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EXCLUSIVE HOTEL INVESTMENT IN CANYAMEL

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Index

<i>I. Introduction</i>	6
<i>II. Limitations</i>	7
<i>III. Objectives</i>	7
<i>IV. Description of the hotel</i>	8
<i>V. Methodology</i>	9
<i>VI. Results</i>	10
Net Present Value	10
Internal Rate of Return.....	19
Payback Period.....	20
Scenario analysis	21
<i>VII. Findings and conclusion</i>	22
<i>Bibliography</i>	24
<i>Annex</i>	26

Tables, Figures and Images Index

Tables

Table 1: Ground prices.....	11
Table 2: Total investment	12
Table 3: Financial resources	12
Table 4: Cost of capital	14
Table 5: Price	14
Table 6: Total sales	15
Table 7: First cash flow sales.....	15
Table 8: GOP and growth	17
Table 9: Cash flow year 1 and 2.....	17
Table 10: Cash flow year 3 and 4.....	18
Table 11: Cash flow year 5	18
Table 12: Net Present Value.....	19
Table 13: Internal Rate of Return.....	20
Table 14: Payback period	21
Table 15: Scenarios.....	22

Figures

Figure 1: Hotel Occupancy Survey, Total, Guests, Autonomous Communities and Cities.....	16
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Images

Image 1: Location of the hotel.....	8
Image 2: NPV and IRR Formula.....	10
Image 3: Payback formula	10

Abstract

The objective of this thesis is to enlighten the steps to follow concerning the investment for an exclusive four-star hotel. It analyses not only the Spanish market, but the Balearic, more precisely. This project uses different data of the hotel industry, such as the hotel prices index, the occupation rate and the gross operating profit, so as to estimate the five first cashflows. Its aim is to answer some of the main questions when it comes to an investment project: should it be accepted? Will it be profitable? What if it goes wrong? How successful could it be? In the means of making a successful and profitable investment, various indicators will be computed. In the first place, the net present value can be obtained thanks to the cashflows, when showing a positive result, it should be accepted. Following, the internal rate of return (TIR), answers the second question. Finally, the payback period will show when the investment is fully recovered using the accumulated cashflows. Lastly, the scenario analysis shows two different possible pathways, in response to the last two interrogatives. The report concludes with a positive outcome from the previous findings.

Resumen en español

El objetivo de este trabajo es ilustrar los pasos a seguir referidos a un proyecto de inversión de un exclusivo hotel de cuatro estrellas. Analiza, no solamente el mercado español, sino el balear de forma más precisa. Este proyecto utiliza diferentes datos de la industria hotelera, como son el índice de precios hoteleros, la encuesta de ocupación y el beneficio de explotación bruto, con el fin de estimar los primeros cinco flujos de caja. Su propósito es contestar a las siguientes preguntas: ¿Debería ser aceptado? ¿Será beneficioso? ¿Qué pasa si sale mal? ¿Cómo de exitoso puede llegar a ser? Con el fin de realizar una inversión exitosa y beneficiosa, se calcularán varios índices. En primer lugar, el valor neto actual se obtiene a partir de los flujos de caja, y será aceptado si muestra un resultado positivo. Después se calcula la tasa interna de rentabilidad (TIR). Este indicador contesta a la segunda respuesta. Finalmente, el periodo de recuperación mostrará cuándo se recupera totalmente la inversión utilizando los flujos de caja acumulados. Por último, se estimarán dos posibles escenarios para contestar las dos últimas preguntas. El informe concluye con un resultado positivo respecto a los hallazgos anteriores.

I. Introduction

One of the reasons I have chosen this topic is because I think this is the most important and specific part, estimating the initial investment and future return, before creating a company. However, this was not my first option (it was a marketing topic). Now, I really think this is going to help me to learn more about the studies of viability and maybe it can be part of my future job.

From this essay, I expect to learn a lot in terms of computation, bank loans, founding a business, in this case, a luxurious hotel next to the beach. Therefore, I am creating it, instead of analysing an existing one.

II. Limitations

The room prices per night were from 2016 and therefore I updated them by checking the evolution of ground prices in the Balearic Islands and using the computed variation as a growth rate.

The beta of my company does not exist due to the fact that this company is not created, neither listed, nor has historical data, and I had to take a preestablished Beta of the hotel and gaming sector. Following this estimation, another limitation can be found: it is based on the American market (United States). Although this rate does not refer to Spain, it is the most accurate one for computation purposes, estimating its validity in Spain as in the US.

For the bank loan, I could not compute the interest at the website's simulator, because you need to be an already enrolled client. Consequently, I visited different banks: BBVA, La Caixa, Banca March and BBVA, from which BBVA and La Caixa could not simulate my request due to the fact that you need to have an account at the bank, due to the fact that their loans are personalised based on your risk. Therefore, in the text will only appear the comparison among three institutions: Bankia, Banca March and the Official Credit Institute.

In order to determine the costs, so that the final cash flow could be computed, the data needs to be broken-down using the gross operating profit percentage. The evolution of this rate is going to be estimated thanks to the Hotel Prices Index. There is a limitation concerning the GOP computations, because the base rate is nation-wide, while the evolution of the Index is regional, only affecting the Balearic Islands.

Also, when computing the final cash flow of the different years, there has to be made an adjustment, which comprehends an investment intended for maintenance and repair. This rate, which obtained from the Ernst and Young report is 2,6%, is based on the following assumptions:

- It does not change over the years during its use for computation purposes.
- It is the same rate for the Balearic Islands as it is in Spain.

