist destination factors affect hotel performance and results. The importance of culinary innovation is also reaffirmed by Sharma (2017) with reference to the Indian hotels.

Innovation represents the variable of success of hotels, not to be limited only to aspects of catering. In fact, it must be relative to all the management that must closely follow the evolution of consumer demand. In this, sense Sandvik *et al.* (2014). The authors propose that innovativeness and the visibility of the benefits to customers from innovative activities both serve as endogenous variables. Competitive market advantage, sales growth, and capacity utilization serve as mediators.

In addition, there are numerous studies that, instead, tend to attribute the primary source of the profitability of a hotel to its location and therefore to its geographical attraction of customers. These include the Lado-Sestayo *et al.* study (2018): the theoretical framework is based upon the models of geographical positioning, agglomeration economies, and competitive environment. The econometric analysis was performed on a large sample of Spanish hotels, including information about hotel characteristics and tourist destination aspects from 2005 to 2011. This publication follows the previous one by Lado-Sestayo *et al.* 2016, on a similar theme that concludes by stating that profitability depends largely on the market structure and the level of demand of the tourist destination. However, it states that there are unobservable characteristics which influence on profitability and they identify the existence of economies of scale. Therefore, the market aspects should also be considered in relation to hotel investments. The marketing experts have also considered the effects on the profitability of the distribution channels, especially those of the telematic type recently established, such as the app (Makki *et al.*, 2016). The theme was already explored previously, when the telematic revolution had not yet the current diffusion: Kang, *et al.*, in fact, in 2007 emphasized the importance of three direct instruments of contact with customers: calls to the hotel, central reservation systems and the hotel's own website.

The profitability of a hotel depends, of course, also on the quality of the service provided, as evidenced by the study by Aznar *et al.* (2016) which referred to the hotel industry in the Catalan coast. Therefore, the perception of customers is of fundamental importance, even when considering the indirect promotion that derives from the personal experience communicated to other potential users. However, it is also important to consider the social and economic extraction of customers. Iyengar & Suri (2012) and Krakhmal (2012) have measured its importance for the profitability of hotels. These analyzes are also relevant for the strategic location of each hotel that can select the market segment in which to offer its services.

In the globalized economy, this also requires a careful analysis of the market structure in the international tourist hotel industry, as proposed by Pan (2005). His empirical results indicate that: market concentration in rooms could significantly improve international tourist hotels' profitability, while concentration in the food and beverage markets have positive but insignificant effects, and the locations of the international tourist hotels significantly affect their profitability. Also the presence of other receptive structures, even if competing, increases the profitability of the hotels, as evidenced by Aznar *et al.* (2017): the number of hotels is a clear indication of the attractiveness of a place, which sometimes also diminishes the importance of the category and therefore of the assigned stars. In fact, many modern consumers base their choices on information obtained from specialist sites and social media. In general, the profitability of the individual company should be evaluated with respect to the entire value chain of which it is part (Georgantzas, 2003).

In any case, the price variable continues to influence customer choices (Chen & Chang, 2012), which prefers stable prices: in fact, these two authors have shown that price instability has a statistically significant and negative effect on hotel profitability.

In addition to external marketing variables such as price, on the profitability of hotels also affect internal behavior and therefore the values and organizational structure of the company. This is demonstrated by the recent study by Simons *et al.*, 2018, related to aggregate effects of behavioral integrity on guest satisfaction, turnover, and hotel profitability: "Latent variables structural equation modeling and path analyses showed strong associations between manager behavioral integrity and worker turnover, customer satisfaction, and hotel profitability".

The experience in Malaysia also confirms similar situations. Singh *et al.* (2017) analyzed the relationship between employee job satisfaction, perceived customer satisfaction, service quality, and profitability in luxury hotels in Kuala Lumpur, and they have concluded that higher employee job satisfaction increases service quality and this increases hotels' profit. Employee job satisfaction generates higher customer satisfaction and increases hotel profitability through future sales and customer positive goodwill.

Moreover, the international literature presents numerous studies that consider the profitability of hotels dependent on the effectiveness, efficiency and economy of the production combination. The importance of managerial efficiency is highlighted, for example, by Ben Aissa & Goaied (2016) using data envelopment analysis and the Return On Assets (ROA) analysis regarding 27 hotel companies operating in Tunisia. "Improved customer service, better quality, operational effectiveness, sustained bottom line profitability, and ability to engage with customers are most important to survive in an extremely competitive market place", as highlighted by Singh (2017) which also analyzes the role of revenue management as a strategic choice for Indian hotels.

The strong correlation between operational efficiency and hotel profitability is also the conclusion of Xu's recent contribution (2017), abstractly connected to the studies of Sami & Mohamed (2014) which highlighted the relations between financial and economic performances and technical efficiency. This also depends on the accommodation capacity of the structures and therefore on the risk of large periods of underutilisation of the unused rooms: in this perspective the study by Tsai & Gu (2012) aimed at the optimizing room capacity and profitability for Hong Kong hotels. In Taiwan similar studies are carried out, such as that of Chiu & Huang (2011) which evaluates the optimal occupancy rate, operational efficiency, and profitability efficiency international tourist hotels.

In conclusion, it is necessary to mention some studies similar to the proposal of this paper because it pertains to the financial structure of the companies that is analyzed in order to identify the sources of profitability. The Diakomihalis study (2011) related to financial structure and profitability analysis of Greek hotels. And also the study of O'Neill & Mattila (2006) which propose an analysis of the effects of revenue drivers on profitability: a hotel's net operating income percentage is most closely tied to its occupancy, although average daily rate has a strong influence, as does market segment (also known as chain scale), the age of the property, and brand affiliation. A hotel's size and location also influence net operating income.

