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Crown Jewels in the Real Estate Market:
analysis and appraisal of Ca' di Dio's acquisition

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Abstract

Real Estate is one of the five investment asset classes – together with stocks, bonds, cash, and commodities. In recent years this market soared abruptly, representing a profitable investment, especially for high-value assets.

This paper focuses on Hospitality Real Estate Market in Venice, Italy.
The tourism-related sector in Venice is facing a huge escalation, to the extent that property purchases have sky-rocketed for both hotels and tourist apartments.
The study investigates the role of "Crown Jewels" in this context, focusing on luxury hotels. In real estate, Crown Jewels are referred to as property acquisitions whose price is much higher than their fair value. Why does it happen? What does their hidden additional value entail?
The case presented will try to answer those questions by analyzing the recent acquisition of Ca' di Dio, a former nursing house that was completely renovated to build a 5-star hotel.

After a general introduction of the Real Estate Market, this study will give insight into the approaches used to value a property, and the financial reasoning behind it. It will then be dedicated to Ca' di Dio's acquisition assessment at the time of proposal, the comparison between its fair value and the price paid, and the "Crown Jewels" relation.

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CHAPTER I

Introduction to the property market

Property has been considered as a "guaranteed asset" for decades, to an extent that it was included among the five main investment classes. Any kind of premises is difficult to be wasted away: whether it to be mere land, or an exclusive mansion, their value tends to last for a longer time than other assets.
The Real Estate Market has grown a lot recently, showing a relevant increase in capital invested and income generated[1]. However, property ownership, unlike stocks and bonds, may not exclusively be held for investment purposes. They are sometimes acquired for primary purposes, such as a house to live in, or the headquarters of a company.
It is essential to distinguish between the two uses, as this paper will consider real estate purely for investment goals. In particular, it will deal with properties with peculiar and distinctive characteristics, whose value may be difficult to spot looking at the overall market. In some cases, these properties may fall into the exclusive group of "Crown Jewels".

The general definition refers to investment property as "a real estate property acquired to obtain a return on the investment by rental income, the property's potential resale, or both"[2]. The estate – a piece of land, a building, or an asset – may be owned by an individual, an investment company, or a corporation.
The purpose, or use, aimed by each of them determines how the property will be looked at and, hence, evaluated.

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[1] Scarrett, D. (2008) *Property valuation – The five methods*. 2nd edition. (p.23)
[2] <https://cleartax.in/glossary/investment-property/> *"Investment property" definition.* Cleartax.in. Accessed 18-01-2023.

Nevertheless, before deepening into the Real Estate Market and the financial concepts behind it, some general economic principles must be introduced. These principles represent the pillars upon which the overall market practices have been developed[3].

As neoclassical economic theory[4] states, the economic wealth depends on three main factors: people, money, and land. By nature, each of them is a scarce resource and, consequently, is needed both for the single individual and for society[5]. As far as real property is concerned, allocation decisions are broadly based on *need* or on *economic demand*[6]. According to the former, cost and value for money are the main decision-driver factors. The simplest example is the provision of hospitals and schools by the public authority: the decision of acquisition is based on the least expensive building.

On the other hand, the provision of shops and private leisure facilities are taken in accordance with the economic demand. In this last scenario, the price is determined by the demand and supply. This model assumes that, holding all else equal, in a competitive market, price will adjust until the quantity demanded matches the supply offered, reaching an economic equilibrium point[7]. However, over a long time, price fluctuations will inevitably affect the demand-supply levels.

This is a simplified explanation, of course, because the real estate market suffers disequilibrium from many other factors. Lying between both the private and the public sector, any government decision concerning taxation and land use controls may affect the price in the property market[8].

[3] Sayce, S. Smith, J. *et alt.* (2006) *Real Estate Appraisal – From value to worth.* Blackwell Publishing Ltd. (p.1)
[4] Approach to economics where the production, consumption, and pricing of goods is determined by the demand and supply model. (<https://en.wikipedia.org/wiki/Neoclassical_economics> *"Neoclassical economics"*. Accessed 20-01-2024.)
[5] "Society" indicates the public well-being, referring to publicly held institutions.
[6] Sayce, S. Smith, J. *et alt.* (2006) *Real Estate Appraisal – From value to worth.* Blackwell Publishing Ltd. (p.1)
[7] <https://en.wikipedia.org/wiki/Supply_and_demand> "*Supply and demand".* Accessed on 20-02-2024.
[8] Sayce, S. Smith, J. *et alt.* (2006) *Real Estate Appraisal – From value to worth.* Blackwell Publishing Ltd. (p.2)

Real Estate represents a peculiar category firstly because its supply, in terms of availability, is generally predetermined[9] and, secondly, it offers a wide range of products. Heterogeneity is the distinctive characteristics of real estate with respect to other markets: it is impossible to find two buildings located in the same exact location, and with the features.

Summarizing, the complexity and peculiarities of the Real Estate Market are mainly due to the following factors[10]:

- **The relatively fixed nature of land.** Land and buildings cannot be moved from one place to another. They can only be demolished, renovated, or constructed.
- **Lack of transparency in a wide market.** Property market, particularly concerning investments, has a limited accessibility to up-to-date resources of data. Unlike stock prices, it is difficult to find open sources about the property's physical attributes, sale price, legal status or any contractual constraints.
- **The nature of legal interest.** Property can be owned in different ways: freehold[11], leasehold[12], or commonhold[13].
- **Heterogeneity.** The unique features regarding the location, size, shape, and amenities make it difficult to compare one estate with another. In this regard, it is essential to evaluate them singularly.
- **The motive behind ownership.** The ownership may be destined either for utility or for investment purposes.

[9] Even in construction projects, the land where the estate will be built is fixed in term of square meters.
[10] Sayce, S. Smith, J. *et alt.* (2006) *Real Estate Appraisal – From value to worth.* Blackwell Publishing Ltd. (p.2). Scarrett, D. (2008) *Property valuation – The five methods*. 2nd edition. (pp. 24-27)
[11] Full legal rights on the acquired asset.
[12] Ownership of a temporary right to hold a property by a lessee, upon a title from the landlord, for a fixed period of time only.
[13] Joint ownership of a premise.

- **Growth and inflation.** Whereas the estate is held for investment goals, such as rent, the return is affected by inflation and expected market growth.
- **Indivisibility.** Since acquiring a building or land requires a substantial amount of money, it is also difficult to sell it back with a positive gain.
- **Demand.** Whilst the land supply tends to be inelastic in the short term, increases in demand may trigger the market in the long run.
- **Government intervention.** Recent regulations and governmental provisions may impact, positively or negatively, the level of taxation and the property's control use.

The interest in owning a property can take various forms: own needs, rentals, investments. Such interest can derive from an individual, a private company, or the Government. In each case, a valuation of the motive behind the acquisition is required to fully understand the reasoning and circumstances.

Usually, a valuer will be engaged to advise on the property's worth. The final objective, in case of investments decision, is to determine how much the property can generate in revenues and whether it is worth it or not.

The appraiser needs adequate knowledge of the real estate market and, particularly, on the underneath sector of interest. As you will see in the next Chapter, the real estate market is divided into various sectors. In order to properly conduct a property's appraisal, it is essential to understand and analyze the market sector dealing with.

Furthermore, the abovementioned factors influencing the market will play a key role in the assessment, as each of them will change and will have a different impact according to the sector concerned. In Chapter 3 a detailed explanation and analysis of the main approaches to valuation will be conducted, while Chapter 2 will broadly introduce the real estate market sectors.

CHAPTER II
The Real Estate Market

The Real Estate Market is composed by several sub-sections, whose logic and features vary a lot between one another. For this reason, real estate sectors are usually analyzed separately. This Chapter will introduce each of them, considering their economic characteristics, the potential use of the buildings, and their reference price. It will then move to examine the so-called *determinants of value*, which build up the value of the property, according to the reference sector.

The Market Outlook 2023[14] recently released by PwC reports real estate markets' investment trends in Italy. According to the pitch, the first half of 2023 presented a volume of € 2.05 billion real estate investments, recording a steep decline with respect to the previous year. In 2022, infact, investment volumes increased to € 11.7 billion, reaching the highest result since the pandemic. However, the temporary slow-down may be due to the uncertain situation concerning interest rates[15]. Investors have preferred a prudent approach, waiting ECB's revision on interest rates before launching new transactions[16].
Despite the unpredictable situation, investors still remain positive about the demand for the office and logistic sector, particularly in Milan. The same perspective affects the residential markets and the hospitality industry, that has seen a peak in transactions in prime urban locations and resorts.
Overall, the real estate market in Italy has registered a rise in investments by 14% from 2021 to 2022. The downturn observed in the first six months of 2023 can

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[14] <https://www.pwc.com/it/> *Real Estate Market overview – H1 2023.* Pwc Italy. (Accessed 30-10-2023)
[15] Any change in interest rates directly impacts the cost of capital, which will influence the investment propensity and the property pricing as well.
[16] <https://www.pwc.com/it/> *Real Estate Market overview – H1 2023.* Pwc Italy. (p.29)

be explained by the post-covid momentum slowing-down effects, which is further triggered by the rising cost of capital and geopolitical uncertainty[17].

Factors affecting property's prices will be examined in the next sections, particularly pointing up the Hospitality market.

2.1. Sectors and KPIs

The Real Estate Market is structured in a variety of smaller market groups, each of which has its own physical and economic characteristic. The subject property's sector is determinant to immediately spot the relevant valuing features, the key performance indicators (KPIs), and, consequently, the attractiveness to potential stakeholders.

The most important KPIs to monitor in real estate are the following[18]:

1. Sales/Rent price
2. Average selling time (in periods, such as months)
3. Number of transactions
4. Discount: any difference between the asked price and actual price

The trend observed in these four indicators will give insights about the expected performance in the market. The sale and rent prices directly link to the property's value. Instead, the average selling time, the number of transactions and the discount reveal whether the market is in expansion or in recession. Whilst the first indicator can be observed at time of transaction only, the other

[17] <https://mediaassets.cbre.com > *2023 Market Outlook report*. Italian Real estate. CBRE research. (Accessed 30-10-2023)
[18] Scardovi, C. Bezzecchi, A. (2014) Banking e Real Estate. Egea spa. (p. 90)

indicators tend to predict the expected trend in the market, relatively to the sector of reference[19].

If you looked at the price[20] solely, the increase (or decrease) would inevitably impact the overall market sector. However, the new information will be incorporated in the valuation after the effects have already taken place.

On the other hand, if the average number of transactions in a time span has increased (decreased), the analyst will expect a growing (declining) market.

The same concepts apply for the other KPIs. If the average selling time is observed to be higher (lower) than in the year before, the market is expected to go through a recession (expansion). Instead, a rise (drop) in discounts will indicate that the property is more difficult (easier) to be sold.

Summarizing, the property's market trends can be predicted by looking at the KPIs. The real estate market's performance is indirectly proportional to the average selling time and discounts, while it is directly proportional to the number of transactions and sales price.

The main markets within real estate comprehend the Residential (or Living), Office, Retail, Logistic and Hospitality sectors[21]. They differentiate between one another in relation to the following features:

- **Potential use** of the property. It may be destined to a personal need, to production, and to investment projects.
- **Physical characteristics.** It indicates the estate's appearance: a palace, a flat, a shopping mall, a hospital, etc.
- **Economic characteristics.** It refers to the economic return generated by the asset: private need, capital building[22], and leased property.
- **KPIs.** Main reference indicator, among the abovementioned.