The chosen occupation rate is the regional rate. However, it does not correspond to the monthly average occupation. Therefore, for the first cash flow computation, the monthly occupation rate is going to be used, so that the total can be established by adding together the monthly results. This is going to give a different average value of the occupation in the Balearic Islands, but it will be more precise.

III. Objectives

In order to have an overview concerning the main aspects of this essay, the main objectives are enumerated below:

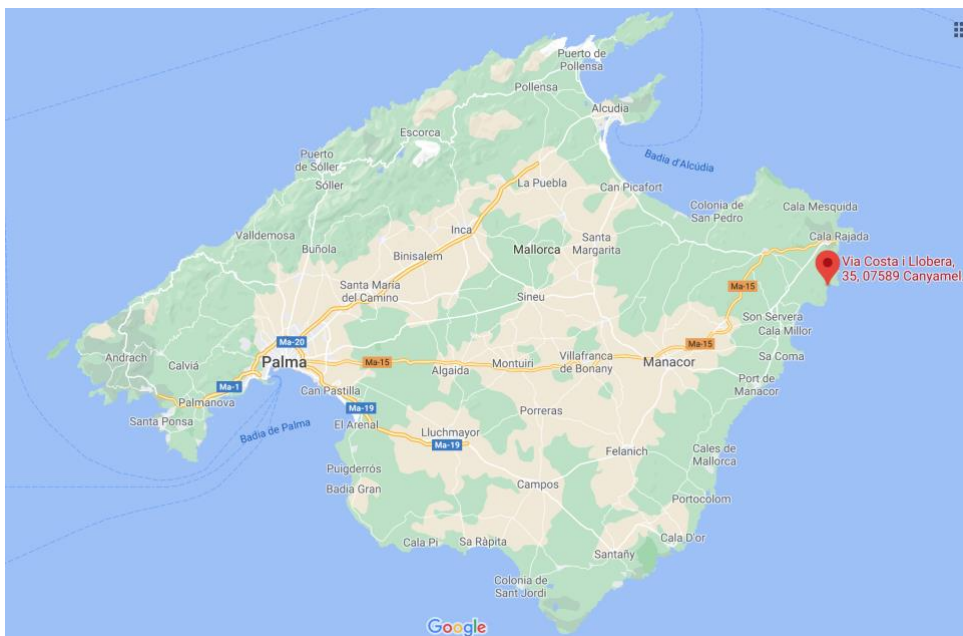
- a) Compute the investment cost**
- b) Determine the cost of capital**
- c) Estimate net fixed cashflows**

- d) Analyse business valuation criteria: NPV, IRR and Payback period
- e) Pessimist and optimist scenario analysis

IV. Description of the hotel

The hotel is located in Canyamel, a small village near the beach in the eastern part of Mallorca. The exact address is Via Costa i Llobera, 35, 07589, Canyamel Illes Balears. It takes one hour by car from the airport, a few more minutes from Palma's port and 45 minutes from the port of Alcudia. It is an exclusive luxurious four-star hotel with a total of 32 rooms divided into double rooms and suites of different categories. It has all kinds of luxury amenities, such as, a spa, a gym and a beauty salon. Moreover, it offers direct access to the beach and has its own signature restaurant.

Image 1: Location of the hotel



Source: Google maps

More to say about the location is that there is not only a white-sand beach with palm trees and crystal-clear water, but many other tourist attractions. Canyamel is a part of Capdepera, where you can find the old castle, from the 13th century, where Jaume II, son of Jaume I “the conqueror”, lived in. Moreover, it held protection from pirates, thanks to the extremely wide sea view from the roof (Castell de Capdepera, n.d.). In addition, you can visit nearby villages and its historical parts and monuments. For example, close to Canyamel, there are the Arta caves, in which it is possible to discover stalagmites and stalactites. Along the coast are other caves and lookouts, as well as other beaches. If you prefer, you can do some more adventurous activities, such as, going hiking or practicing water sports. You can hire a jet ski, surfboards, snorkelling devices, among others, from the hotel. Furthermore, there is an exclusive golf club in Canyamel with an agreed pick-up service from and to the hotel. You can enjoy a golfing journey and have lunch at their magnificent restaurant, later go to the beach and

end the day having a candlelight dinner on the hotel's terrace, while listening to the sea and watching the stars.

There is only one main building, where everything comes together: the reception, the kitchen, the restaurant and a meeting room are located at the ground floor. There is also a large garden with an infinity pool and sitting areas, the terrace of the restaurant and the private access to the beach of Canyamel. Floors one to five comprehended the rooms and suites. The Spa is located under the ground floor, where also the gym is situated and therefore also dressing rooms, as well as the beauty salon. The land where the hotel was built has a soft inclination, making possible the entrance, and exit, from and into the garden and to the beach access, as well as lots of natural light entering the underground floor, making it a comfortable and relaxing space.

The double rooms, of which seven of them have sea view and the other twelve do not, are equipped with a king size bed or two single beds, each room has a free safety box, TV and a private bathroom with a bathtub. They are located in the different floors of the building. Then, there are the suites, which include the mentioned features adding some benefits, for instance, room service, a bigger space and all of them are facing the seaside. There are seven junior suites, four deluxe suites, including a private jacuzzi on their terrace, and only two Royal suites at the top floor incorporating a private sauna and a larger jacuzzi on a bigger terrace.