Extremely critical about the use of traditional financial performance measures Chow *et al.* (2003).
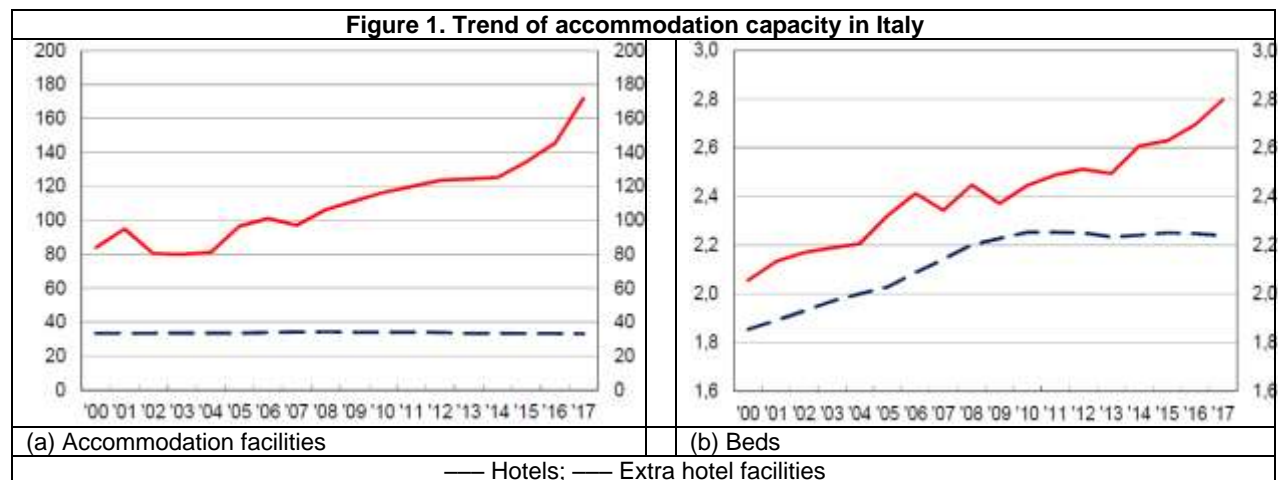
In fact, they may fail to motivate or guide effective resource allocation and use. The study also shows how value-based performance measures, which charge managers for the opportunity cost of capital that they use, may be more effective for inducing such results.

The wide Italian literature includes numerous considerations on the genesis of hotel income in the context of larger monographs dedicated to the company management (Desinano, 2010; Molinari, 2017; Cipolla & Biasion, 2010; Bonfiglietti, 2018; Ricci *et al.*, 2007; Liberatore, 2001; Benevolo & Grasso, 2010). In it the studies that are more similar to this paper are, however, the research of Iovino & Migliaccio (2018a & 2018b) who have used a similar method presented here, even if referring to a different audience with different purposes.

Italian accommodation facilities (notes)

In Italy, in 2017, there were 33.000 hotels and over 170.000 extra-hotel facilities, which offered about 5 million beds (Figure 1) to which we would add non-registered private beds (Petrella & Torrini, 2018, and bibliography cited therein).

In the last ten years the number of hotels has slightly decreased, compared to a notable development of alternative structures, almost doubled, in response to the changed characteristics of the demand. The changes were also related to the quality of the tourist supply: downgraded hotels with one and two stars, counterbalanced by an increase in qualitatively better hotels: today, in fact, the needs of the less gifted travelers are satisfied especially by the Bed and Breakfast (B&B), by rented accommodation, and by campsites and tourist villages.

Figure 1. Trend of accommodation capacity in Italy

(a) Accommodation facilities   (b) Beds

—— Hotels; —— Extra hotel facilities

Source: Petrella & Torrini (2018) citing Eurostat data.

Results and Discussion

Despite the slight decrease, hotel hospitality is still present in Italy. Therefore, a measurement of its profitability should be attempted, even considering the increasing competition in the sector. Indeed, it should decrease to make the hotel facilities more attractive. On page 7 there is a quantitative analysis of the indexes listed above with some comments.
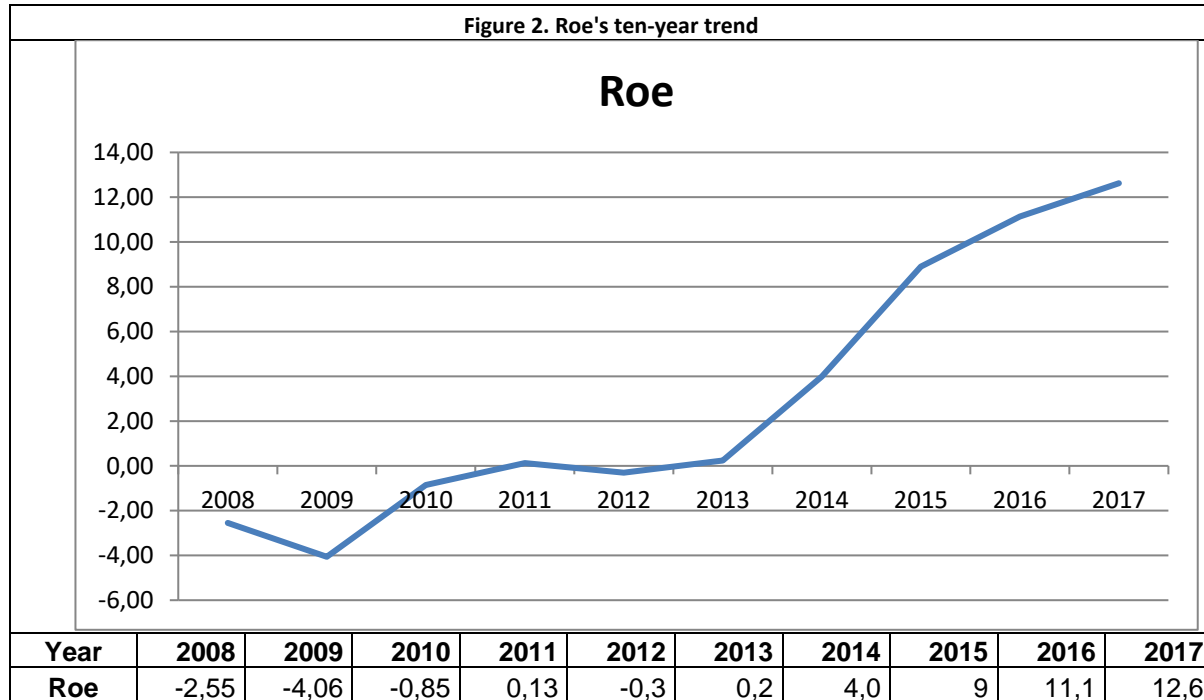
ROE – Return on Equity

The ROE reports the net profit to equity and measures the overall profitability of the entire company. Table 1 elaborates some statistics on the constantly increasing data available: from 2.344 indices of 2008 (48,4%) up to almost 70% in the last years of the decade considered.