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[19] Scardovi, C. Bezzecchi, A. (2014) Banking e Real Estate. Egea spa. (p. 91)

[20] The consolidated price of all the property within the same sector, similar characteristics and location.

[21] Scardovi, C. Bezzecchi, A. (2014) Banking e Real Estate. Egea spa. (p. 92)
<https://www.pwc.com/it/> *Real Estate Market overview – H1 2023.* Pwc Italy. (pp. 31-36)

[22] Whereas the core activity of the business takes place (e.g. Banks' offices, or large-scale retail trades).

- **Stakeholders** potentially involved. People or companies interested in acquiring the estate, either for their own use or for investment purposes.

Figure 1[23] summarizes the overall real estate sectors, along with their reference characteristics.

Sector	Use	Physical characteristic	Economic characteristic	KPI	Stakeholder
Residential	Personal (consumption)	Entire / Part of a building	Personal need	Price	Family; Retail
Office	Production	Part of a building	Capital asset	Price / Rent; Cap rate*	Companies; Banks
	Investment	Entire building	Rent	Rent	Real estate funds; Property companies; Insurance companies
Retail	Production	Part of a building	Capital asset	Rent	Companies
	Investment	Entire building	Rent	Rent	Real estate funds; Property companies; Insurance companies
Logistic	Production	Entire building	Capital asset	Sale price	Companies
	Investment	Entire building	Rent	Rent	Investors
Hospitality	Production; Investment	Entire building	Capital asset; Rent	Rent (estimated); cap rate*	Hotel chains; Real estate funds; Property companies

*annual net operating income(NOI)/property's market value
It shows the expected annual operating cash flow (%) in relation to the price paid

Figure 1. Real estate market sectors

In order to further distinguish the market sectors, it is interesting to analyze the risk profile for each of them. Assets within the real estate sectors present a different level of risk, according to the potential number of users, the asset life cycle, and how easily the property can be replaced[24]. This last factor is known as the *asset fungibility level*, which links to lowering the risk if the object property is easily replaceable. The risk level further decreases if the potential users are many, as more people would be interested in acquiring the asset.

[23] Scardovi, C. Bezzecchi, A. (2014) Banking e Real Estate. Egea spa. (p. 92)
[24] Scardovi, C. Bezzecchi, A. (2014) Banking e Real Estate. Egea spa. (p. 93)

Lastly, the life cycle pictures the maintenance needed for the property: the older it is, the higher number of interventions required, enlarging the risk.
The relation between these three factors altogether is depicted in Figure 2[25], where the average sector return is noted.

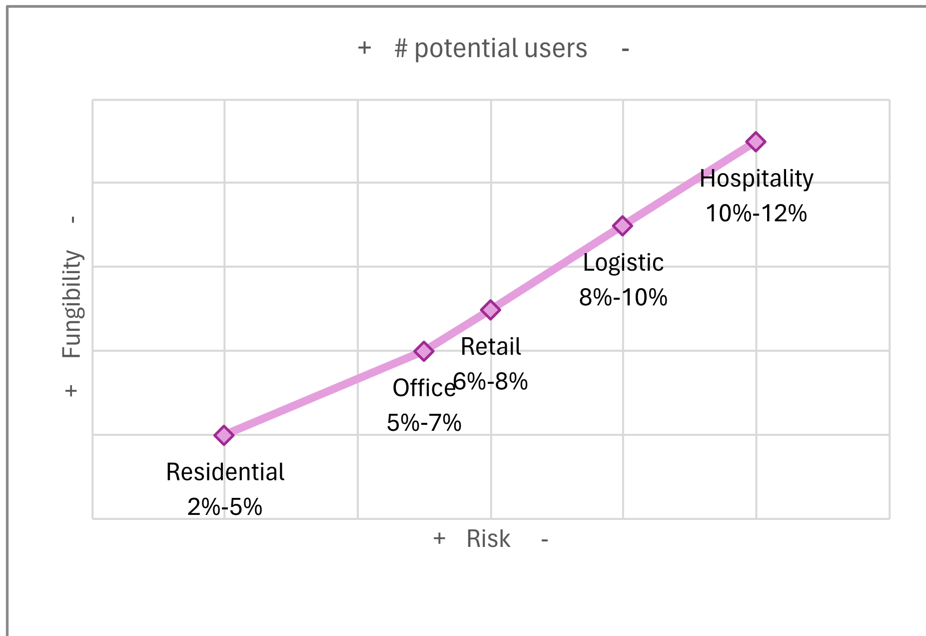

Figure 2. Risk-return relation in real estate sectors

The risk-return relation implies that the risk will be the highest for properties in the Hospitality sector, due to a small number of users[26], difficulty in replacement, and high maintenance costs. Conversely, the Residential sector should be the less risky for a continuously amount of people interested in acquiring their own house, high fungibility, and relatively low maintenance expenses.
However, the uniqueness of every sector makes it difficult to provide a direct comparison among all types of properties. Within each real estate sub-market, buildings must be evaluated singularly, taking into account each sector's peculiar characteristics and the object property's scope and features. The

[25] Scardovi, C. Bezzecchi, A. (2014) Banking e Real Estate. Egea spa. (p. 94)
[26] "Users" mean the people interested on acquiring the property.

reference characteristics, in turn, will be determinant to define the return that the object property is expected to generate.
This is the reason why real estate appraisals are so important: to allow stakeholders and investors to seize the investment profitability.

As mentioned in the introduction, this paper will focus on the Hospitality sector. The elevated risk hotels' investments, or in other tourism-purposed properties, does not imply that this sector is unprofitable. As a matter of fact, the hospitality industry has registered an abrupt soar recently. The post-Covid scenario pushed people to travel more and explore new cities, inevitably increasing the tourism demand from 2021. Big investors in this asset class and hotel chains have benefitted enormously from it, especially considering resorts, luxurious hotels, and other properties in Italy's prime locations[27].

2.2. Determinants of value

Investing in real estate has the primary purpose to generate a positive return for the investor. An accurate valuation of the costs and the risks must be conducted beforehand, because buying properties requires a much higher capital than other asset classes. The property appraisal is performed before the acquisition, with the goal of understanding the prospective streams of income for a determined future period. Usually, the valuation is delegated to an appraiser, who is specialized in the real estate sector concerned.

The most common practice for valuation is based on market value, which is defined as "the estimated amount for which a property should exchange on the date of valuation between a willing buyer and a willing seller in an arm's length

[27] <https://www.pwc.com/it/> *Real Estate Market overview – H1 2023.* Pwc Italy. (p.29)

transaction (...)"[28]. The appraiser, following the investor's instruction, should provide a clear and as much complete as possible investment report. The collection of detailed information about similar properties, markets, or transactions is an essential step to properly assess the quality of the acquisition. What type of data and how to relate it to the property being valued largely depends on the market sector. Even though they will be examined in Chapter 4, there are distinct features that can help during the first phase of valuation. From these "basic" characteristics, the quality of the investment may be ascertained by combining the effect of each of them[29].

The most relevant features in real estate are divided into three categories: physical, economic and legal. Obviously, the valuer should have an adequate knowledge of the ones affecting the property being valued.

PHYSICAL FACTORS

Physical features concern the nature and the spatial context of the estate: since every building exists in space, it will impact the environment and will be impacted by the surroundings[30].

The location of the estate is the first factor that comes to mind. A property located in a central area will be valued more than one in outskirts. A common example referred to the residential sector is commuter homes versus city center's houses. In hospitality, hotels and apartments near tourist attractions entail higher value than those in the suburbs.

However, the nature of use of the property will affect the choice of location as well[31]. This is the case of the logistic or industrial sector, where distribution

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[28] *RICS Valuation Standards (The Red Book).* 6th edition. Published 2007.

[29] Scarrett, D. (2008) *Property valuation – The five methods*. 2nd edition. Routledge. (p.45)

[30] Scarrett, D. (2008) *Property valuation – The five methods*. 2nd edition. Routledge. (p.68)

[31] Scarrett, D. (2008) *Property valuation – The five methods*. 2nd edition. Routledge. (p.68)

warehouses are preferred to be in industrial areas or near junctions and interchanges.

Following the same reasoning, the positioning-related factors of the property must be taken into account as well. For example, despite the amazing view from a coastal house, the building would require constant maintenance, repairs and insurance against the salt-water corrosion, possible high tide and strong-winds effects[32].

Another physical feature relates to topography, which indicates the land surface. This factor is very important in case of construction projects: a levelled site is normally preferred to a steeply one. Moreover, levelling a site would require additional engineering solutions and it will generally be more expensive.

Topography is generally linked to the site's accessibility. Accessibility evaluates the existing road, rail, sea and air infrastructure, along with the point(s) of access to the estate. Particularly in the industry sector, the lower the accessible points to warehouses, the higher the disadvantages.

Last, but not least, there are the property-specifics factors, which merely concern the aspect of the asset.

Construction materials can have both a positive and negative effects on value[33]. Whereas a building constructed using tested materials is certain to be solid, another built using new technologies may rise problems. The age of the property plays a relevant role nonetheless: maintenance and repair costs will be much higher as the property is older.

Furthermore, the layout and the detailed description of the site are determinant for value. For most users, the ideal property is rectangular or squared because it will maximize the availability of space. Instead, specifications such as the materials used to decorate the property[34], height or additional space required, must be assessed case by case.

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[32] Scarrett, D. (2008) *Property valuation – The five methods*. 2nd edition. Routledge. (p.69)
[33] Scarrett, D. (2008) *Property valuation – The five methods*. 2nd edition. Routledge. (p.69)
[34] Scarrett, D. (2008) *Property valuation – The five methods*. 2nd edition. Routledge. (p.71)

LEGAL FACTORS

Legal factors concern the contractual terms of the contract, both in case of acquiring the property or leasing it. This factor is considered from the buyer's perspective, distinguishing between the two cases.

Where the party interested in buying the estate for its own purposes, the legal factors will concern tenure, any Government control policies in use on the premises, and the costs following the acquisition. In particular, they may regard refurbishment, new construction on the site, or any other expense rose that is legally liable to the acquirer.

Instead, if the buyer wishes to rent the property, legal factors concern the lease terms in place when the contract will be stipulated. The lease contract controls the relationship between the landlord and the lessee, and, for its power, it will considerably influence the overall rental and capital values[35].

The current payable rent is the information the valuer should seek in order to value a property that fall within this case. In particular, he shall look for the frequency of payment, periodic deadlines, whether it is payable in advance or in arrears, and the applicable sanctions when payment is late.

These factors altogether will help on deciding the convenience of acquiring the property, from a legal perspective.

ECONOMIC FACTORS

Lastly, economic factors broadly concern the effect of the economy in the property market. Whereas the economy of a State is growing, people will theoretically have a higher income, which increases their financial disposal to buy properties. Key measuring factors are GDP, employment data, manufacturing activity, and prices of goods[36].