The restaurant is specialised in fusion kitchen and offers a diverse "à la carte" menu. Each dish provides a mixture of the Mediterranean gastronomy, combined with Latin flavours and Asian cuisine. It has received numerous awards and it is well-known in the region. Besides, it promotes the consumption of local products, not only in terms of food, but also wine. It is possible to order almost any wine from Mallorca or to pre-order it, so that it can be brought to the guest within a few hours. In addition to this, there is a special brunch every Sunday on the terrace. Not only guests can book and enjoy this option, but also day-visitors have the possibility to relax in front of the sea, while tasting a range of different specialties.

V. Methodology

This investment project concerns the viability of a hotel located in the eastern part of Mallorca. The region Canyamel is known for its beaches and nearby activities. It is a matter of fact that the Balearic Islands are a mature tourism destination. Therefore, the hotel project to be analysed envisions an all-year-round open hotel, not intended only to sun and beach tourists, but to different segments. Moreover, the luxury of its amenities enforces a different kind of visitor, from a more upper class, far from cheap tourism, as it has been focused on during decades.

In order to determine the profitability of the investment of the hotel, there are three different indicators that are going to be computed and analysed. These are the Net Present Value (NPV), the Internal Rate of Return (IRR) and the Payback period. Before computing these indicators, it is mandatory to obtain the cashflows for the analysed period, five years, in order to be able to compute the named

indexes. The cashflows are broken down much more complexly than just operating sales minus costs. It involves many other aspects such as the amortization, taxes and repair and maintenance costs (which is a fixed rate from the sales). Once the different cash flows have been obtained, the indicators can be calculated.

The NPV computes the present value of the estimated future cashflows, so that it is a useful measurement to accept or decline the investment (Farlex Dictionary, 2012). Following, the IRR uses the previously computed NPV equal to zero in order to obtain an approximation of the expected return of investment (Sevilla, n.d.). The next image provides the formula, which is the same for both. In the first case, the NPV would be the computed value, while in the second one it would be “r”.

Image 2: NPV and IRR Formula

$$NPV = \sum_{i=1}^n \frac{Cash\ Flow_i}{(1+r)^i} - Initial\ Investment$$

Image: Cheusheva, 2021

After, the Payback period is going to show the time that it is foreseen to take the total to recover the initial investment. Concerning the formula, a is the period before recovering the investment. I₀ is the initial investment, “b” is the sum of cashflows until the end of period “a” and F_t is the cash flow during the period where the investment is fully recovered (Velayos, n.d.).

Image 3: Payback formula

$$Payback = a + \frac{I_0 - b}{F_t}$$

Image: Velayos, V (n.d.)

Lastly, two different evolution possibilities are going to be computed, so that one option reflects a well-developing investment, while the other option generates very low to no income at all.

VI. Results

Net Present Value

In first place the Net Present Value is going to be computed. Thanks to the breakdown of the different cashflows concerning the NPV, the Internal Rate of Return and the Payback period can be found out afterwards.

The NPV method is based on the fact that you cannot compare cashflows with different timing. For this reason, you need to compute the net cashflows at a

present value, so that the comparison among them is accurate. This will make possible determining whether the investment is going to be profitable or not, helping in the decision-making process of rejecting or accepting it. Once the current value of each cash flow is computed, they need to be added together. When this quantity is defined, it can be checked that it is bigger than the initial investment, meaning that subtracting the initial investment from the obtained amount, will result in a positive outcome (Farlex Dictionary, 2012).

In fact, there are three possible outcomes based on these calculations. The net present value can be bigger, smaller or equal to zero. In case it is smaller than zero, the project should be rejected, because the current value is negative, meaning that there will not be any kind of profit from the investment. If the result is zero, it means that carrying out the project or not does neither lead to losses nor to benefits. In any case, this should also be rejected, due to the fact that the investment will not provide profit and it will be time consuming. Hence, it does not make any sense carrying out this investment. The best result is a positive NPV and, in the event of a comparison within different projects, the one with the highest net present value is going to be chosen. (Velayos, n.d.)

The components of the net present value are *A*, *K*, *Q*. In first place, *A*, stands for the cost of the investment, not taking into account the bank loan. *K* is the cost of capital, which comprehends the paid interests based on the loan. Lastly, *Q* is going to be computed, which symbolises the estimated cashflows during a 5-year analysis (Velayos, n.d.).

First of all, it is necessary to determine the **total investment** for the project: opening a new hotel. Based on the list of prices per region of a four-star hotel, Canyamel's cost per stay is 75.902 euros (El Económico, 2016). Due to the fact that this is the computation of 2016, there has been made an adjustment of 4,43%, according to the Ministry of Transport, Mobility and Urban Agenda. The variation of ground prices between 2016 and 2019, has increased to the amount of 90.271,41 per room. The formula to determine the ground prices' evolution is the interest equal to $(4 \sqrt{(2019/2016)}) - 1$. Coming to the following result, where $4 \sqrt{\quad}$ is the data of 2019 by 2016 high $\frac{1}{4}$, the final value is 4,43%. Now, this percentage needs to be multiplied by the room costs per night, high 4, because that is the number of years between 2016 to 2019. All of this leads to an increase in the average room costs, whose new value is 90.271,41 euros.