The range of variation is very high, just under 300%, although around 2/3 of the results are around the arithmetic average, as shown by the pentenist distribution. Therefore, the arithmetic average can be considered significant for the performance of Italian hotels.

Table 1. Statistical Data Relating to ROE										
Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
N. Available values	2344	2427	2584	2690	2766	2878	3077	3258	3376	3282
Available values % of 4840	48,4%	50,1%	53,4%	55,6%	57,1%	59,5%	63,6%	67,3%	69,8%	67,8%
Minimum value	-147,71	-148,64	-149,98	-148,86	-148,5	-149,69	-147,62	-149,98	-149,69	-149,6
Maximum value	139,48	147,67	145,85	98,74	147,4	123,82	140,94	147,51	138,98	145,4
Variation range	287,19	296,31	295,83	247,6	295,9	273,51	288,56	297,49	288,67	295
Arithmetic average	**-2,55**	**-4,06**	**-0,85**	**0,13**	**-0,31**	**0,24**	**3,99**	**8,90**	**11,13**	**12,62**
Median	0,095	-0,12	0,24	0,53	0,41	0,89	1,69	4,24	5,52	7,745
Average deviation	17,84	18,28	17,59	17,57	18,23	18,31	18,81	20,78	20,91	20,38
Variance	967,86	975,81	965,72	944,91	977,85	1012,55	1000,63	1057,93	1025,17	971,98
Standard deviation	**31,11**	**31,24**	**31,08**	**30,74**	**31,27**	**31,82**	**31,63**	**32,53**	**32,02**	**31,18**
% Std. dev. on the Avarage	-12,20	-7,69	-36,40	244,71	-101,80	133,58	7,92	3,65	2,88	2,47
Asymmetry	-1,02	-1,30	-1,03	-1,03	-1,01	-1,06	-0,67	-0,49	-0,35	-0,46
Pentenist distribution										
Absolute values										
In Group E=	143	157	152	170	176	189	166	165	158	147
In Group D=	205	205	224	216	244	233	283	295	313	287
In Group C=	1609	1663	1775	1823	1847	1931	2057	2123	2185	2113
In Group B=	270	294	288	327	346	367	362	429	468	507
In Group A=	117	108	145	154	153	158	209	246	252	228
Total	2344	2427	2584	2690	2766	2878	3077	3258	3376	3282
Values %										
In Group E=	6%	6%	6%	6%	6%	7%	5%	5%	5%	4%
In Group D=	9%	8%	9%	8%	9%	8%	9%	9%	9%	9%
In Group C=	69%	69%	69%	68%	67%	67%	67%	65%	65%	64%
In Group B=	12%	12%	11%	12%	13%	13%	12%	13%	14%	15%
In Group A=	5%	4%	6%	6%	6%	5%	7%	8%	7%	7%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

The arithmetic mean of the Roe has its minimum, negative value, in the year 2009, which presumably saw the greatest symptoms of the international economic crisis in Italy. With different intensity, however, the overall profitability has progressively increased with more intense rates since 2013. The change in the figure is about 17 percentage points and therefore it is significant, considering the minimum value of 2009 (- 4,06%) and the maximum value of 2017 (+ 12,6%) (Figure 2).

Figure 2. Roe's ten-year trend

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Roe	-2,55	-4,06	-0,85	0,13	-0,3	0,2	4,0	9	11,1	12,6

Source: AIDA data processing

The evolution of the index demonstrates a positive reaction of the sector to the economic crisis, which has achieved optimal levels of profitability, presumably resulting of an adequate restructuring of companies stimulated by the crisis. The result appears even more comforting considering that in the last years of the decade the reference rate of loans has been very low, increasing the convenience of investments in such companies.

ROI – Return on Investment
ROI measures the percentage profitability of the company's only characteristic management. It is a relationship that has the operating result in the numerator and in the denominator a sum that expresses the capital invested in that management area. Aida database calculates it as follows: equity + bonds within 12 months + bonds over 12 months + banks within 12 months + banks over 12 months + other lenders within 12 months + shareholders for loans within 12 months + shareholders for loans over 12 months + other lenders over 12 months.