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[35] Scarrett, D. (2008) *Property valuation – The five methods*. 2nd edition. Routledge. (p.47)

[36] <https://www.investopedia.com> *4 Key Factors That Drive the Real Estate Market.* Investopedia.com. Nguyen, J. (updated 12-06-2023)

Most importantly, the supply and demand with respect to the property sector of reference must be carefully analyzed. Particularly in the residential market, the bidden and asked prices are linked to the supply/demand levels. Whereas the house market is lacking in demand, owners will be forced to lower the asked price, otherwise the property will not be sold.
The same relation between demand/supply and prices applies in the hospitality industry. Whereas a boost in demand is recorded in a particular area, it will increase the value of properties located there. The peak in demand from 2022 to 2023 in resorts and prime urban locations in Italy has proved it[37].
However, the effects of the economy vary depending on the real estate sector. For example, hotels are more sensitive than other types of properties because they usually have a longer-term lease which, in downturn periods, can weight on the business. Conversely, residential homes have a short rental period[38], allowing to be changed in the middle of an economic slump.
Another relevant economic factor relates to risk and, hence, return. Interest rates levels largely impact the real estate market, due to the close connection with mortgages. Whereas interest rates are low, borrowers will bear a much lower interest on debt than in the opposite situation. However, low interest rates are appealing to investors, increasing the properties' demand and prices.
Consequently, the relationships among the state of the economy, interest rates and the buyer's demand are very thin and must be carefully examined case by case.

[37] <https://www.pwc.com/it/> *Real Estate Market overview – H1 2023.* Pwc Italy. (p.29)
[38] From one to five years in Italy.

CHAPTER III

Real Estate Finance

Every decision taken within a company has a direct or indirect impact on the overall entity and on other companies operating with it[39]. Each of these choices lead back to a decision that is informed by Corporate Finance, whose final goal is to maximize the value of the business.

Investment, financing and dividend decisions represent the three main categories to focus on when trying to reach this objective. Investment choices concern the firm's assets, financing relates to find the monetary sources to acquire those assets, while dividend policies regard the cash returned to the business' investors. Since these decisions are strictly related, optimizing one of them may have the opposite effect on another.
The investment return should be greater than the hurdle rate[40], keeping in mind that the return should reflect the magnitude and the timing of the cash flows and its effects. At the same time, the company should find the right kind of debt matching the assets while, simultaneously, reaching the optimal mix of debt and equity that maximize the firm value. Moreover, shareholders must be given their cash back: how and how much depends on current and potential investment opportunities[41].The role of finance is to find the adequate mix of all the policies concerned to reach the maximum possible value for the firm.

[39] These decisions apply from capital structure-related choices to the stipulation of a contract with a new supplier.
[40] The hurdle rate is the minimum acceptable rate of return. It should reflect the riskiness of the investment and the mix of debt and equity used to fund it.
[41] Damodaran, A. (2015) *Applied Corporate Finance.* 4th edition. Wiley. (p. 515).

On the other hand, a proper scenario about investment, financing, and dividend must be clear also for analyst in order to perform the valuation as fairly as possible. The business maximization value process is very intricated, both for the firm to reach it and for the analyst to unravel it.

This chapter aims to give an overall view on different valuation approaches. Firstly, two basic assessment principles will be introduced: the *discounted cash flow valuation (DCF)* and the *multiples (or relative) valuation*. Applying both these methods on the same asset often leads to different results: this happens because the first approach is based on future cash flows' predictions, while the second one is based on the market value of similar firms.
After this first distinction, the chapter will move to the central point of this paper: real estate appraisal.
There are three main approaches to property valuation: the comparative, the income, and the cost method. Each of them must be applied case-by-case, depending on the circumstances behind each appraisal.

3.1. Discounted Cash Flow Valuation

The Discounted Cash Flow is a method where the asset's value is estimated by computing the present value of the expected future cash flows.
According to the logic of this method, the assessment output should reflect the intrinsic value of an asset. It is a function of the cash flows that will be generated by the asset, its predicted life, the cash flows' expected growth, and the riskiness associated with these cash flows[42].
In practical terms, it is very hard – almost impossible – to predict cash flows in the long term. For this reason, the model relies on heuristics to split the value

[42] Damodaran, A. (2015) *Applied Corporate Finance.* 4th edition. Wiley. (p. 516).

into two parts[43]. The first is the sum of cash flows generated for N years, according to a pre-determined forecasting horizon[44], while the second is the actualized terminal value. The terminal value (in short, *TV*) indicates the price a buyer will be willing to pay for the firm/equity in year N. It is calculated as the present value of cash flows produced from year N+1 onward, which are then discounted by N. The formula below shows a summary of the DCF model.

$$Value\ of\ the\ asset = \sum_{t=1}^{N} \frac{CF_t}{(1+\ r)^t} + \frac{TV}{(1+\ r)^N}$$

where

$$TV = \frac{CF_{N+1}}{r-g}$$

where *N* are the years in the forecasting horizon[45], *g* is the expected growth rate in perpetuity, and *r* is the discount rate reflecting both the riskiness of cash flows and the financing mix used to acquire the asset.
The division into two parts often applies because valuers generally allow for periods (N) where cash flows grow at different rates, but assume that at a certain point in the future the growth rate will decline to a stable rate that can be sustained forever[46].

The general formula changes in accordance with the approach used for the valuation. They can be classified into three models: Dividend Discount Model (DDM), Free Cash Flow to Equity (FCFE), and Free Cash Flow to Firm (FCFF). Each of them aims to obtain a different output, respectively: the price per share, the equity value, and the enterprise value.

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[43] Two-stage growth model.
[44] It is common practice to use four or five years as forecasting horizon.
[45] High-growth periods. The company is growing fast and is experiencing different growth levels every year.
[46] The firm reaches a mature position when it is assumed to be operating at *g* forever.

Hence, an important clarification to be made before the valuation is deciding what to value: the entire firm (**Enterprise Value**), or its equity stake (**Equity Value**). However, in the last case, the capital structure is much more relevant, as any variation of debt/equity levels will change the equity itself. The Equity Value is often calculated to estimate the value of the single share as well[47]. However, in most of the cases, the Enterprise Value is preferred as it provides a broader picture on the company's situation.
Understanding which value is more suitable – according to each situation – is fundamental because the cash flows and discount rates will change accordingly.

For the sake of simplicity, the next sections will distinguish between Enterprise, (or Asset) and Equity Value only. The price per share is set aside, firstly because it can be inferred from the Equity Value, and secondly because it has a minimal relevance for the purpose of this study.
This brief introduction is useful to get a hand on the four main factors influencing Discounted Cash Flows models, which are hereby summarized:

1. Cash Flows from existing assets (to equity and to the firm)
2. Discount rates, which reflects the potential risks from both existing and growth assets
3. Terminal Value, which depends by the length of time needed for the firm to reach a steady-state position
4. Expected growth rate (in equity earnings/cashflows and operating earnings/cashflows)

Although each approach uses different definitions of these factors, it is important to avoid mismatching between them. They will lead to consistent results only if the same set of assumptions is applied[48]. In the next sections, the inputs for each model will be discussed.

[47] In this case, the price per share is computed dividing the Equity Value by the Number of Shares Outstanding (NOSH).
[48] Damodaran, A. (2015) *Applied Corporate Finance.* 4th edition. Wiley. (p. 517).

3.1.1. FCFE Models - Equity Valuation

Free Cash Flows to Equity are estimated as the amount of cash the firm can afford to pay out as dividends. Often they do not match the actual dividends paid, which instead depends on the payout ratio[49]. In other words, FCFE captures the true capacity to generate cash flows for stakeholders, not the real outflows of payments.

Equity valuation approaches require to compute the levered cash flows, which are net of any interest-bearing debt. Free Cash Flow to Equity is computed accordingly, as shown below, by taking the residual cash after meeting all operating expenses, tax obligations, and interest and principal payments[50].

$$FCFE = Net\ income + Depreciation - CAPEX - \Delta Working\ capital - Principal\ payments + new\ debt\ issues$$

where Δ*Working capital*[51] is the change in non-cash working capital and CAPEX is the amount invested in property, buildings, or equipment.

Then, the general DCF formula becomes:

$$Value\ of\ a\ stock = \sum_{t=1}^{N} \frac{FCFE_t}{(1+k_e)^t} + \frac{\frac{FCFE_{N+1}}{k_e - g}}{(1+k_e)^N}$$

The nominator indicates, respectively, the cash flows (*FCFE)* and the Terminal Value discounted at time N. The discount factor is the cost of equity (k_e[52]*)*.

Both for the high-growth (from 1 to N) and the steady-state period all components of the FCFE must be estimated.

[49] The payout ratio is the percentage paid back to shareholders, equal to: *1 – Retention ratio*

[50] Damodaran, A. (2015) *Applied Corporate Finance.* 4th edition. Wiley. *(p.531)*

[51] ΔWorking capital = Current assets – Current liabilities

[52] The rate of return required by equity investors in the firm.

A similar, yet special, case of valuing equity is the Dividend Discount Model (DDM), whose goal is to find the stock price. In this model, FCFE are replaced by the dividends per share (DPS), while the expected future dividends are discounted by the cost of equity (k_e).

As mentioned in the previous section, there are four basic inputs needed to build the model. First, the **FCFE** for each period – as seen above. Second, the **rate of return** required by stakeholders, captured by the cost of equity, and third, the **growth estimates**. Finally, the **terminal value** in year N, which largely depends on the duration of the high-growth period. It can be affected by several factors: the size of the firm in relation to the market[53], the existing growth rate and excess return[54], and the presence of competitive advantages[55].

Focusing on the second input, the required rate of return reflects the investment's risk, represented by the cost of equity. It is computed as follows:

$$k_{e_N} = rf_N + \beta \times \text{MRP}$$

where *rf* is the risk-free rate[56], Beta corresponds to the systematic risk[57], and *MRP* (Market Risk Premium) is the excess return that the market pays for an average-risk equity investment.

Particular attention must be given to Beta, as it will be different if the business' capital structure changes. Beta, by definition, is the ratio between the covariance of the stock and market returns' and the variance of the market. Hence, when

[53] Smaller firms tend to earn excess returns and maintain them (Damodaran A. (2015) *Applied Corporate Finance.* 4th edition. Wiley. *(p.521)*).

[54] Earning excess returns, above the cost of equity, will implicitly lead to high growth (Damodaran A. (2015) *Applied Corporate Finance.* 4th edition. Wiley. *(p.521)).*

[55] Presence of barriers to entry (Damodaran A. (2015). *Applied Corporate Finance.* 4th edition. Wiley. *(p.521))*.

[56] The return the market pays for investments with no risk (normally, a 10-year Government Bond yield)

[57] Market-related risk, which captures the impact of shocks in the economy on the single stock. If B < 1, the stock fluctuates less than the market (defensive stock), whereas if B > 1, it fluctuates more than the market (aggressive stock).

the leverage increases[58], the risk (and volatility) of the stock is higher, rising Beta as well. Consequently, when the leverage is too high or low, or change frequently, the equity value would change as well, not allowing for an appropriate assessment. For this reason, FCFE models must be used only if the firm being valued has a solid capital structure.

The third step is estimating growth in the long run. Stable growth is a function of the equity reinvestment rate [59] and ROE, used as expression of the reinvestment's quality[60]. The equity reinvestment rate is the amount of equity reinvested in the business in relation with the net income produced, while the Return on Equity is the ratio between the net income and the shareholders' equity.
Consequently, expected growth for FCFE models can be estimated as:

$$g_N = Equity\ reinvestment\ rate_N * ROE_N$$

Special care should be put to the equity reinvestment rate, as it may be less than 0% or greater than 100%[61]. If it is negative and is expected to remain as such, the expected growth in earnings will turn negative as well. On the other hand, if the firms reinvest more than the net income generated, it will boost growth, but it will need to issue new stocks to fund the capital increase[62].
In any case, the stable growth in the long run scenario (g_N) should reflect the average economic growth [63]. This is because g_N plays a key role on the computation of the Terminal Value, whose formula is hereby reported.