Table 1: Ground prices

2.016 (trimester)				2.017 (trimester)			
1st	2nd	3rd	4th	1st	2nd	3rd	4th
226,0	244,2	256,8	237,0	266,3	274,2	256,0	266,3

Source: Ministerio de Transportes, Movilidad y Agenda Urbana

2016 average value	241,0
2017 average value	265,7

Source: own elaboration

2.018 (trimester)				2.019 (trimester)			
1st	2nd	3rd	4th	1st	2nd	3rd	4th
263,7	273,0	258,5	262,4	276,5	285,0	298,9	286,1

Source: Ministerio de Transportes, Movilidad y Agenda Urbana

2018 average value	264,4	0,044297543	4,43%
2019 average value	286,6	Growth rate	1,19

Source: own elaboration

As the hotel comprises a total of 32 rooms, the updated costs need to be multiplied by the total room number, leading to a total investment of 2.888.685,64 euros. From this amount, 39,42% (1.138.685,24 euros) are part of the intern sources of finance and the left 60,58% belong to the external funding. This means, a bank loan worth 1.75 Million is needed. The computation justification is shown below:

Table 2: Total investment

Investment cost (2016) Canyamel:	75.902,00
Growth rate	1,19
Total investment 2019 per room	90.271,41
Number of rooms	32
TOTAL INVESTMENT	2.888.685,24

Source: own elaboration

Table 3: Financial resources

External resourcecs	60,58%	1.750.000,00
Shareholders' equity	39,42%	1.138.685,24

Source: own elaboration

The external resources, which is the bank loan, should have a weight between 55% and 70% of the investment. In this case, the weight they have is nearly 61%, which is kind of in the middle of both values. It is to underline, that only the intern sources of finance are going to be taken into account when computing the net present value. This is because it is to avoid the double-financing effect, which is paying twice the interest rate of the bank loan: once to the bank and a second time with the cost of capital. This amount is the shareholder's equity, which is represented by A, being 1.138.685,24 euros.

In second place, the **cost of capital** (K) is going to be computed. K is the mean value between the part of internal sources and external financing by the percentage each one represents in the investment (Farlex Dictionary, 2012).

For the internal financing it is necessary to apply the Capital Asset Pricing Model (CAPM). This model calculates the cost of capital using the beta of the company, the market rate and the free-risk rate. (Kenton, 2021).

The beta of a company is the risk measure of that company compared to the market as a whole. The beta coefficient is the relation of the covariance of the market return and the investment return to the variance of the return of the market (Kenton, 2021). The covariance shows how changes in the market's return affect the company's return rate, while the variance shows how much the market rate differs from its average measurement (Kenton, 2021). Nonetheless, only listed firms happen to have a beta and it requires historical data from the firm. This project does neither happen to be listed nor to have the required data in order to calculate the beta of the company. Therefore, the used beta is a created one by NYU Stern concerning the hotel and gaming sector, being 1,56 (NYU Stern, 2021).

The risk-free rate is going to be based on the Spanish 30-year bond, which holds 1,126% on the day of computation, the 16th February (Investing, 2021). The market rate is an indicator that estimates the expected profitability when investing in a company. The Return on Equity (ROE) shows the gained profit from the investment. This data is obtained at the Spanish Central Bank homepage, being led to different rates and how many companies are part of the different market rates. For the computation, a market rate of 18% is going to be used. In the table below it is broken down how these resources come up to 27,45%.

The external resources refer to the bank loan. After comparing different options, including Bankia, Banca March and the ICO (Official Credit Institution) credit lines, the most bearable option is to sign the loan-contract with Banca March. This decision implies an amortization period of 25 years, which is five years longer than the ICO option but also a shorter term than Bankia's possibility concerning 30 years. However, the effective interest rate is fixed at 4,23%, lower than Bankia's 4,92% and ICO's 5%. Moreover, it already includes the commission (1%), while the other two did not. To compute K , the 4,23% are going to be adjusted by the corporate tax at the general rate, 25%.

The previous data makes a total cost of capital, K , of 12,74%. This percentage is formed by the internal sources (27,45%) multiplied by its total weight on the investment (39,45%) and then added to the external resources (3,17%) times its weight (60,58%).

Table 4: Cost of capital

K			
Intern	27,45%	Weight	39,42%
Risk free rate	1,13%		
Beta	1,56		
Market rate	18%		
CAPM: $r_f + \beta(r_m - r_f)$	27,45%		
Extern	3,17%	Weight	60,58%
Bank loan interest	4,23%		
Corporate tax	25%		
$i^*(1 - \text{corporate tax})$	3,17%	Total K	12,74%

Source: own elaboration

Lastly, the Q, which are the different **cashflows**, is going to be estimated. For the purpose of computing the different cashflows over five years, many aspects need to be considered. Overall, a cash flow is the net amount of the difference between inflows and outflows of cash and cash-equivalents that enters or leaves an enterprise (Velayos, n.d.).

For the first year, the costs need to be subtracted from the sales, which are going to be the number of rooms times the price, among other factors explained in the following paragraphs. For this reason, it is to decide the price per room per night that is going to be charged. In order to establish a reasonable price, different four-star hotels in Canyamel have been compared. The table below shows the average price that was obtained and is going to be used in the sales estimation. As it is shown below, the three different hotels that have been analysed are a “cheap” one, a pricy one and a hotel that is located in the middle of both of them in terms of price. This average value is going to be the price per room per night for the hotel.