Aida database makes available (table 2) more than 40% of the ROIs from the balance sheets of the 4.840 companies covered by the sample, from a minimum of 37,9% in 2008 to a maximum of 49,9% in 2013. In any case, we believe that the amount of information available is sufficient to be able to express a trend judgment. The index variation range is about 60 points and is constant throughout the decade: the minimum values are about -30%, compared to a maximum value of about + 30%.
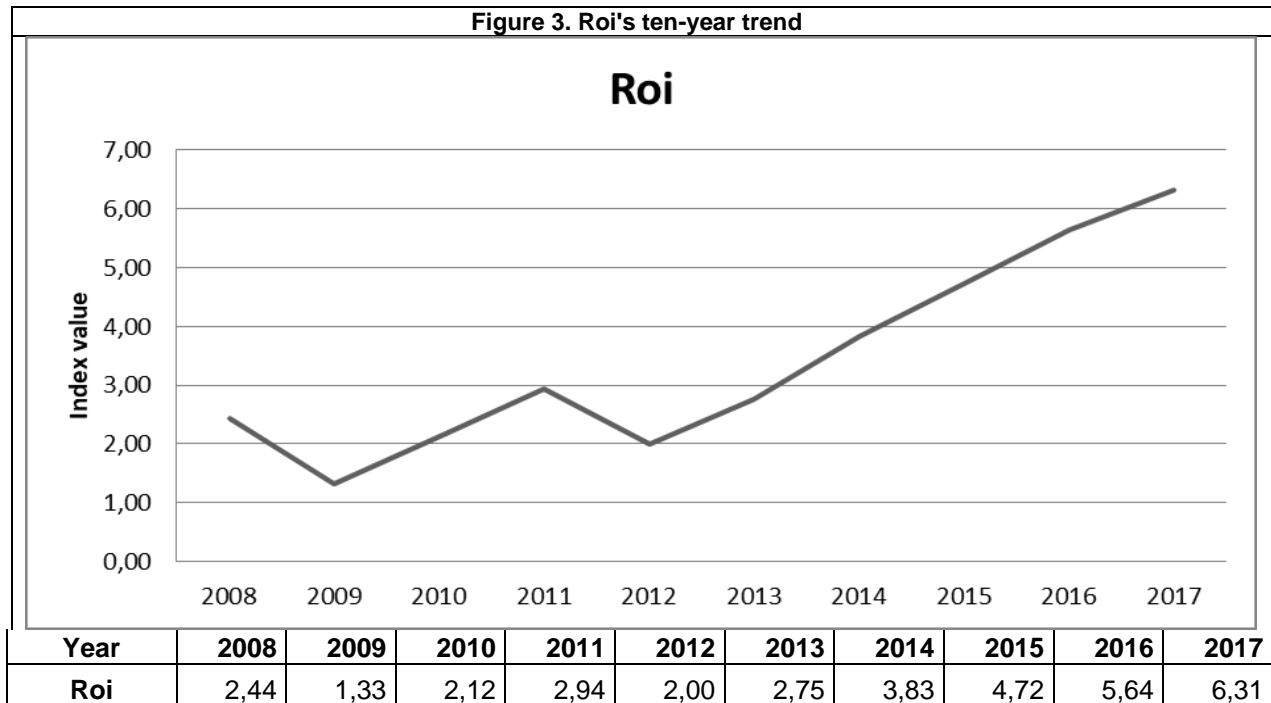
Table 2. Statistical Data Relating to ROI										
Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
N. Available values	1832	1895	1969	2328	2370	2413	2326	2344	2140	2064
Available values % of 4840	37,9%	39,2%	40,7%	48,1%	49,0%	49,9%	48,1%	48,4%	44,2%	42,6%
Minimum value	-29,89	-29,77	-29,98	-30	-29,87	-29,9	-28,57	-29,5	-29,66	-29,77
Maximum value	29,67	29,88	29,95	29,93	29,79	29,92	29,98	29,84	29,97	29,95
Variation range	59,56	59,65	59,93	59,93	59,66	59,82	58,55	59,34	59,63	59,72
Arithmetic average	**2,44**	**1,33**	**2,12**	**2,94**	**2,00**	**2,75**	**3,83**	**4,72**	**5,64**	**6,31**
Median	2,105	1,32	1,64	2,21	1,525	2	2,62	3,455	3,925	4,565
Average deviation	5,79	5,86	5,75	5,92	6,08	6,20	6,26	6,54	6,66	6,69
Variance	73,45	76,09	74,18	75,05	80,86	78,90	78,50	82,87	80,75	80,76
Standard deviation	**8,57**	**8,72**	**8,61**	**8,66**	**8,99**	**8,88**	**8,86**	**9,10**	**8,99**	**8,99**
% Std. dev. on the Avarage	3,52	6,57	4,05	2,94	4,50	3,23	2,31	1,93	1,59	1,42
Asymmetry	-0,32	-0,24	0,02	-0,01	-0,05	0,05	0,18	0,04	0,17	0,01
Pentenist distribution										
Absolute values										
In Group E=	114	121	118	140	144	141	116	118	97	92
In Group D=	238	258	276	333	335	386	421	441	469	494
In Group C=	1070	1096	1162	1342	1392	1338	1254	1217	1051	949
In Group B=	288	299	271	339	315	363	333	367	325	346
In Group A=	122	121	142	174	184	185	202	201	198	183
Total	1832	1895	1969	2328	2370	2413	2326	2344	2140	2064
Values %										
In Group E=	6%	6%	6%	6%	6%	6%	5%	5%	5%	4%
In Group D=	13%	14%	14%	14%	14%	16%	18%	19%	22%	24%
In Group C=	58%	58%	59%	58%	59%	55%	54%	52%	49%	46%
In Group B=	16%	16%	14%	15%	13%	15%	14%	16%	15%	17%
In Group A=	7%	6%	7%	7%	8%	8%	9%	9%	9%	9%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

The arithmetic average has been increasing steadily since 2009, accentuating their increase from the year 2015 (Figure 3): the percentage variation recorded in the decade is about five points, from a minimum of 1.33% in 2009, to a maximum 6.31% in 2017. On average, in the decade, the Roi was 3,41%.

| Figure 3. Roi's ten-year trend |

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Roi	2,44	1,33	2,12	2,94	2,00	2,75	3,83	4,72	5,64	6,31

Source: AIDA data processing

Although with a different trend, the curve of the Roi follows the trend already described for the Roe, highlighting a substantial growth. However, there is a significant difference, considering that the Roi is always positive, even in the years when the Roi was negative. Evidently, the characteristic management has always been profitable. However, its results have been eroded by the extra-characteristic and extraordinary management costs, presumably from the passive interests. In recent years, the significant increase in Roe could be a combined effect of the increase in Roi and lower interest expense (or other items not attributable to non-typical management) due also to the very low interest rates desired by the monetary authorities to encourage economic recovery after the crisis.