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[58] An increase in leverage implies a debt rise, which leads to a lower equity within the company.
[59] (CAPEX – depreciation +/- ΔWorking capital – new debt issued + debt repaid) / net income
[60] Ca' Foscari University of Venice (2021) *Financial Reporting and Advanced Corporate Finance.* McGraw-Hill Customized Publishing.
[61] Damodaran A. (2015) *Applied Corporate Finance.* 4th edition. Wiley. *(p.534).*
[62] New equity means that the number of shares outstanding will increase.
[63] Ca' Foscari University of Venice (2021) *Financial Reporting and Advanced Corporate Finance.* McGraw-Hill Customized Publishing.

$$TV_N = \frac{FCFE_{N+1}}{k_e - g}$$

At the denominator, k_e is the cost of equity in the economy after the high-growth period. Hence, g must be always equal or lower than k_e, otherwise their difference will be negative and the terminal value will be infinite.

Only if the firm shares the same characteristics of others in the economy, the growth rate is lower than the required return in the market. When this condition applies, the firm has reached a mature position.

In conclusion, the Free Cash Flow to Equity is a suitable valuation model only if:

- The output aimed for is the equity (or stock) value,
- The firm's capital structure is expected to be stable for the near future,
- The firm being valued is growing at a rate equal (or lower) than the nominal growth in the market.

3.1.2. FCFF Models – Enterprise Valuation

Whereas Dividend Discount and FCFE models aims to evaluate the equity of a business, firm valuation models try to assess the entire entity. It is common practice to first assess the enterprise value, to then analyze equity, even if only interested in the last one.

Firm Valuation models emphasize the operating assets of the business and the cash flows they generate[64]. The capital structure has a minor relevance, as it adapts easily to this model. For this reason, firms whose financing structure

[64] Damodaran A. (2015) *Applied Corporate Finance.* 4th edition. Wiley. *(p.539).*

changes frequently are more suitable to apply Enterprise Valuation models, rather than Equity Valuation approaches[65].

Assuming a two-stage period , the DCF model applied when assessing the entire business changes to:

$$Value\ of\ a\ firm = \sum_{t=1}^{N} \frac{FCFF_t}{(1+WACC)^t} + \frac{\frac{FCFF_{N+1}}{WACC-g}}{(1+WACC)^N}$$

The formula above shows that the **cash flows to the firm** (*FCFF*[66]*)* are discounted by the **weighted average cost of capital** (WACC[67]).
These are two of the four main inputs needed to reach the Enterprise Value, along with the **perpetuity growth** after N and the **Terminal Value** for the firm's operating assets.

The Cash Flows to the Firm can be measured in two ways. One is to add the cash flows of equity investors (dividends or stock buybacks) to the cash flows of debt holders (interest and net debt payments). The other is to estimate the cash flows to the firm prior to debt payments and after reinvestment needs are met[68]:

$$FCFF = EBIT \times (1 - tax\ rate) - CAPEX + Depreciation - \Delta Working\ capital$$

Obviously, both approaches should give the same result.

[65] Ca' Foscari University of Venice (2021) *Financial Reporting and Advanced Corporate Finance.* McGraw-Hill Customized Publishing.
[66] Residual cash flows after meeting all operating expenses, taxes, and reinvestment needs, but prior to debt payments. (Damodaran A. (2015) *Applied Corporate Finance.* 4th edition. Wiley.)
[67] The cost of different components of financing used by the firm, market-value weighted.
[68] Damodaran A. (2015) *Applied Corporate Finance.* 4th edition. Wiley. *(p.539)*

Differently from the previous model, FCFF is not influenced by any interest-bearing expenses on taxes[69]. For this reason, it is often known as unlevered cash flow. Most importantly, all estimates of a firm's value are based on expected cash flows, not on current ones[70]. In order to proceed, the key items to be forecasted during the high-growth period are: earnings [71], net capital expenditures, and working capital.

In addition, the discount rate must be estimated for each period as well. It is represented by the cost of capital and calculated as follows.

$$WACC = k_e\left(\frac{E}{D+E}\right) + k_D\left(\frac{D}{D+E}\right)$$

The Weighted Average Cost of Capital, or briefly cost of capital, reflects the opportunity cost of investing in the firm. It balances the cost of equity (k_e) and the cost of debt (k_D) with the weights in relation to the firm's financing structure. As the firm's exposure to market changes, both costs affect the WACC relatively to its capital structure. If a firm's financial leverage is expected to change over time, it will affect its cost of borrowing and the impact of after-tax cost of debt[72]. However, if a company's financial structure changes, it is possible to keep track of the effects by measuring the WACC for each period.

Going back to the WACC computation's components, whilst the cost of equity is determined following the same procedure of FCFE models, the cost of debt follows a separate reasoning. The cost of equity, as reported in the previous section, is equal to: $k_{e_N} = rf_N + \beta \times \text{MRP}$. Hence, it relies on market's expectations and valuations.

On the other hand, the cost of debt simply reflects the current mix of debt within the company. It is usually derived as the ratio between interest expenses

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[69] Tax benefits from interest payments translates into real cash benefits, which can be seen only after having computed the cost of debt and taxes.

[70] Damodaran A. (2015) *Applied Corporate Finance.* 4th edition. Wiley. *(p.540)*

[71] Based on the expected revenue growth, pretax operating margin, reinvestment rate and taxes due in each period.

[72] Damodaran A. (2015) *Applied Corporate Finance.* 4th edition. Wiley. *(p.545)*

and total debt or, for new-born companies, taking comparable companies with similar leverage and/or credit ratings.

The last major component is the Terminal Value, which is estimated according to the following formula and then actualized at time of the assessment.

$$TV = \frac{FCFF_{N+1}}{WACC_{N+1} - g}$$

The $FCFF_{N+1}$ are the operating cash flows and WACC is the cost of capital after having reached the steady-state position. Instead, *g* is the perpetuity growth, according to which the business is expected to grow in operating income from N onwards.
The expected growth in operating income has a proportional relation to the firm's reinvestment rate[73], as expressed below.

$$g = Reinvestment\ rate\ \times\ ROCE$$

where

$$Reinvestment\ rate = \frac{CAPEX - Depreciation + \Delta WC}{EBIT \times (1 - t)}$$

$$ROCE^{74} = \frac{EBIT}{Total\ assets - Current\ Liabilities}$$

Generally, growth in operating income is expected to be lower than growth in net income, because financial leverage can increase the latter.

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[73] The proportion of the after-tax operating income reinvested in capital expenditures and working capital, measured as the after-tax return on the capital invested. (Damodaran A. (2015) *Applied Corporate Finance.* 4th edition. Wiley. *(p.540)).*
[74] Return on Capital Employed. It is a profitability ratio that assesses how company is generating profits from its capital. (Ca' Foscari University of Venice (2021) *Financial Reporting and Advanced Corporate Finance.* McGraw-Hill Customized Publishing.).

Small changes in the stable growth rate can change the terminal value significantly, and the effect gets larger as the growth rate approaches the discount rate used in the estimation[75].

Thus, in both DCF valuations, there are two critical assumptions to be made regarding stable growth. The first involves what will be the main characteristics of the business in stable-growth position, in relation to capital and cost of capital. The second regards when the valued firm will reach such position.

In conclusion, FCFF models are more suitable in the following cases:

- The analyst is interested in valuing the entire entity,
- The firm's capital structure is expected to change over time, or has a very high leverage,
- The Equity Valuation shows a very low (hence, not reliable) FCFE.

However, FCFF models require to make additional assumptions on the cost of capital, especially regarding the leverage effect, which may not be feasible. Moreover, the Enterprise Valuation approach is much less intuitive, misleading the focus of the assessment[76].

3.2. Multiples Valuation

The second way to ascertain the firm's value is through a relative approach, where the market value of other comparable companies[77] is assessed and balanced to the targeted firm. This method defines market scaling measures (called multiples) for a set of companies which allow a direct comparison

[75] Ca' Foscari University of Venice (2021) *Financial Reporting and Advanced Corporate Finance.* McGraw-Hill Customized Publishing.

[76] Ca' Foscari University of Venice (2021) *Financial Reporting and Advanced Corporate Finance.* McGraw-Hill Customized Publishing.

[77] From the rest of the chapter, they will be referred to as "comparables" or "comps".

between them. Typically, the average comps multiple is calculated and applied to a performance measure of the valued firm[78].
Its basic principle is that the market is correctly pricing stocks on average. As it makes errors on the individual entity, considering the whole set of companies will allow to eliminate those errors[79].

In simple terms multiples are standardized measures of prices, defined as:

$$Multiple = \frac{Price\ you\ pay\ for\ the\ asset}{Revenue\ generated\ by\ the\ asset}$$

The *price you pay for the asset* reflects what the analyst is assessing: either the Equity or the Enterprise Value.
Instead, the *revenue generated by the asset* could reflect, in accordance with its nominator, the Profit[80], the Cash Flows[81], or the Book Value generated by the asset/company. Both these elements will be explained further in the chapter.

Performing a multiple-based valuation entails several steps, summarized hereby:

1) ***Define comparable firms, assets, or markets.*** The objective is to find a set of companies as similar as possible to the valued one. The dimension of the sample should be neither too small nor too large[82].
2) ***Define the right multiples.*** Choosing the most appropriate multiples largely depends on the performance indicators used for valuation. In this step, it is important to understand the best measures of relative values considered by the industry[83].

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[78] Benninga, S. Sairg, O. (1997) *Corporate Finance – A valuation approach*. McGraw-Hill. (p.306).
[79] Pearl, J. Rosenbaum, J. (2020) *Investment Banking: Valuation, LBOs, M&A, and IPOs.* 3rd Edition. Wiley.
[80] Net income, EPS (equity valuation), or EBIT (enterprise valuation).
[81] FCFE (equity valuation or FCFO (enterprise valuation)).
[82] A large group may mislead the value of the performance indicator, while a small sample may allow the firm-specific characteristics to affect the results.
[83] Benninga, S. Sairg, O. (1997) *Corporate Finance – A valuation approach*. McGraw-Hill. (p.306).

3) ***Collect market data and project bases for the valued firm.*** Historical and future market data are gathered to compute the multiples, both for comps and for the targeted firm.
4) ***Average across industry.*** Determine the mean, or median, of comparable multiples found in the previous stages. The output will be the final scaling measure to use for the assessment.
5) ***Value the firm.*** It is the final step where the average multiples are compared and adjusted to the firm being valued. This is the most important and delicate phase.

The first step is selecting the most suitable comparable firms: defining "similar" companies is crucial because it will affect the entire valuation model. There are several approaches that could help making this choice[84]:

- *Direct-comparable firms:* choose companies almost identical to the one being valued. It is almost impossible to find them in practice.
- *Storytelling:* a common key variable links the valued firm with the comps. In this case, it is possible to adjust the measure in relation to the variable considered.
- *Statistical techniques:* if the company largely differs from the selected sample, it is possible to determine multiples by regression.
- *Industry:* use the entire sector in which the valued company operates as comparable. Even in this case, multiples are found through regression models.