Table 5: Price

	Double	Double SV	Junior	Deluxe	Royal
<i>Hotel 1</i>	178	198	258	313	424
<i>Hotel 2</i>	223	243	295	357	504
<i>Hotel 3</i>	192	212	267	338	489
Average	198	218	273	336	472

Source: own elaboration

Following, once the price is established, to know the annual sales, the total number of rooms needs to be multiplied by each price and 365. This is based on the supposition that the hotel remains open throughout the year and that the price

does not change during the winter months. This can be explained by the fact that the hotel does not target sun and beach tourists, it targets consumer groups who travel also during the low-season months to Mallorca, in order to enjoy other activities or to relax near the sea.

Table 6: Total sales

	Rooms	Price	Amount/night	Days
				365
Double Rooms NSV	12	198 €	2.372 €	865.780 €
Double Rooms SV	7	218 €	1.524 €	556.138 €
Junior Suites	7	273 €	1.913 €	698.367 €
Deluxe Suites	4	336 €	1.344 €	490.560 €
Royal Suites	2	472 €	945 €	344.803 €
Total	32		8.098 €	2.955.648 €

Source: own elaboration

Then, it has to be adjusted to the occupancy rate. According to the IBESTAT, the total occupancy rate in Balearic in 2019, for four-star hotels, was 76,48%, but this value did not match the average of the 12 months, which was 64,14%. In order to obtain a more realistic rate and sales forecast, every month's occupancy is going to be taken into consideration for the computation of the first cash flow (see annex). (IBESTAT, n.d.)

Table 7: First cash flow sales

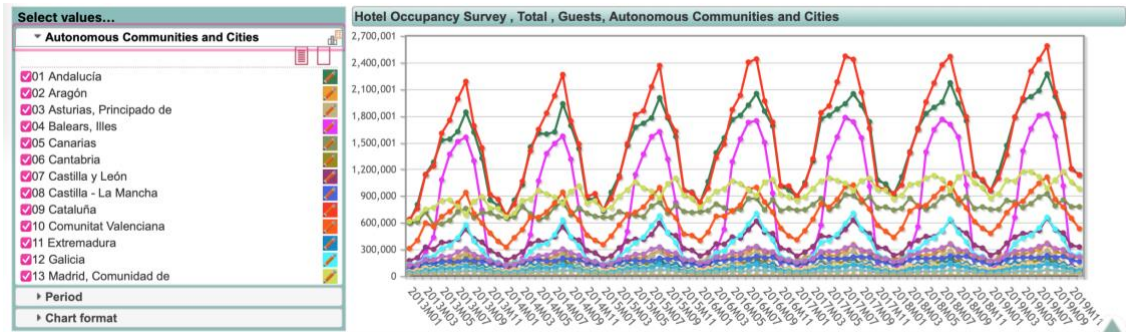
TOTAL
1.898.508,48
1.293.044,42
31,89%
605.464,06

Source: own elaboration

For the first cash flow, the sales rose up to 605.464,06 euros. Then, the costs are going to be obtained thanks to the GOP (Gross Operation Profit) indicator. The GOP is the difference between the income and outcome from tourism services and it is integrated into the Revenue Management department (IHCS, n.d.). In spite of the fact that there is no costs estimation relatable to this hotel, the Ernst & Young report provides the average gross operation profit from 2013, which was 24,5% in for-star hotels in Spain. However, the rate has to be updated, so that it is a relatable value for the following calculations. For this, an approximation is going to be used. The first GOP is at national level, but the following ones are going to be computed regionally, in order to obtain more accurate computations, according to the data from IBESTAT. This approximation is established based on

the fact that the Balearic Islands are one of the largest tourist destinations in Spain, so it is shown using the pink line at the graph below, being their occupancy higher than the average in Spain (INE, 2021), leading to increased sales and a higher GOP. (La Informaición, 2019).

Figure 1: Hotel Occupancy Survey, Total, Guests, Autonomous Communities and Cities



Source: INE

Therefore, at IBESTAT the data about the evolution of the Hotel Prices Index in the Balearic Islands is going to be consulted. After computing the average growth of the index, which is 3,84%, the GOP in 2019, following this formula $24,5\% \times (1+3,84\%)^7$, results in 31,89%. After, the GOP and the sales for the following cashflows can be obtained, using 3,84% as the annual growth rate (see Annex) (IBESTAT, n.d.).

As a means of obtaining the EBIT (Earnings Before Interest and Tax), the amortization has to be subtracted (La Informaición, 2019). The building, according to the Spanish Corporate Law and the General Accounting Plan, depreciates in a maximum period of 50 years. In this case, the amortization quota is going to be the total investment (2.888.685,24) by the total number of years (50), resulting in 57.773,70. Following, the corporate tax will be deducted. In Spain, the general rate gets established every year, but in the last years it has not been changed, being its current rate 25%. Nevertheless, during the first two years of a business, this is reduced from the general rate of 25% to 15%. For both cash-flows of the first two years, the computed rate is going to be 15%.

This leads to the Earnings After Tax, where the amortization needs to be added again, resulting in an estimation of the first cash flow, Q. After making an adjustment, the Q of the final cash flow of the first year is drawn forth. The made adjustment refers to the maintenance and repair investment (La Informaición), 2019, which, according to the Ernst & Young report from 2014, is 2,6% of the total sales. This shows that in Spain, generally the hotels invest 2,6% of their sales into maintenance and repair (Ernst & Young, 2015). Once more, it is going to be based on the supposition that it is the same amount in Spain as in the Balearic Islands. This rate is going to be applied to every cash flow, based on the supposition that it does not change during the different periods of computation.

During the following years, for each cash flow there will be a growth on the gross operating profit. This rate is going to be estimated using data from IBESTAT, based on the Balearic Islands.