ROA – Return on asset
ROA is given by the percentage ratio between operating result and total activity.
It is often used because it can be calculated easily, considering that the values that are reported are immediately available. It would like to have the same informational power as the ROI, which, however, requires the identification of the invested capital in the only operational management that is not always easily obtainable. With the ROA it is assumed that all company uses are functional to operational management, an element that is not always verifiable.
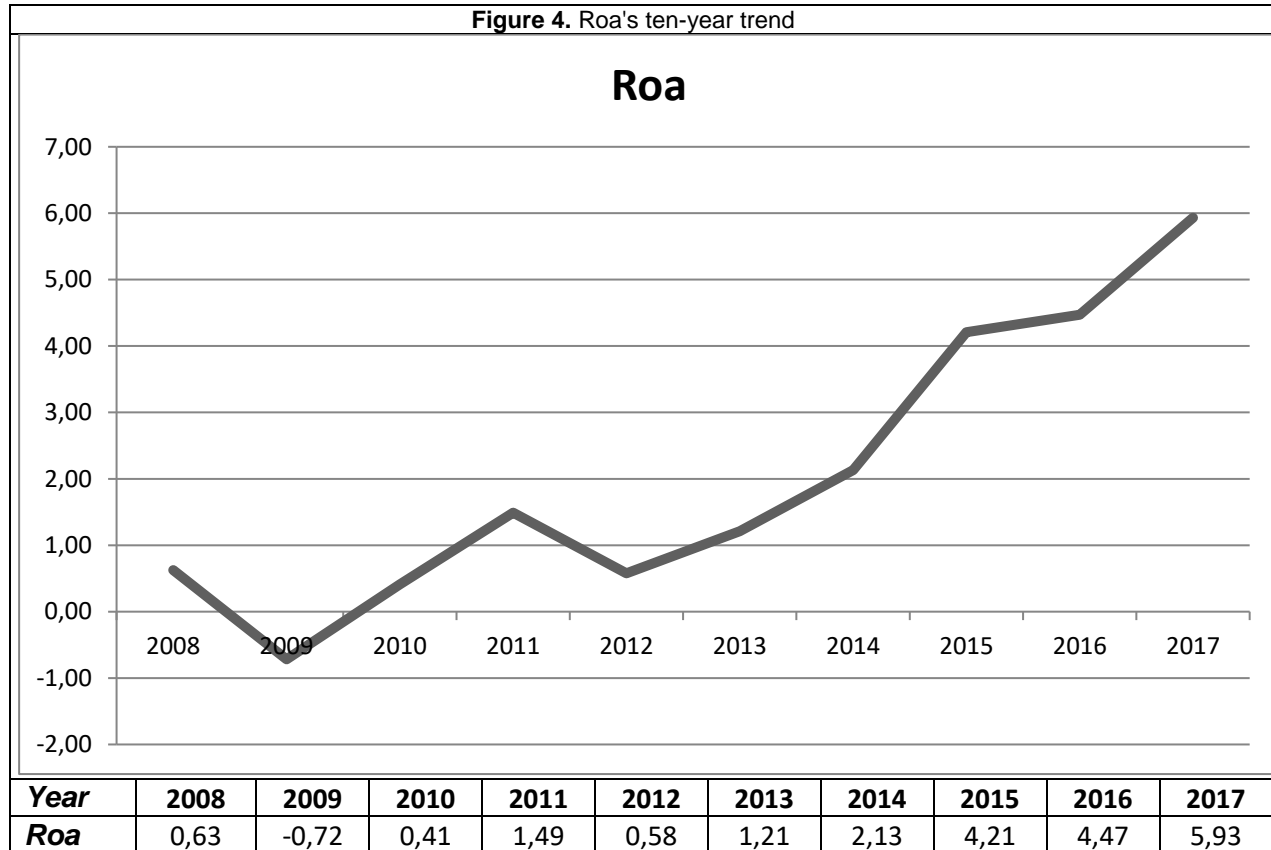
Aida database makes available (table 3) a very high percentage of ROAs from hotel budgets, from a minimum of 54,9% in 2008 to a maximum of 76,3% in 2016. In any case, it is believed that the quantity the information available is largely sufficient to be able to express a trend judgment. The range of variation of the index is very high, much higher than that of the ROI, with significantly variable values of the decade considered.

Table 3. Statistical Data Relating to ROA										
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
N. Available values	2658	2779	2915	3048	3182	3297	3466	3594	3692	3527
Available values % of 4840	54,9%	57,4%	60,2%	63,0%	65,7%	68,1%	71,6%	74,3%	76,3%	72,9%
Minimum value	-425,12	-257,41	-763,66	-245,04	-191,52	-320,74	-399,06	-183,28	-562,43	-362,57
Maximum value	75,76	73,25	94,21	150,6	98,51	75,56	206,93	98,74	374,65	290,27
Variation range	500,88	330,66	857,87	395,64	290,03	396,3	605,99	282,02	937,08	652,84
Arithmetic average	**0,63**	**-0,72**	**0,41**	**1,49**	**0,58**	**1,21**	**2,13**	**4,21**	**4,47**	**5,93**
Median	1,815	1,04	1,37	1,87	1,18	1,67	2,15	2,92	3,19	3,59
Average deviation	7,12	7,38	7,05	6,97	6,76	6,87	7,00	7,11	7,89	7,75
Variance	288,32	257,30	418,63	234,06	191,61	229,93	289,77	175,06	410,85	252,76
Standard deviation	**16,98**	**16,04**	**20,46**	**15,30**	**13,84**	**15,16**	**17,02**	**13,23**	**20,27**	**15,90**
% Std. dev. on the Avarage	27,11	-22,35	49,77	10,26	23,98	12,53	7,99	3,14	4,53	2,68
Asymmetry	-9,69	-5,91	-19,81	-3,79	-3,95	-6,62	-8,30	-2,18	-8,35	-2,88
Pentenist distribution										
Absolute values										
In Group E=	86	114	69	106	120	103	86	99	68	58
In Group D=	179	182	160	218	271	252	216	364	175	258
In Group C=	2093	2132	2426	2338	2331	2486	2740	2543	2976	2678
In Group B=	258	300	227	293	369	358	343	396	378	384
In Group A=	42	51	33	93	91	98	81	192	95	149
Total	2658	2779	2915	3048	3182	3297	3466	3594	3692	3527
Values %										
In Group E=	3,24%	4,10%	2,37%	3,48%	3,77%	3,12%	2,48%	2,75%	1,84%	1,64%
In Group D=	6,73%	6,55%	5,49%	7,15%	8,52%	7,64%	6,23%	10,13%	4,74%	7,31%
In Group C=	78,74%	76,72%	83,22%	76,71%	73,26%	75,40%	79,05%	70,76%	80,61%	75,93%
In Group B=	9,71%	10,80%	7,79%	9,61%	11,60%	10,86%	9,90%	11,02%	10,24%	10,89%
In Group A=	1,58%	1,84%	1,13%	3,05%	2,86%	2,97%	2,34%	5,34%	2,57%	4,22%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Focusing on the average value of the ROA index, it is easy to see a trend very similar to that of the ROI (Figure 4). Although with significantly different absolute values, the two indices evolve in a similar way. The average of the arithmetic average over the decade is 2,03% between a minimum value of -0,72% in 2009 and a maximum of 5,93% in 2017, with a range of 6,65 percentage points. Nine of the 10 available values are placed in the three central groups of the pentenist distribution: precisely four in the second, three in the third which has as its central value the arithmetic mean, two in the fourth.