In all the above cases, the analyst should be careful to exclude "abnormal" firms[85], that are experiencing unusual events which may taint the overall assessment. Moreover, in relation to the company-specifics and the above-listed

[84] The criteria presented are further explained in: Ca' Foscari University of Venice (2021) *Financial Reporting and Advanced Corporate Finance*. McGraw-Hill Customized Publishing.
[85] Benninga, S. Sairg, O. (1997) *Corporate Finance – A valuation approach*. McGraw-Hill. (p.309).

criteria, the analyst should be searching for comps affected by the same risk and growth factors[86]. For example, the comps of a start-up firm should match the following criteria: expected high growth, relevant outflows at the beginning, the risk of potential failure in the future, and easy access to capital. Of course, all these factors must be weighted in accordance with the current market conditions.

The *size*, *industry classification*, and *business model* are the most important factors driving the comps choice. This implies selecting "similar" companies based on the range of sales, marketable position, product characteristics, clientele appeal, and the same technology used[87]. The *country-related issues and conditions* can impact the business performance as well. Hence, the geographic location plays a relevant role.

Furthermore, a standalone rule is that no comparable is perfect. A useful trick is to divide the sample in smaller groups, each weighted by the comparability level. In this sense, a proper assessment through historical growth in sales and in profitability can be helpful.

After the selection of comps, the valuer must choose the best multiples – the proper scaling factors for the performance measures highlighted. As mentioned earlier in the chapter, the assessment's goal is either the Equity or the Enterprise Value. This distinction is the core point driving the choice of multiples, and it is captured in the nominator of the previously mentioned formula, reported hereby.

$$Multiple = \frac{Price\ you\ pay\ for\ the\ asset}{Revenue\ generated\ by\ the\ asset}$$

When valuing Equity, the assessment is generally oriented towards the price per share. Instead, both equity and net debt must be assessed to get the Enterprise

[86] Pearl, J. Rosenbaum, J. (2020) *Investment Banking: Valuation, LBOs, M&A, and IPOs*. 3rd edition. Wiley.

[87] Benninga, S. Sairg, O. (1997) *Corporate Finance – A valuation approach*. McGraw-Hill. (p.310).

Value. Although in theory both are computed, in practice the EV is given more importance for the sake of simplicity.
Conversely, the denominator shows the most pertinent performance indicator for the valuation's purpose. Financial measures falling in *Revenue generated by the asset* are classified into two categories: top line, or bottom line[88]. The former indicates revenues/sales, while the latter reflects the earnings.
Top line indicates how effective a company is at generating sales and revenue but does not consider operating expenses[89]. It is suitable for new-born companies whose profitability and sales growth may be very high[90].
Bottom line, on the other hand, reveals the company efficiency in relation with its management and operating costs[91]. The determinant mainly depends on the position of the company and the objective of the valuation.

The following table summarizes the multiples' composition:

	EQUITY VALUE	*ENTERPRISE VALUE*[92]
NUMERATOR	Price	Enterprise Value
DENOMINATOR		
Top line	Sales per share	Sales
Bottom line	EPS	EBITDA
MULTIPLE		
Top line	P / Sales	EV / Sales
Bottom line	P / E	EV / EBITDA

Table 1. Composition of multiples

[88] Pearl, J. Rosenbaum, J. (2020) *Investment Banking: Valuation, LBOs, M&A, and IPOs*. 3rd edition. Wiley.
[89] The name derives from the "top line" position in the Income Statement.
[90] <www.investopedia.com> *Bottom-Line Growth vs. Top-Line Growth: What's the Difference?* Investopedia.com. Murphy, C.B. (updated 27-09-2023)
[91] The name derives from the "bottom line" position in the Income Statement.
[92] The enterprise value is often computed as: EV = Equity Value + net debt

Even though they depend on the firm-specific sector, the most common multiples are P/E for equity and EV/EBITDA for enterprise value. However, if both are considered for the same appraisal, some discrepancies may arise because of the effect of leverage[93]. Equity multiples are affected by the firm's capital structure, making more difficult selecting other firms with the same characteristics. A possible solution is taking whole-firm values (such as EBIT, Sales, and the like), which are not influenced by the financial composition of capital.

Accounting for the main two multiples only, the P/E multiple can be computed solely if the targeted firm is public and quoted in the market[94]. "P" defines the Price per Share, and it is computed as[95]:

$$P_0 = \frac{Div_1}{k_e - g} = \frac{EPS_0 \times \ (1 + g) \times Payout\ ratio}{k_e - g}$$

Where the payout ratio shows the portion of total earnings destined to shareholders. It is equal to dividends divided by the net income.
This formula is then divided by the Earnings per Share.

$$\frac{P_0}{EPS_0} = \frac{(1 + g) \times Payout\ ratio}{k_e - g}$$

P/E multiple depends on the same inputs of the DCF model: earnings growth (g), the cost of equity (k_e), and the firm's payout ratio.
Furthermore, EPS can vary by looking at different time perspectives. Either prices are normalized by last year's earnings, or by next year's expected earnings[96]. The former are called *trailing earnings multiples* (or *LTM*) and are

[93] Benninga, S. Sairg, O. (1997) *Corporate Finance – A valuation approach*. McGraw-Hill. (p.330).
[94] Price per Share (P) and Earnings per Share (EPS) are available only for public companies. (<www.linkedin.com> *Avoid Using Price-Earning (PE) Ratio to Valuated Private Companies.* Aloysius, C. 21 December 2022).
[95] The computation of the price relates to the DDM model.
[96] Pearl, J. Rosenbaum, J. (2020) *Investment Banking: Valuation, LBOs, M&A, and IPOs*. 3rd edition. Wiley.

computed as: P_0/EPS_0. Conversely, *leading earnings multiples* (or *NTM*) shows the expected future earnings for next year and are calculated as: P_0/EPS_1.

The other main multiple is EV/EBITDA, which is composed by firstly defining the Enterprise Value.

$$EV_0 = \frac{FCFO_1}{WACC - g} = \frac{EBIT * (1 - t) + D\&A * (t) - CAPEX - \Delta WC}{WACC - g}$$

As for the P/E ratio, the Enterprise Value is divided by the revenue generated (EBITDA), revealing the main determinants of EV/EBITDA: the cost of capital (*WACC*), growth (*g*) and reinvestment rate, and the tax rate (*t*).

$$\frac{EV}{EBITDA} = \frac{(1 - t)}{WACC - g} + \frac{\frac{D\&A\ (t)}{EBITDA}}{WACC - g} - \frac{\frac{CAPEX}{EBITDA}}{WACC - g} - \frac{\frac{\Delta WC}{EBITDA}}{WACC - g}$$

For this brief introduction on the subject only these two multiples are presented, although there exists a wide range of them. For example, in the retail industry the valuation is hinged on turnovers: the price to sales multiple compares the average price to its annual sales. Another multiple is the PEG ratio, where the P/E ratio is divided by the expected growth rate in earnings. This multiple is used for valuing companies with a high potential growth, such as start-ups. Multiples are chosen case-by-case depending on the sector of interest.
Nonetheless, common practice is to compute various multiples that will be further examined in the final evaluation step. In this way, the analyst can properly weight and integrate them in the final appraisal.

In conclusion, it is important to be reminded that this type of valuation is often used as support to the Discounted Cash Flows method. As a matter of fact, conducting a valuation by multiples implies knowing the market very well, since

it is subject to too many vagaries which can lead to a different result. Therefore, the relative valuation approach can be misleading if not properly conducted.

3.3. Property Appraisal Methods

Real Estate appraisal plays a decisive role in determining a property's value. Particularly in mergers and acquisitions, they are essential in deciding whether to invest in a business or not. As a matter of fact, understanding the "financial" composition of the target asset, or property, is the core point for an investment decision.

As introduced in Chapter 2, Real Estate comprehends a variety of sectors, each of which entails different peculiarities.

Depending on the property being valued – a residential property, an industrial complex, or a commercial building – the valuation approach must be adjusted accordingly.

Commercial appraisals are generally more subjective than residential appraisals because they depend upon uncontrollable elements such as the current market price for rent, fewer comparable available, and variable maintenance costs[97].

Moreover, if the target firm/property is being assessed for purchasing purposes, the unraveling question is how much the buyer is willing to pay for it.

A closer attention in this paper is given to the "Special buildings" category: investments worth of unique attention with respect to other type of properties. Hotels (both as business activities and as rentals), multiplexes, and real estate companies fall within this category.

[97]<www.firstrepublic.com> Rosenkranz, R. *6 Commercial Real Estate Valuation Methods.* (30-03-2022).

Analysts implement various approaches to assess a property's value. Besides the purely financial aspects, they consider factors such as location, condition, market trends, and income potential[98].

The following chapter will deal with the most widely applied real estate appraisals methods[99], focusing on the hospitality market. The Comparative Method, Income Method and Cost Method will be investigated, even though there exist other methods applied in peculiar circumstances or for a market niche.

The Comparative (or Market) Method compares the property being valued with identical or similar ones for which price information is available. Hence, the appraiser estimates the overall value by looking at prices of similar properties in the market and adjusting for size[100]. This is the most pertinent approach when dealing with the previously mentioned "special buildings", provided that their market is sufficiently large. Mergers and acquisitions proposal are also assessed by the Market approach.

Instead, the Income Method is commonly used for rental or commercial properties[101]. This approach provides a value indication by converting future cash flows to a single current capital value at valuation date[102].

At last, the Cost Method is based on the principle that a buyer will not pay a higher price for an asset than for another one in the market with equal utility[103]. The last one is "the last resort" approach, as it is much more complicated than the others and requires a set of assumptions to be made.

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[98] <https://learn.thinkprop.ae> *Understanding Real Estate Appraisal: Exploring the five most popular appraisal methods – An infographic.* Mayfield, J. (Accessed on 07-12-2023)

[99] According to the *IVS Framework* (International Valuation Standards Council, 2021).

[100] Size measures include the number of Sales, Net Income, barriers to entry and position in the market.

[101] <https://learn.thinkprop.ae> *Understanding Real Estate Appraisal: Exploring the five most popular appraisal methods – An infographic.* Mayfield, J. (Accessed on 07-12-2023)

[102] <https://www.ivsc.org/> International Valuation Standard Council (2014) *Development property – exposure draft*. (paragraph 5.)

[103] <https://www.ivsc.org/> International Valuation Standard Council (2014) *Development property – exposure draft*. (paragraph 5.)

The following paragraphs will deal with these three only, although other kind of assessment approaches exist. For example, the Gross Rent Multiplier (GRM) method takes the price of similar properties and divides them by their gross income. This factor, known as GRM, is then multiplied by the gross rental income of the targeted property. Another method is the Capitalization (CAP) rate, where instead the property's worth is based on the potential income that will be generated[104]. The CAP rate is computed by dividng the Net Operating Income (NOI) by the property's market value[105].

Both these alternative approaches could be applied in the real estate sector, even though the projected income or rental inflows should be known in advance.

In the hotel market analysts apply the CAP rate only if certain conditions are met[106]. For this reason, and for that it could be derived from the Income Method[107], it is not among the general appraisal methods.

Nevertheless, this paper will analyze and compare only the three most widely applied approaches.