Table 8: GOP and growth

GOP 2013	24,50%
GOP 2019	31,89%
GOP Q2	33,12%
GOP Q3	34,39%
GOP Q4	35,71%
GOP Q5	37,08%
Variation	3,84%
Growth	1,30

Source: own elaboration

The sales are going to show an increase by the growth rate obtained from the evolution of the gross operating profit data from IBESTAT, 3,48%. So is going to do the GOP, also 3,48% growth. Thanks to the reduction of the tax, the first two years the cashflows are going to be 157 thousand and nearly 170 thousand euro.

Table 9: Cash flow year 1 and 2

Q		Q1	Q2
Sales	3,84%	605.464,06	628.704,98
(Costs)	Sales x GOP	412.372,10	420.504,72
GOP	3,84%	31,89%	33,12%
(amortization)	57.773,70	57.773,70	57.773,70
EBIT		135.318,26	150.426,55
(tax)	15%	20.297,74	22.563,98
EAT		115.020,52	127.862,57
Amortization	57.773,70	57.773,70	57.773,70
Q*		172.794,22	185.636,28
(adjustment)	2,60%	15.742,07	16.346,33
Total Q		157.052,16	169.289,95

Source: own elaboration

The next two years the cashflows are going to be broken down following the same procedure as previously, except for the tax, which is going to be increased to the general rate at 25%, leading to the following cashflows:

Table 10: Cash flow year 3 and 4

Q	Q3	Q4
Sales	652.838,02	677.897,41
(Costs)	428.347,33	435.841,66
GOP	34,39%	35,71%
(amortization)	57.773,70	57.773,70
EBIT	166.716,99	184.282,05
(tax)	41.679,25	46.070,51
EAT	125.037,74	138.211,53
Amortization	57.773,70	57.773,70
Q*	182.811,44	195.985,24
(adjustment)	16.973,79	17.625,33
Total Q	165.837,66	178.359,91

Source: own elaboration

The final cash flow does not mean the end of the business. What is more, under the principle of “on-going concern” established in the General Accounting Plan the fifth cash flow implies a residual value (BOE, 2008). This value can be computed using the cash flow of the fifth year multiplied by the growth rate (g) and divided into the cost of capital (k) which is 12,74%, less the growth (g). The used growth rate is going to be 2%, due to the fact that this is the value the European Central Bank recommends the yearly inflation to be (close, but under two percent). The residual value will be 9,5, obtained by the following computation: $VR = Q_5 (1+g) / (k-g)$ (Basu, 2018). Hence, the cash flow in the fifth period used to compute the NPV, IRR and Payback period, is going to be 1.82 Million euro.

Table 11: Cash flow year 5

Q	Q5
Sales	703.918,71
(Costs)	442.923,54
GOP	37,08%
(amortization)	57.773,70
EBIT	203.221,47
(tax)	50.805,37
EAT	152.416,10
Amortization	57.773,70
Q*	210.189,81
(adjustment)	18.301,89
	191.887,92
Total Q	1.822.029,40

Source: own elaboration

As it is reflected on the different final cash flows, the third year is lower than the second one. This may be caused by the increase in the tax rate. From this period

on, the fourth and fifth cash flows are both growing, resulting in 178 thousand and 191 thousand, without considering the residual value.

All the previous computations (the A , for the total investment less the bank loan; K , the cost of capital, which is 12,74%; and Q , the cashflows of the different years) were required in order to breakdown the Net Present Value. After they have been obtained, the NPV can be computed by using the following process. Every cash flow has to be updated by the cost of capital (K) high the number of years. This means, for the first year it will be high 1, which is not necessary for the calculation, second year will be high 2, until reaching the fifth year. The following table shows how the process has been followed.

The sum of the current cashflows (1.498.891,42) is higher than the initial investment A (1.138.685,24). This makes the net present value of the investment project a positive outcome of 360.206,18, obtained subtracting the initial investment from the sum of the present cashflows.

Table 12: Net Present Value

Net Present Value						
Year	0	1	2	3	4	5
Cash Flow	- 1.138.685,24	157.052,16	169.289,95	165.837,66	178.359,91	1.822.029,40
K						
12,74%						
NPV		139.302,04	133.185,92	115.724,11	110.395,54	1.000.283,81
Sum of NPV	1.498.891,42					
NPV	360.206,18					

Source: own elaboration

Internal Rate of Return

The IRR reflects the expected annual growth of the investment. The calculus process is very similar to the NPV, previously computed. It is based on the different cashflows, analysing the sum of all of them at a discounted rate, but it considers the Net Present Value equal to zero (Fernando, 2021).

Depending on the obtained value, it is used as an indicator to whether accept or to reject the investment project. If the obtained IRR is lower than the cost of capital (K), the project must be rejected, because the profitability it holds is lower than the cost, which is the minimum accepted yield. In the event of not rejecting and operating this project, there would only be losses (Fernando, n.d.).

If the cost of capital and the internal rate of return share the same value, this leads to a “break-even” scenario, where no costs are incurred but no profit is made. In case this situation occurs, the investment may be made after improving the competitive advantage of the firm (Fernando, n.d.).

The third possibility is when the IRR is higher than the cost of capital. When this happens, it means that the project is profitable, because the profit it provides to

the investor is higher than the incurred costs. Therefore, the investment should be done (Sevilla, n.d.)