Figure 4. Roa's ten-year trend

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Roa	0,63	-0,72	0,41	1,49	0,58	1,21	2,13	4,21	4,47	5,93

Source: AIDA data processing

The brief considerations expressed for the ROI can also be referred to the ROA, considering the similar trend of this index in the decade considered.

ROS – Return on Sales
ROS measures the profitability of sales. It is given by the percentage ratio between operating result and the sum of all revenues.
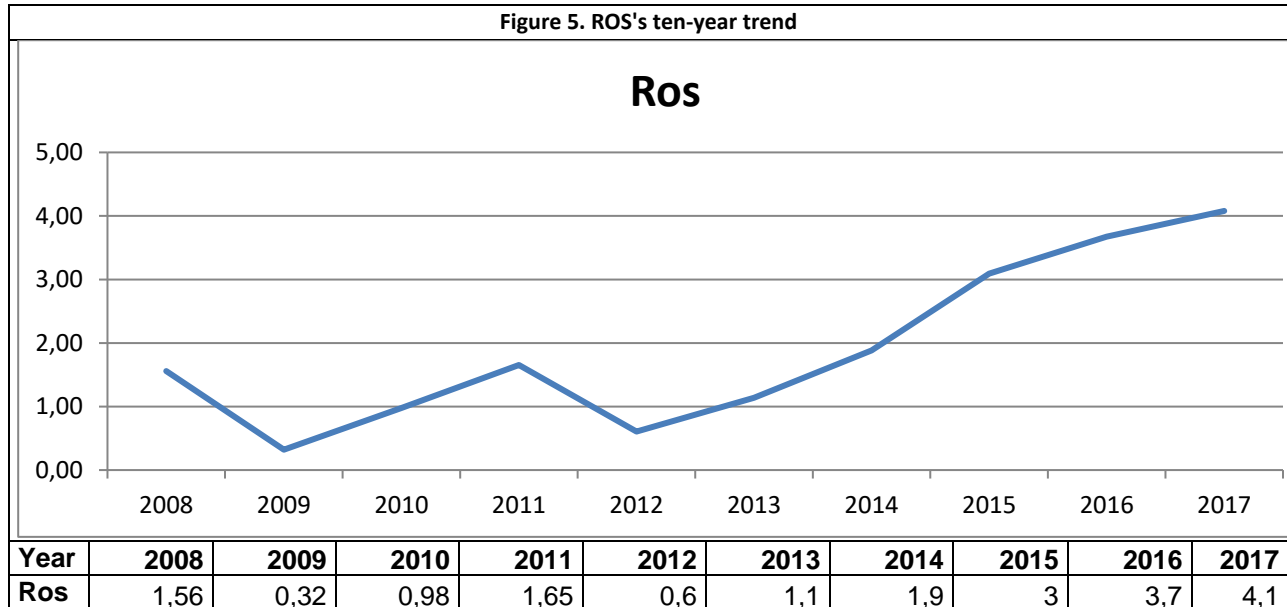
Aida database makes available (table 4) a very high percentage of ROS from hotel balance sheets, from a minimum of 46,7% in 2008 to a maximum of 72,5% in 2016. In any case, it is believed that the quantity the information available is largely sufficient to be able to express a trend judgment. The range of variation in the index is absolutely constant, and settles just below 80 percentage points, from a minimum value of – 49,93% in 2009 to a maximum of 30% in 2015.

Table 4. Statistical Data Relating to ROS										
Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
N. Available values	2258	2426	2626	2770	2931	3076	3233	3382	3511	3376
Available values % of 4840	46,7%	50,1%	54,3%	57,2%	60,6%	63,6%	66,8%	69,9%	72,5%	69,8%
Minimum value	-49,47	-49,93	-49,09	-49,13	-49,84	-49,68	-49,9	-48,98	-48,18	-49,66
Maximum value	29,92	29,97	29,9	29,96	29,97	29,8	29,95	30	29,3	29,83
Variation range	79,39	79,9	78,99	79,09	79,81	79,48	79,85	78,98	77,48	79,49
Arithmetic average	**3,34**	**0,64**	**1,80**	**2,89**	**1,00**	**1,79**	**2,82**	**4,42**	**5,07**	**5,85**
Median	4,3	2,83	3,325	4,08	2,74	3,115	3,75	4,605	4,86	5,195
Average deviation	8,52	9,74	8,63	8,08	8,58	8,12	7,50	7,20	6,94	6,78
Variance	145,81	181,25	153,69	134,43	148,90	140,25	123,02	113,90	104,46	96,61
Standard deviation	**12,08**	**13,46**	**12,40**	**11,59**	**12,20**	**11,84**	**11,09**	**10,67**	**10,22**	**9,83**
% Std. dev. on the Avarage	3,62	21,03	6,88	4,01	12,20	6,62	3,93	2,41	2,02	1,68
Asymmetry	-1,06	-1,09	-1,14	-1,13	-1,13	-1,29	-1,27	-1,22	-1,17	-0,95
Pentenist distribution										
Absolute values	-14,78	-19,55	-16,79	-14,50	-17,30	-15,97	-13,82	-11,58	-10,27	-8,90
In Group E=	169	203	208	219	235	230	240	225	207	184
In Group D=	304	331	323	341	375	390	375	373	398	475
In Group C=	1176	1203	1392	1457	1525	1649	1776	1906	2019	1847
In Group B=	502	599	596	640	668	688	708	694	685	649
In Fascia A=	107	90	107	113	128	119	134	184	202	221
Totale	2258	2426	2626	2770	2931	3076	3233	3382	3511	3376
Values %										
In Group E=	7%	8%	8%	8%	8%	7%	7%	7%	6%	5%
In Group D=	13%	14%	12%	12%	13%	13%	12%	11%	11%	14%
In Group C=	52%	50%	53%	53%	52%	54%	55%	56%	58%	55%
In Group B=	22%	25%	23%	23%	23%	22%	22%	21%	20%	19%
In Group A=	5%	4%	4%	4%	4%	4%	4%	5%	6%	7%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Focusing on the average value of the ROS index, like the ROA, it is easy to see a trend very similar to that of the ROI (Figure 5): different absolute values, but almost the same evolution. The mean of the arithmetic average over the decade is 1,90% between a minimum value of 0,32% in 2009 and a maximum of 4,1% in 2017, with a range of 3,36 percentage points. The pentenary distribution of the 10 values is absolutely identical to that described for the ROA.