3.3.1 Comparative Method

The Comparative Method identifies the value of a property by using information of similar assets within the same market[108]. It is also known as Market Method, or Comparable Transaction Method, because the appraisal is

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[104] GRM and CAP rate were explored in the article *Understanding Real Estate Appraisal: Exploring the five most popular appraisal methods – An infographic.* Mayfield, J. (<https://learn.thinkprop.ae>)

[105] <https://learn.thinkprop.ae> *Understanding Real Estate Appraisal: Exploring the five most popular appraisal methods – An infographic.* Mayfield, J. (Accessed on 07-12-2023)

[106] Company's equity must be public in the market, the hotel must be operating, certain vacancy rates criteria must be met, no extraordinary costs projected for the next year are among the conditions to be met.

[107] It is derived by changing the target income flow into the Net Operating Income (NOI).

[108] <https://www.ivsc.org/> International Valuation Standards Council (2021). *IVS Framework*. (paragraph 30.1).

based on identifying similarities between the targeted property and others operating in the same sector.
This approach is based on the simple notion that if one property sells for €1.000.000 in the market today, then so should another if they are exactly identical[109]. In similar fashion, the same concept applies in Multiples Valuation: understanding the core resemblances and differences among assets will allow to ascertain the target's value.
The valuer examines precedent transactions as well. Analyzing similar acquisitions, mergers, or takeovers, may be helpful on understanding the intrinsic value underneath a property. Moreover, when the comparable transactions involve the subject asset itself, this method is referred to as "Prior Transaction Method"[110].
Although the Comparative Method is the most commonly used basis in real estate appraisals, the analysts should carefully select similar properties. Any differences, both positive and negative, with respect to the targeted asset must be accounted for in the final valuation. They may be determinant factors leading to the actual property's value.
A variety of factors could be used for discerning the capital value: present and expected incomes, the expected return by the market, the tenure of the property, any costs incurred, or planned, for renovations and construction, the lease terms and the strengths of tenant's covenant – if any.
As presented in Chapter 2, the factors affecting value can be split into legal, economic, and physical aspects. Legal factors regard the contractual terms, economic factors concern the expected yield of those assets[111], while physical factors define the location, the size, and the conditions of the building. On

[109] Scarrett, D. (2008) *Property valuation – The five methods*. 2nd edition. Routledge. (p.67)
[110] <https://www.ivsc.org/> International Valuation Standards Council (2021). *IVS Framework*. (paragraph 30.2).
[111] For commercial purposes or rented properties only.

performing the valuation, the appraiser should firstly choose the right comparable properties according to these factors.

The next question is: how to properly select them? As seen in the paragraph dedicated to Multiple Valuation, it is difficult to find identical companies. Especially if data is available only for publicly traded companies. Consequently, a set of indicators, commonly known as *units of comparison*, may be helpful. To cite a few that have already been mentioned, for business valuations there are EBITDA multiples, earning multiples, revenue multiples and book value multiples. For real estate properties, common units of comparison include price per square meter, rent per square meter and capitalization rates. For financial instruments analysts highlight the expected yield and interest rate spreads[112].
These indicators may be applied when conducting an analysis on precedent market transactions as well.
Purely focusing on the hotel market, the appraiser should consider the physical characteristics of the dwelling[113], the average price per night, the average Net Sales per night, and the occupancy rate[114]. In addition, the capital structure and the company's management have a central role. For example, a big chain such as Four Seasons Hotels is not an appropriate comparable when valuing a family-owned hotel business. Instead, it would be appropriate for international chains such as Hilton or Marriott International.
Nevertheless, if the small hotel in question has no similar comps, the analyst can take the big chains and then adjust their value accordingly. Obviously, there must be some underlying common factors for such an assessment to take place: the location, a similar stay demand, or other physical characteristics. This is the reason the Market approach is widely applied: taking the market, analyze it, and

[112] <https://www.ivsc.org/> International Valuation Standards Council (2021). *IVS Framework*. (paragraph 30.4).
[113] They include the location, amenities, the rank (for example, 4 or 5 stars), etc.
[114] The number of rooms occupied with respect to the available ones.

backing up comparables with proper indicators, without any need for information about the targeted entity.

Furthermore, the units of comparison applied will change in accordance with the type of property being valued. Residential properties, for example, heavily relies on local market experience and on the specific features of each building[115]. It is a sector where there is a large variety of transactional evidence. On the other hand, commercial property requires a more detailed investigation backed up by financial elements[116].

Within the retailed industry, the main objective is the disposal of a space in which to sell goods. Shopping centers or factory outlets are the perfect example. On one hand, buildings located in the suburbs are valued similarly as industrial warehouses, where rents and capital values are expressed in terms of price per square meter[117]. On the other hand, big centers located in downtown or near the main streets are valued differently. In this case, retailers try to be as close as possible to "footfall", the proximity to a good flow of pedestrian, or to dispose of eye-catching prominent windows that allow to attract customers[118].

To a certain extent, these factors play a major role for hotels as well. The proximity to the center, the strategic position[119], and the level of tourism highly influence the business. On valuing specialized property such as hotels, any supporting evidence from recent transactions is useful to assess these types of indicators.

Comparable evidence is convenient to then identify the most appropriate properties/assets to match with. Similarly to the Multiple Valuation approach, comparables are chosen according to several criteria. First of all, the data source

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[115] Scarrett, D. (2008) *Property valuation – The five methods*, 2nd edition. Routledge. (p.73)

[116] Differently from residential properties, commercial properties require knowledge about the current and predicted balance sheet and the debt position of the firm.

[117] Scarrett, D. (2008) *Property valuation – The five methods*, 2nd edition. Routledge. (p.75)

[118] Jewellery, clothes, shoes and likewise shops.

[119] A strategic position may be either in the proximity of the city center, or in an exclusive location – usually very difficult to reach to ensure peacefulness.

must be reliable and trusthworthy, for an appropriate comparison to take place. In case of comparable transactions, sufficient information about the transaction must be available and as close as possible to the valuation date. This is important to reflect the market's expectations. Moreover, the presence of several transactions is generally preferred to a single one[120].

The perfect comps are the ones identical to the target property, asset, or firm. However, in practice the valuer tries to pick the most similar ones, because it is very rare to find two equal assets. According to this reasoning, comparables may present some discrepancies with the target one. The wider the differences between their features, the lower the similarity level will be.

In any circumstance, the appraiser should properly analyze their differences and make adjustments accordingly. Examples of common characteristics include material features (age, size, etc.), geographical location, projected profitability of the asset, historical and expected growth, yields, and ownership characteristic[121].

The International Valuation Standards Council drafted the steps to follow in order to conduct a Comparative Method Appraisal[122]:

1. Identify the **units of comparison**, in relation to the reference market and the characteristics of the property/asset/firm being valued;
2. Find the **most appropriate comparable properties, assets, or firms** on the basis of the units of comparison;
3. Conduct an analysis whose aim is **finding similarities and discrepancies** between the comparables and the subject asset;
4. If any differences arise, **adjust the valuation metrics** accordingly;

[120] <https://www.ivsc.org/> International Valuation Standards Council (2021). *IVS Framework*. (paragraph 30.7).
[121] <https://www.ivsc.org/> International Valuation Standards Council (2021). *IVS Framework*. (paragraph 30.8).
[122] <https://www.ivsc.org/> International Valuation Standards Council (2021). *IVS Framework*. (paragraph 30.6).

5. Apply the adjusted valuation metrics to the target and find its value.

In conclusion, the comparative method employs market data and transactional evidence to assess a property's value. Since assets are heterogeneous, the analyst must take into account all the relevant differences and make appropriate changes. Obviously, the adjustments applied to the comparable evidence must be duly justified.
Even though the market approach is the most commonly used, it would be more suited for properties, firms, or assets where there is a wealth of market evidence[123]. Nevertheless, the underlying requirement is an adequate knowledge of the market and a good understanding of the legal, economic and physical factors affecting its value.

3.3.2 Income Method

The Income Method provides an indication of the property's worth by converting future cash flows to present value[124]. Although there exist several ways to implement this approach, all of them are based on the Discounted Cash Flow (DCF) Method.
As previously explained, the aim of DCF is to compute the present value of the asset or, as it will be dealt later, of the property. It forecasts expected cash flows and discount them back to the valuation date.
The application of this method entails the abovementioned key points: future cash flows forecasts, discount rates, terminal value of the assets, and growth rate expectations. The specifics about each of them are explained in detail in Chapter 3.1.

[123] Scarrett, D. (2008) *Property valuation – The five methods*, 2nd edition. Routledge. (p.82).
[124] <https://www.ivsc.org/> International Valuation Standard Council (2014) *Development property – exposure draft*. (paragraph 5.)

The reasoning behind DCF approaches could be also applied in real estate appraisals, where buildings, dwellings, or land are financially operating, hence generating inflows. Think about a rented flat in the city center: if the owner wants to sell it, it would be easy for the prospective buyer to predict the revenues and net income it will generate. This is because the subject asset is already "active": location, demand and flat's conditions will determine the rent price.

The same concept applies for a real estate company wishing to buy a new asset from a private owner. The object of the acquirement may be destined to either rent or selling to clients. In accordance with the use, the projected cash flows may be computed from the standard DCF model.

Real estate, however, presents some peculiarities with respect to other markets when applying Discounted Cash Flows approaches. Differently from other sectors such as financials, consumer services, and industrials, real estate requires attention from too many variables[125]. These inputs might not be known in advance and, even though a market analysis is helpful, discrepancies may still occur.

For example, the building may have not been completed, the purchase may constitute of only land because of construction projects, or the property is destined to total, or partial, restructuring. *Development property* is the technical term for any real property that is either under construction or where construction is contemplated[126]. Development property is the common definition for all the above-mentioned scenarios, where the subject asset is uncompleted and, hence, cannot be properly evaluated.

[125] Interests and yields (for prospective investments) depend on the financial scenario, furniture relies on the current costs of goods, utilities' cost depend on raw materials, etc. The overall costs incurred is too volatile, as it depends on several different factors.

[126] <https://www.ivsc.org/> International Valuation Standard Council (2014) *Development property – exposure draft*. (paragraph 5.)

In these cases, expected cash flows are more difficult to predict because the real costs will be computed only at time of completed works. The period of constructions, refurbishment or renovations implies a significant stream of outflows, rather than inflows. Perhaps years will go by before the company will be able to actually see positive cash flows. Consequently, predict them can be challenging.

A market approach method is often implemented when the evidence of cash flows is blurred. Comparing similar property transactions with the subject one will be useful to forecast the asset's value[127]. In order to apply the Comparative Method to development properties, the analyst conducts a market-evidence based analysis, applying multiples[128]. Of course, if market conditions change in the forecasting period, the appraiser should adjust the forecasts accordingly.

The value of a development property will reflect the market's expectations of such property when complete, deducted by the incurred costs to complete it[129]. Along with the difficulties on estimating construction and renovation costs, the market itself may react differently[130]. Moreover, the buildings costs involve a variety of different assets, whose prediction may depend on different factors as well. Hence, the market approach is not entirely reliable when assessing development property. It is suggested to apply it only if the market is well-known and presents some direct evidence of value[131]. Instead, a variant of the Income Method is more often applied: the Residual Method.

3.3.2.1 Residual Method

[127] <https://www.ivsc.org/> International Valuation Standards Council (2021). *IVS Framework*. (paragraph 50.24).

[128] See Chapter 3.2 for market multiples' detailed explanation.

[129] <https://www.ivsc.org/> International Valuation Standard Council (2014) *Development property – exposure draft*. (paragraph 19.)