Using the “TIR” formula in Excel, where the values are the different cashflows obtained for the Net Present Value computation, the final result is 20,63%. Hence, this is an acceptable value, based on the fact that the internal rate of return is higher than the cost of capital (12,74%) and the expected profitability to be obtained from the investment is more than 20%.

Table 13: Internal Rate of Return

Internal Rate of Return						
Year	0	1	2	3	4	5
Cash Flow	- 1.138.685,24	157.052,16	169.289,95	165.837,66	178.359,91	1.822.029,40
	20,63%					

Source: own elaboration

Payback Period

The payback period is a method to determine the time it is going to take a firm to recover the initial investment. This criterion establishes a difference whether all cashflows are the same or it is to expect different results. When a project estimates the same cashflows over the years, the process to follow is to divide the total investment by any cash flow and the obtained result is the number of periods it is going to take. Nevertheless, referred to the case of this project, there are different cashflows during the analysis, leading to a different methodology (Velayos, n.d.).

Moreover, the payback period criterion is crucial when it comes to investments in an unstable environment, due to the fact that it estimates the required periods to recover the total initial investment. Thanks to the payback period, the risk of investing can be determined: when a project is risk adverse, it usually yields a lower return; when it is a risky project, the return to be expected is often much higher. Furthermore, when a project needs more time (more periods) to recover, it is a riskier investment, because it could lead to the end of it before getting back the invested money. In any case, the payback period does not take into account the profitability of an investment project (Velayos, n.d.).

For this hotel project, the obtained payback period is between the fourth and the fifth year. This is because, from the investment of nearly 1.14 Million euro, every year their produced cash flow is going to be subtracted. In the fourth year, the accumulated cash flow will be, still, a negative value of 468.145,58 euros. Nevertheless, in the following year, it will add up to 1.3 Million euros. In order to determine a concrete moment of time where the investment will be recovered, the negative accumulated cash flow will be divided into the cash flow of the fifth year. Applying the detailed formula in the methodology, where “a” is 4; I_0 is 1.138.685,24; F_t is 1.822.029,4 and “b” is 468.145,58 (Velayos, n.d.), this makes the exact payback period four years and three months.

Table 14: Payback period

Year	Cashflow	Accumulated CF
0	- 1.138.685,24	- 1.138.685,24
1	157.052,16	- 981.633,09
2	169.289,95	- 812.343,14
3	165.837,66	- 646.505,48
4	178.359,91	- 468.145,58
5	1.822.029,40	1.353.883,82

Between year 4 and 5:
3,63
4 years and 3 months

Source: own elaboration

Based on the principle of on-going business, it is to expect that the investment project will last longer than only five years (BOE, 2008). It depends on the number of years that this business will be operating, that the project can be qualified as a “good” or “bad” investment. If it were only five years, and it takes more than four to recover from the initial investment, this project would not be preferable. Nonetheless, if the business lasts 50 years the recovery has been fast and successful. Moreover, the building would be fully amortised.

Scenario analysis

In the following section, the scenario analysis is going to be computed. This economic method helps to establish different points of view when it comes to estimating business performance. In spite of involving the base scenario, which usually is the most likely to happen, it creates two (or how many more it is wished to analyse) different scenarios based on suppositions. In this project, the two additional estimated scenarios are going to be an optimistic and a pessimistic one. The suppositions underlying a positive perspective include more sales than expected, maybe due to a higher occupation or to external factors, such as the risks involved in travelling to other destinations, so that more tourists come to this one and hence, the hotel receives more guests (Scott, 2020).

The pessimistic approach focuses on more unpredictable factors. For instance, a financial crisis affecting the origin countries of the clients, natural catastrophes or accidents will lead to less travellers and for this reason, the hotel would sell less rooms than on a normal situation. Generally, these factors are not the business’s fault, unless it is due to bad managerial activities (Scott, 2020).

Concerning this investment project, both scenarios are based on the cash flow of the first year, and from then on, there are two approaches. The first scenario is an optimistic estimation, where costs will decrease seven percent, and sales will increase up to 17%. While the pessimist scenario involves less and less sales

each year, reaching minus 14% and a growth in costs, up to an increase of nine percent. The reduction in costs is linked to the “economies of scale”, where more sales mean spreading the fixed costs among a larger outcome, minimising the costs. On the contrary, the boost is often associated to other costs in order to improve performance, for example, a greater investment in international advertising.

Regarding the initial cash flow, for the first year it was 157.052,16. Followingly, it is broken down how the business would evolve in both cases.

Table 15: Scenarios

OPTIMIST SCENARIO		PESSIMIST SCENARIO	
17%	708.392,95	-14%	520.699,09
-9%	375.258,61	9%	449.485,59
Amortization	57.773,70	Amortization	57.773,70
EBIT	275.360,64	EBIT	13.439,80
25%	68.840,16	25%	3.359,95
EAT	206.520,48	EAT	10.079,85
Amortization	57.773,70	Amortization	57.773,70
Q*	264.294,18	Q*	67.853,56
Adjustment	18.418,22	Adjustment	13.538,18
Final Q	245.875,97	Final Q	54.315,38

Source: Own elaboration

After the analysis, these two scenarios will lead to a final cash flow of 245.875,97 and 54.315,18 respectively. The difference between the first year and a possible good second is nearly 90.000 euros, making a variation of 56,56%. By contrast, the difference to a bad performance is a little more than 100.000 euros, leading to a negative variation among both years of 65,42%.