Figure 5. ROS's ten-year trend

Ros

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Ros	1,56	0,32	0,98	1,65	0,6	1,1	1,9	3	3,7	4,1

Source: AIDA data processing

The evolution of the index shows increasing margins in favor of hotel profitability, overcoming the most critical phase of the crisis in 2009, with a new, less severe reduction in 2012.

Since last year the growth has been constant and accentuated with obvious beneficial effects on the indexes previously analyzed: higher sales gains obviously favor the overall operating profitability.

Incidence Rate of Charges and Extra Management Revenues

It is the percentage ratio between net profit and operating result. It expresses the net profit compared to 100 euros of the operating result, that is the part of net profit less the costs attributable to the atypical, financial, fiscal and extraordinary management. If non-typical operations are negatively affected, as is frequently the case, the index is less than 100.

Aida database makes available (table 5) an increasing amount of indices obtained from the sample of 4.840 hotels. From a percentage lower than 40% of the first years, it is possible to exceed 60% in the last years of the considered decade. The range of variation is very high, around € 900 on average, from a minimum of – 499,9 to a maximum of 491,82.

Therefore, the Italian hotels present very different and articulated relationships between the characteristic management and the others. However, the arithmetic mean of the available values can be considered significant, also considering that values above 50% are placed in the central part of the pentenist distribution.
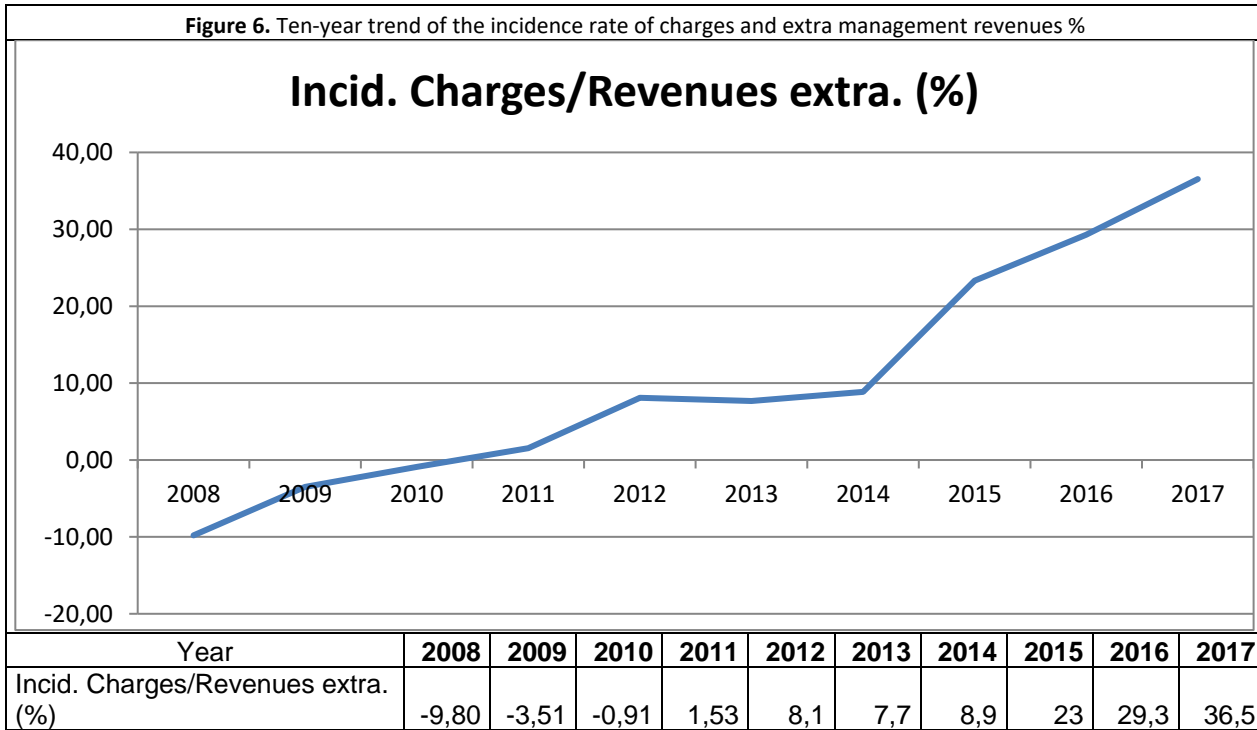
Table 5. Statistical Data Relating to Incidence Rate of Charges and Extra-management Revenues %										
Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
N. Available values	1788	1654	1908	2110	2011	2217	2511	2799	2989	2965
Available values % of 4840	36,9%	34,2%	39,4%	43,6%	41,5%	45,8%	51,9%	57,8%	61,8%	61,3%
Minimum value	-475,48	-489,34	-488,35	-493,13	-486,44	-499,19	-499,9	-497,88	-492,67	-469,43
Maximum value	395,69	416,7	471,06	400,48	455,43	464,43	432,79	491,82	347,32	470,16
Variation range	871,17	906,04	959,41	893,61	941,87	963,62	932,69	989,7	839,99	939,59
Arithmetic average	**-9,80**	**-3,51**	**-0,91**	**1,53**	**8,09**	**7,68**	**8,85**	**23,32**	**29,29**	**36,53**
Median	9,59	14,05	15,01	16,37	19,19	19,45	22,58	34,54	42,46	48,67
Average deviation	59,74	53,32	53,54	50,23	51,42	48,29	47,30	41,34	37,01	33,72
Variance	8676,21	7824,37	8164,92	7080,78	7136,70	7011,90	6854,13	5170,55	3933,81	3451,61
Standard deviation	**93,15**	**88,46**	**90,36**	**84,15**	**84,48**	**83,74**	**82,79**	**71,91**	**62,72**	**58,75**
% Std. dev. on the Avarage	-9,50	-25,24	-99,49	54,87	10,44	10,90	9,35	3,08	2,14	1,61
Asymmetry	-2,09	-2,68	-2,18	-2,59	-1,72	-2,45	-2,78	-2,79	-3,33	-3,32
Pentenist distribution										
Absolute values										
In Group E=	138	106	131	133	128	124	147	143	155	123
In Group D=	166	145	132	177	191	186	194	210	192	340
In Group C=	984	982	1142	1208	1142	1350	1529	1725	1787	1743
In Group B=	483	412	488	573	520	527	619	689	837	737
In Group A=	17	9	15	19	30	30	22	32	18	22
Totale	1788	1654	1908	2110	2011	2217	2511	2799	2989	2965
Values %										
In Group E=	8%	6%	7%	6%	6%	6%	6%	5%	5%	4%
In Group D=	9%	9%	7%	8%	9%	8%	8%	8%	6%	11%
In Group C=	55%	59%	60%	57%	57%	61%	61%	62%	60%	59%
In Group B=	27%	25%	26%	27%	26%	24%	25%	25%	28%	25%
In Group A=	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Focusing on the evolution of the average value of the incidence rate of charges and extra-management revenues, we see a steady growth, from the negative values of the first years up to 2017 (Figure 5), with a range of more than 46 points percentages, between a minimum of -9,80% in 2008 and a maximum of 36,5% at the end of the decade. The mean of the arithmetic average over the decade is 10,11%.