[130] The real estate market may change in relation with political, economic, and geographical policies.

[131] For example, if the same transaction as occurred, or the property's dynamics are identical.

The assessment of a *development property* is usually performed through the Residual Method – a variant of the Income Method. This approach is worth an explanation on its own due to the high presence of uncompleted properties in the real estate market.

Comparative and Income Methods are more appropriate where transactional evidence of sales is readily available, whilst the Residual Method is used to provide an evaluation of undeveloped land, renovating buildings, and for sites uncapable of producing an economic rent at the time of assessment[132].

Whereas the object of evaluation is a development property, the real estate appraisal is conducted by presenting the project on completion: its final value minus the estimated costs for the construction works (including fees and finance costs)[133].

This type of approach gathers as much reliable information as possible, since many of the variables have not been built, plans have just been drafted, and rents are not likely to be negotiated yet[134]. First of all, the appraiser should start analyzing completed properties in the same sector or with similar characteristics. Secondly, he should focus on the singular elements[135] of costs and income and implement them within the big picture of the project.

Through the Residual method, the likely profit after a certain disposal of the land, or construction costs in the site can be estimated. Thanks to its high adaptability, it is usually applied to infer the feasibility of an acquisition/investment proposal.

In the same way, it is useful to estimate the current value of an undergoing project at a given time[136]. For example, the construction works will last five years from present time, but the company wants to know the perspective value

[132] Scarrett, D. (2008) *Property valuation – The five methods*, 2nd edition. Routledge. (p.115)
[133] Scarrett, D. (2008) *Property valuation – The five methods*, 2nd edition. Routledge. (p.116)
[134] Scarrett, D. (2008) *Property valuation – The five methods*, 2nd edition. Routledge. (p.116)
[135] They may be high-value items, specifics to an asset, or constructions details worth of particular attention.
[136] <https://www.ivsc.org/> International Valuation Standard Council (2014) *Development property – exposure draft*. (paragraph 20.)

in three years. Whereas the construction or renovation works will take two or more years, the market may be subject to relevant changes affecting the face value of the development property. Similarly, during this period, the property itself may be subject to external events influencing the development project.

Even though the Residual Method has its roots in the analysis of the market, the same procedure of the Income Approach applies. In the Residual Method the difference is that cash flows are inferred from reliable data in the market, rather than an operational analysis of the projected balance sheet. Such cash flows will then be actualized at present time in relation to the discount rate[137]. The International Valuation Standards Council has provided a guiding list of the most common inputs for development properties[138], even though they will vary according to the property being assessed at time of assessment. The first typical input is the property's expected value at time of completion. Secondly, any agreements prior to the acquisition of the property[139] must be checked. Whenever, after completion, the owner will destine such property to the same purpose, such agreements must be accounted at valuation date. Thirdly, finance and construction costs must be predicted and implemented in the model. Payments made before the valuation date are considered irrelevant for the purpose of the analysis, even though they must be reflected in the value. Lastly, any potential risk associated with the ongoing works must be considered. Common risks include unforeseen conditions for which the construction or refurbishment costs will be higher, contract delays, supplier failures, and any changes in law, supply and demand.[140]

[137] The discount rate either reflects the transaction costs of similar properties in the market, or the WACC. (See Chapter 3.1).
[138] <https://www.ivsc.org/> International Valuation Standard Council (2014) *Development property – exposure draft*. (paragraph 24.)
[139] Referring, for example, to lease agreements, where the property is destined to be an investment.
[140] <https://www.ivsc.org/> International Valuation Standard Council (2014) *Development property – exposure draft*. (paragraph 24(g)).

Since cash flows are the main inputs considered, checking the reliability of data sources is the first step on performing the analysis. At the same time, market information allows to make a direct comparison between the property being valued and the ones in the same sector. Whereas a lot of differences arise, the appraiser should conduct the valuation on the specific components of that property.
In this context, the main advantage of the Residual Method is that it allows specific costs to standout when valuing a real estate project. Estimating incurred costs and future income inflows for particular items or projects will avoid many of the shortcomings of the Comparative Method described earlier.
On the other hand, the model is very sensitive to changes in the inputs. Any difference between the forecasted cash flows at the time of valuation and their actual value can become very large. The problem is that differences will be visible only at a future date, highlighting how delicate is the choice of assumption and the quality of information.
Appraisals are usually performed with different methods [141] to allow for comparability among them. Relying solely on projected costs and income is not appropriate[142].

In conclusion, the Residual Method simulates the approach of the Comparative Method, without direct market evidence of value. Development is an intricate business, whose range of variables make the market comparison less suitable for valuation[143].
The rationale behind this approach is that the investment made for the completed property, deducted by the projected costs, generates a surplus. The surplus must be positive for the project to be feasible: it constitutes the financial

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[141] <https://www.ivsc.org/> International Valuation Standard Council (2014) *Development property – exposure draft*. (paragraph 22.)
[142] <https://www.ivsc.org/> International Valuation Standard Council (2014) *Development property – exposure draft*. (paragraph 28.)
[143] Scarrett, D. (2008) *Property valuation – The five methods*, 2nd edition. Routledge. (p.121)

source used for the acquisition of land, site, or building and cover the related costs. If the difference is instead close to zero or negative, the development project is not financially achievable[144].

3.3.3. Cost Method

The Cost Method is based on the economic principle that the buyer will pay for a property a price equal to an asset with same utility[145]. The cost to obtain such asset entails a valuation of any replacement, construction, and reproduction expenses. In addition, deductions for physical deterioration and other forms of obsolescence must be estimated.

The reasoning behind this approach reflects partially the Comparative Method. In the Cost Approach, first of all, the analyst should identify properties within the market that may have the same prospective profits of the subject asset. The potential to earn a similar profit is based on the use, destination, and target clientele[146]. This leads to the second step: identify the utility derived from the subject property for the prospective buyer. The utility level is reflected in the projected profits. This stage is very sensitive to the initial condition of the building[147], land, or residential properties.

Consequently, if any construction, renovation or refurbishment works are planned, the expected utility should implement the upgrades. This is the case, as mentioned earlier, of *development property*.

[144] The investment is not convenient as the amount of money invested are higher than future revenues.
[145] <https://www.ivsc.org/> International Valuation Standards Council (2021). *IVS Framework*. (paragraph 60.1).
[146] <https://www.ivsc.org/> International Valuation Standard Council (2014) *Development property – exposure draft*. (paragraph 30.)
[147] The definition of "building" comprehends both commercial and industrial real estate.

As the actual profit is determined on the completed properties' value, the application of the Cost Method is more difficult when dealing with development real estate.

Instead, the expected profits (utility) for completed properties may be inferred on the basis of ongoing agreements. If the property is ready to be sold, the fixed price has already been negotiated. If it will be rented, the periodical rent has already been agreed upon. In both cases, the resulting profits may be easily computed.

In case of readily disposable property[148] for which there is market-available evidence, the appraiser will estimate the price for the subject property's acquisition, consistently with the price of similar assets in the market.

On the other hand, the procedure for a partially completed asset is more complicated. The value of such properties reflects both the costs certainly incurred and the costs and time required to complete the property. While the former could be deducted from a market analysis, the latter requires a per-se evaluation, affecting the expected profit and risk[149].

As a consequence, unless the valued property is subject to a sale, or rent, agreement and the price has been fixed by both parties, the Cost Approach is unlikely to give a reliable result[150].

Furthermore, analyzing a development project and anticipate the related costs for a hypothetical alternative would replicate either the Market Approach or the Residual Method[151].

The Cost Approach derives the acquisition price from the cost that would be incurred by acquiring other assets holding similar prospective profits. For this

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[148] Anything else falling outside the definition of "development property".

[149] <https://www.ivsc.org/> International Valuation Standards Council (2021). *IVS Framework*. (paragraph 60.4).

[150] <https://www.ivsc.org/> International Valuation Standard Council (2014) *Development property – exposure draft*. (paragraph 30.)

[151] <https://www.ivsc.org/> International Valuation Standard Council (2014) *Development property – exposure draft*. (paragraph 29.)

reason, it is suitable only in specified circumstances[152]. Firstly, in case the analyst is not able to recreate an asset with the same utility of the subject property, or when it has just been created. This situation happens when an active market has not existed yet. Secondly, whenever the property is not directly generating income, or benefits. Lastly, when the cost approach is used as an alternative for appraisal – as a comparison with other methods.

For clarification, the following list shows the steps when implementing a Cost Method appraisal:

1. Identify the property: completed or development property. If the latter, it is not suggested to continue as this approach replicates the Comparative or Residual Method.
2. Conduct a market analysis of similar property, at the end of which the likely profits may be estimated.
3. Estimate the profits of the subject property, in relation with market evidence and statistics.
4. Estimated the acquisition price on the basis of the market projected profits. If the result is a surplus, the investment will be worth it. Otherwise, the costs incurred would be higher than profits generated, leading to an economic loss.

In conclusion, any valuation method should present a range of reliable assumptions used to document value. According to the specifics and the object of the property being assessed, an approach may be more appropriate than others. The Comparative Method is broadly implemented where the market is well-known and transaction evidence is available. The Income Method is used for rental or commercial properties, where the property's revenue determines

[152] The list is provided by the International Valuation Standards Council (*IVS Framework (2021),* paragraph 60.2 and 60.3).

its value[153]. Specifics regarding development property are commonly dealt through the Residual Method, whereas the Cost Approach applies if market comps are lacking.

Ideally, the computation and subsequent comparison among all of them will lead to the straightforward real estate value.

[153] <https://learn.thinkprop.ae> *Understanding Real Estate Appraisal: Exploring the five most popular appraisal methods – An infographic.* Mayfield, J. (Accessed on 07-12-2023)

CHAPTER IV

The Valuation Process: Ca' di Dio's acquisition proposal

The real estate market in Venice has drawn attention for the several acquisition's operations concluded in recent years. Besides the residential market, luxury hotels represent the core of business transactions in this small island.

Among the ones that reached the higher bids, the purchase of Hotel Danieli by Four Seasons has registered the peak amount. The operation was concluded in June 2022 for a price higher than € 300 millions, adding estimated renovation costs of € 30 millions[154].

In second position for the price agreed, Hotel Bauer was acquired for € 250 millions. Elliott Group sold the property to the Austrian-based real estate group Signa in June 2020[155].

Grand Hotel Britannia was another significant acquisition in July 2019 by Marriott International. Bringing this historical hotel into the St. Regis collection is a further proof of international hotel chains' interest in purchasing properties in Venice. In this case, 40 million euro were additionally invested for refurbishment costs[156].

Lastly, Alpitour Group acquired a former nursing house near Saint Mark's square to build a 5-star hotel in February 2019. The agreement has required an annual payment of € 1.350.000 for 27 years, for a total investment of € 36.450.000. In addition, the project needed around 6-8 million euro for

[154] <www.italiaatavola.net> *Il Four Season sbarca a Venezia e conquista l'Hotel Danieli.* Alberto L. (06-01-2022).
[155] <www.gabettigroup.com> *Hotel report – Q4 2020.* Gabetti group. April 2021.
[156] <www.settengenesio.it> *St. Regis Venezia – Scheda intervento.*

construction and refurbishment costs[157]. This remarkable investment by the Italian tourist company will give birth to Ca' di Dio.