VII. Findings and conclusion

Concerning the location of the hotel, beach of Canyamel, and the type of business, an exclusive four-star hotel with 32 rooms, an investment of 2.888.685,24 is needed. This investment will be split into shareholder’s equity (39,42%) and a bank loan worth 1,75 Million euro from Banca March, whose effective interest rate is 4,23% to be paid in 25 years.

The different rooms are divided into categories (double rooms, Junior suites, Deluxe suites and Royal suites), whose occupation define the first cash flow, which has been broken down monthly whilst the following ones used the annual rate. Moreover, each year there was a small growth of 3,84% on the sales and

the gross operating profit. All of this has led to positive cash flows of 157 and 169 thousand the first two years and, after increasing the corporate tax, 165 and 176 thousand euros the next two years. The last cash flow is an estimation based on the principle of ongoing business adjusted at a residual value of 9,5, which has led to the fifth-year cash flow being 1,82 Million euro.

For the Net Present Value, the cost of capital was computed using the average weight on investment by the internal sources (using the CAPM model) and the external finance adjusted by the general rate of the corporate tax (25%), coming to a value of 12,47% as well as the different cashflows. When calculating the present value of each cash flow, the NPV was obtained at a value of 360.206,18 euros. Later, this number was needed to find out the Internal Rate of Return, which is the expected return from the investment, being 20,63%. Assumed from these two indicators, the project should take place considering the NPV is greater than zero and the IRR is bigger than the NPV.

Based on the cashflows, the payback period was drawn at the fourth year of the investment, during its third month. Again, following the principle of ongoing business, this rate is quite low, compared to the years that the hotel is supposed to be a competitive firm.

After, two scenarios had been analysed, following the expectance of a positive evolution in sales of 17% and a decrease in 9% in costs, leading to a cash flow of 245.875,97 euros. The negative scenario used a reduction of 14% in sales followed by an increase of 9% in costs, which led to a positive cash flow of 54.315,38 euros.

To sum up, the evolution of the hotel is estimated to be positive, with a moderate growth in sales and costs, leading to a small increase in the gross operating profit. The project should be carried out based on the IRR and NPV: it yields a return slightly over 20% and the cost of capital is lower than the expected rate of return. Finally, the payback period estimates the recovery of the investment in four years and three months. All in all, this investment project should be made because it will be profitable.

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Annex

Hotel Prices Index, base 2008.

Índice	2019M12	2019M11	2019M10	2019M09	2019M08	2019M07	2019M06	2019M05	2019M04	2019M03	2019M02	2019M01	Average
	126,19	113,55	128,02	140,32	152,68	153,14	147,34	138,22	127,62	113,95	110,70	116,58	130,69
2018M12	2018M11	2018M10	2018M09	2018M08	2018M07	2018M06	2018M05	2018M04	2018M03	2018M02	2018M01		
	119,03	114,44	124,68	134,08	146,87	149,44	143,00	134,25	123,16	114,06	107,31	114,45	127,06
2017M12	2017M11	2017M10	2017M09	2017M08	2017M07	2017M06	2017M05	2017M04	2017M03	2017M02	2017M01		
	119,78	112,83	122,31	132,52	142,66	143,17	137,31	128,13	120,81	109,64	102,68	116,01	123,99
2016M12	2016M11	2016M10	2016M09	2016M08	2016M07	2016M06	2016M05	2016M04	2016M03	2016M02	2016M01		
	125,43	108,62	110,09	123,72	132,29	132,95	121,87	117,25	109,72	101,12	101,05	103,96	115,67
2015M12	2015M11	2015M10	2015M09	2015M08	2015M07	2015M06	2015M05	2015M04	2015M03	2015M02	2015M01		
	111,54	98,09	106,17	115,20	121,07	119,66	114,89	109,41	108,19	101,31	92,45	105,47	108,62
2014M12	2014M11	2014M10	2014M09	2014M08	2014M07	2014M06	2014M05	2014M04	2014M03	2014M02	2014M01		
	103,30	97,68	99,57	109,09	114,53	112,45	105,75	102,30	100,79	93,61	88,48	96,85	102,03
2013M12	2013M11	2013M10	2013M09	2013M08	2013M07	2013M06	2013M05	2013M04	2013M03	2013M02	2013M01		
	99,97	90,65	97,19	104,02	112,31	110,83	104,31	100,72	96,95	95,08	93,41	99,38	100,40

Source: INE and own elaboration

Occupation Balearic Islands 2019

Ocupación Islas Baleares													
	2019M01	2019M02	2019M03	2019M04	2019M05	2019M06	2019M07	2019M08	2019M09	2019M10	2019M11	2019M12	
ILLES BALEARS													
Cuatro estrellas	37,0%	44,6%	49,0%	69,5%	66,0%	83,9%	89,7%	81,8%	81,9%	64,8%	47,2%	44,9%	
Fuente: IBESTAT													
Days	31	28	31	30	31	30	31	31	30	31	30	31	TOTAL
Sales	92.880,24	100.670,19	123.003,56	169.006,40	165.879,08	203.842,56	225.222,02	230.493,60	199.081,14	162.214,08	114.784,43	111.431,18	1.898.508,48
Costs	63.259,28	68.564,89	83.775,80	115.107,62	112.977,65	138.833,98	153.395,20	156.985,59	135.591,05	110.481,47	78.177,88	75.894,03	1.293.044,42
GOP	31,89%	31,89%	31,89%	31,89%	31,89%	31,89%	31,89%	31,89%	31,89%	31,89%	31,89%	31,89%	31,89%
													605.464,06

Source: IBESTAT and own elaboration