Figure 6. Ten-year trend of the incidence rate of charges and extra management revenues %

Incid. Charges/Revenues extra. (%)

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Incid. Charges/Revenues extra. (%)	-9,80	-3,51	-0,91	1,53	8,1	7,7	8,9	23	29,3	36,5

Source: AIDA data processing

The constantly increasing trend of the average of the analyzed index is symptomatic of a significant reduction in the absorption of income resources of non-typical and extraordinary management. Most probably, it has affected the lowest cost of money due to European monetary policies, considering that financial costs often negatively characterize the income accounts of Italian companies, especially those that require significant investments in fixed assets and therefore are characterized by a more rigid management.

Conclusion and implication

Despite some typically internal problems, Italy remains an emblem of tourist countries with ever-increasing visitor inflows (Oɴᴛ, 2018).

The accommodation supply is articulated and is affected by recent trends that favor alternative structures to traditional ones. However, despite a slight reduction, the hotels remain numerous and can oppose local competition by providing better services (Petrella & Torrini, 2018).

This quantitative study highlighted the trend of profitability from the years of the global economic crisis to recent times, making use of the critical analysis of the trends of five financial indicators that characterize the large sample used.

In brief, the first hypothesis (H1) is certainly confirmed: the global economic crisis has reduced company profitability, especially in 2009. The detailed analyzes presented reveal that the reaction of Italian accommodation facilities aimed at survival has allowed strategies to encourage the

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recovery of profitability in subsequent years (H2).

These statements derive from the answers to the initial research questions. The quantitative analysis of the evolution of the main income ratios (RQ1) showed the progressive increase in profitability (RQ2) due to a greater profit on sales, this is even considering that there are more numerous hotels that offer better services and can therefore propose higher prices to a wealthier clientele. The increase in profitability must also be ascribed to the lower incidence of extra-management charges presumably deriving from lower passive interests, considering the European monetary policies for the development of investments that have reduced the reference rates (RQ3) to historic lows. This study may have further developments, also analyzing other profitability ratios (for example, EBITDA/Sales) and those of productivity (Per capita revenues, Per capita added value, Work cost per employee, Return on employees) etc.

Studies related to financial indices (especially leverage) to be linked to economic ones can also be very useful to confirm the outlined interpretative hypotheses that assign to the lesser financial charges one of the significant causes of increasing the overall profitability of the company.

In the future, it will also be necessary to consider that Italian tourism companies are organizing themselves into networks of companies to favour the territorial marketing of tourist destinations (Migliaccio *et al.*, 2018).

The main limitation of this study is its almost exclusively quantitative nature based on balance sheet data of hotels with at least € 800.000 in turnover. If the sample also extends to smaller hotels, especially those with a family size that are numerous, there may be a more accurate picture of the Italian situation. Balance sheet considerations should then also be integrated with qualitative analysis, also intercepting variables that are notoriously not considered in the context of economic and financial reporting. Furthermore, everything should be related to an interdisciplinary evaluation, considering that tourism dynamics must conform to higher ethical values as correctly, recently affirmed. (Nicolaides, 2018a; 2018b, 2018c; Ramphal & Nicolaides, 2018; Nicolaides & Grobler, 2017).

The study proposed in this publication could have different implications.

It can certainly be useful for the development of empirical research relating to public or private companies, if it is possible to have data for at least a decade. It favors data-based analyses and therefore develops a culture of comparison, favoring the identification of possible disadvantages of the single company compared to the sector average. In this way, the importance of the financial statements for management purposes is re-evaluated to create appropriate strategies to respond to crises or even growth and development.

Moreover, it can also be useful for the legislator who can make decisions using significant information. It also contributes to the knowledge of the Italian situation which, however, can be considered a useful reference for all countries that want to develop tourism.

This study is part of a larger project that aims to analyze the performance of Italian companies before, during and after the economic crisis of 2018.

In addition to the mentioned papers of Iovino & Migliaccio (2018a & 2018b) related to tourism, the project has investigated the Italian cooperative companies (Fusco & Migliaccio, 2015, 2016a, 2016b, 2018, in press), with particular attention to social cooperatives that they manage social-assistance residences for old people (Migliaccio & Losco, 2018). More recently, a similar methodology, *mutatis mutandis*, has also been extended to joint-stock companies of various sectors relevant to the national economy: plastic (Migliaccio & De Blasio, 2017), tanning industry (Migliaccio & Arena, 2018), energy (Iovino & Migliaccio, in press, a & b). In the future, research results are expected for *inter alia* social enterprises and the football industry.

The ambitious goal of the project is to develop a cross-sectoral comparison to evaluate the differences and similarities that could lead to focusing on the most successful strategies which could turn out to be useful in the unfortunate hypothesis of a new crisis emerging.

Acknowledgments

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