The acquisition of Ca' di Dio has brought particular attention due to the complete change of the estate's purpose, which has further emphasized the growing hotel business in Venice.

This chapter, particularly, will deal with the specifics behind Ca' di Dio's acquisition. After a general introduction, it will explain how real estate appraisal may have been conducted from Alpitour's perspective. The chapter will analyze and compare the different assessment methods, in order to select the most appropriate one. Afterwards, it will take the reader into the overall hotel valuation process: from the collection of data to the computation of its final valuation range[158]. Lastly, the property's "fair value" and the actual price paid will be compared.

The peculiarity of this case, as many others, will rise in this last part, where Ca' di Dio's acquisition can fall into the so-called "Crown Jewels" of real estate.

In finance, Crown Jewels are referred to as the most important assets within a company. However, in real estate, they are considered acquisition targets whose price is extremely high with respect to their face value. As later will be explained, this kind of situations happen because of the many advantages entailed in the property's added value.

At the end of the chapter, the relevance of Crown Jewels in the real estate market will be presented with reference to the acquisition of Ca' di Dio.

[157] <www.italianostravenezia.org> *Perdiamo anche la Ca' di Dio.* (16-02-2017).

[158] The final valuation range is the approximate worth of the property, according to the analyst's assumptions.

4.1 Ca' di Dio: Introduction to the case

The historical dwelling of Ca' di Dio is known for its breathtaking view on the Venetian lagoon, located in Sestiere Castello, only a few steps from Saint Mark's square and La Biennale. Ca' di Dio is an ancient building, which has been related to hospitality for almost 800 years.

Its origin dates back to 1272, when pilgrims on the way to the Holy Land seeked a shelter to eat a warm meal and to sleep. Later on, the dwelling became a refuge for poor widows looking for help[159].

Ca' di Dio's first renovations were run in 1544 under the guidance of Jacopo Sansovino, an Italian famous architect and sculptor, who planned the total refurbishment of the dwelling. However, the works stopped only after three years for a still-unknown reason. Nevertheless, Sansovino's original drawings have been saved for the project to be continued. It is still not clear whether the XXI century's façade of building corresponds to the original project, or it is only a partial realization of it[160].

Despite the initial interruption, Ca' di Dio's refurbishment had been continued until the early XXI century, when its destination changed once more. Back then, it was, to some extent, a luxury nursing house, reserved only to wealthy elderly men. The outstanding location, the welfare offered, and the dwelling's recent renovations dilated the real purpose of a mere nursing house.

Despite the preciousness of the building, from the early 2000s it started to diminish in its use. Elderly men could not afford the place anymore, preferring to stay elsewhere. The immediate consequence is that lots of the rooms and spaces became empty and the management had to face huge maintenance

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[159] <www.ilgazzettino.it> *Hotel di super lusso a Ca' di Dio, nato nel 1272 come alloggio per pellegrini. Cinquantotto i dipendenti, tutti veneziani.* Gasparon M. (13-10-2021).

[160] <it.wikipedia.org> Oratorio della Ca' di Dio. (Accessed on 21-12-2023).

costs[161]. At that time, the public association managing Ca' di Dio was Ire, while the name has become I.P.A.V.[162] more recently.
For the lack of money and interest from elderly people, the Venetian public association decided to change the destination of the building into a tourist accommodation. Without any doubt the decision shocked many locals, who not only saw the property as a society symbol but were also disappointed for the umpteenth house destined to tourist purposes.
However, Ire partially alleviated this shock by not properly selling the building. Instead, the association thought that it would have raised some money by renting it for other scopes.

From the summer of 2016, the historical estate started to be the object of a public auction, divided in several rounds[163].
The rental base started at € 945.000 per year. The auction registered at least eleven potential buyers at the beginning, but the large part of them were soon eliminated as the price increased by € 30.000 per round. Despite the high interest from big international hotel chains, SHG (Salute Hospitality Group) finally obtained the property lease for 27 years. The hotel Group beated the Venetian entrepreneur Elio Dazzo, reaching a final price of € 1.350.000[164]. The overall investment has worth € 36.450.000, besides the estimated refurbishment costs (at least € 7.000.000).
According to local papers of the time[165], SHG estimated to create around 65 rooms, among standards and suites, classified as a 4-star hotel. The winning company had already nine active hotels in Italy.

[161] <www.ilgazzettino.it> *Hotel di super lusso a Ca' di Dio, nato nel 1272 come alloggio per pellegrini. Cinquantotto i dipendenti, tutti veneziani.* Gasparon M. (13-10-2021).
[162] Istituzioni Pubbliche di Assistenza Veneziane
[163] <www.italianostravenezia.org> *Perdiamo anche la Ca' di Dio.* Italia Nostra. (16-02-2017).
[164] <nuovavenezia.gelocal.it> *Ca' di Dio, dimora per anziani diventa un albergo a 4 stelle.* La Nuova Venezia. (16-02-2017).
[165] Nuova Venezia, Il Gazzettino, Italia Nostra. (16-02-2017).

The high expectations for the new hotel's opening collapsed when the acquirer company had to face massive expenses for construction works. The initial € 7 millions renovation costs soon became € 17 millions. For this reason, SHG started to look for a partnership with another hotel chain, or international company, willing to help them facing this financial issue.
Despite the initial interest of the giant Spanish group Melià, the negotiation went wrong between the parties. The problem was overcome with the support of another Italian company: Alpitour Group.
Alpitour is a leading firm in the sector, offering both programmed tours and tourist packages, as well as owning several hotels in its portfolio[166].
Il Gazzettino, a local newspaper, reports the interview to Shg's CEO Gianluigi Facchino on 24th October 2018[167]: "Our company is satisfied to reach this agreement with Alpitour, an important and solid company with whom we share the same mission and vision. Ca' di Dio aims to be a luxury 5-star hotel, but handy. Overall, we aim for beauty that gives space for creation."
In contrast with the 4-star hotel project in 2017, Shg aimed to build a 5-star luxury hotel with the help of the new partner. This interview has marked an important step towards the soon-to-be Ca' di Dio's management, because it highlights the key role of Alpitour in the overall transaction.
As a matter of fact, without the help of another firm, Shg would have not been able to complete the required works. The witness is the impass situation right after Shg's auction winning. The initial work interruption scared both construction companies and public institutions (Ire and the municipality of Venice). Consequently, the overall project was saved by Alpitour's intervention, who decided to invest an initial sum of 16 million euro to build a luxury 5-star

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[166] The hotel segment is managed by the controlled company VOIhotels.
[167] <www.ilgazzettino.it> *Alpitour al fianco di Shg per l'albergo alla Ca' di Dio.* Il Gazzettino. R. Br. (24-10-2018)

hotel. The hotel's management will be assigned to Voihotels, Alpitour's division regarding hotel chains[168].

During the last months of 2018, works had been estimated to be completed by the subsequent year, with a perspective opening for 2020 New Year's Eve[169].

Despite the initial project, the end of 2019 and the entire 2020 brought stunning news all around the world. The Covid-19 pandemic blocked the works and inevitably obliged the firm to postpone the opening. In particular, Venice's tourism sector suffered immensely during this period: not only workers had to stay at home, but the usual touristic flow completely stopped. Venice seemed like a ghost island in that period.

Nevertheless, the big question mark about tourism recovery did not stop Alpitour from believing in this project. As soon as restrictions started to fall, they continued the renovation works, relying on the well-known Spanish architect Patricia Urquiola.

In the spring of 2021, Paolo Terrinoni, Voihotel's CEO, speaks about the enthusiasm behind the opening approaching: "We are glad Ca' di Dio is finally showing off to the city through its façade. The works are proceeding quickly, and the opening is estimated to be at the end of the spring, in conjunction with the city's most important events and the wish for the international tourism to recover"[170].

The official inauguration took place on 12th October 2021, where the hotel showed decorative and architectural details touched by the crafted hands of local artisans, altogether respectful of the original spaces[171]. The overall

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[168] <nuovavenezia.gelocal.it> *Via le impalcature, ecco la nuova Ca' di Dio veneziana. A primavera aprirà un albergo Alpitour.* La Nuova Venezia. Pendolini E. (19-01-2021)

[169] <www.ilgazzettino.it> *Alpitour al fianco di Shg per l'albergo alla Ca' di Dio*. Il Gazzettino. R. Br. (24-10-2018)

[170] <nuovavenezia.gelocal.it> *Via le impalcature, ecco la nuova Ca' di Dio veneziana. A primavera aprirà un albergo Alpitour.* La Nuova Venezia. Pendolini E. (19-01-2021)

[171] <www.ilgazzettino.it> *Hotel di super lusso a Ca' di Dio, nato nel 1272 come alloggio per i pellegrini. Cinquantotto i dipendenti, tutti veneziani.* Il Gazzettino. Gasparon M. (13-10-2021)

investment for renovations and construction amounted to € 25 million. In addition, Ire, the owner, should receive an annual rent of € 1.350.000 for 27 years.
After the meticulous study by the architect and designer Patricia Urquiola, Ca' di Dio opens as part of VRetreats division within Alpitour Group's VOIhotels.

The new opening represented the first step towards the tourism-related recovery after the pandemic. VRetreats, as a matter of fact, is a collection where historical and exclusive dwellings, an exquisite character in design and a strong bond with the locals are the main features. All estates within this collection are meant to connect history, art and culture.
Regarding Ca' di Dio, particular attention was given to the common areas, where guests are received and relations begin. In the Lobby, originally the Church, it is possible to admire the 14.000 Murano glass' crystals that create three rib vaults of the chandelier. Every corner has been designed in detailed, allowing textures, glasses, marbles, and stones to reflect the local craftmanship. The building counts a Reading Room, the Alchimia bar, two restaurants, two roof terraces from which you can have an outstanding view of the city, and three gardens, expression of the peace of the nature[172].
The hotel offers 66 rooms, among which 57 Suites and 9 Deluxe, most of which have windows on the lagoon[173]. The warm hospitality, the bond with nature, and the deep attention to details are embodied in the personality of Ca' di Dio.

[172]<www.ilsole24ore.com> *Per VRetreats (Gruppo Alpitour) una collezione di 12 hotel in tre anni.* Il Sole 24 Ore. Incorvati L. (13-10-2021).
[173]<https://vretreats.com/ca-di-dio/>

4.2 Valuation approaches to Ca' di Dio's acquisition's proposal

Ca' di Dio's history is helpful to get a hand over the actual valuation. The frequent change in management throughout the years and the lack of financial resources of the owner, Ire, inevitably brought the estate to be destined to a more profitable scope. Ire's decision to put the property in a rental auction finally attracted the interest of many investors.
Why had the property risen stakeholders' attention only at this point?
A possible answer is that experts saw the possibility of making big returns. In Italy, especially in Venice, the tourism-related sector is the most profitable one[174]. Big investors seized this opportunity miles away, even with the implication of the burden of a three-decades rent.
The acquirer's reasoning is that future revenues generated will be enough to cover the rent and the initial renovation expense, as well as the ordinary costs for the property to stay open.
However, where exactly is this reasoning built upon? How can the potential acquirer estimate that the investment is worth it?
All these questions can be answered by performing the property's appraisal, thanks to which the value of the investment could be translated into an actual number. This number will show, with strong confidence, Ca' di Dio's financial value.

In this case, the appraisal is conducted by putting ourselves into Alpitour's - or other companies' – shoes in 2018. The year before, Shg started to look for a partnership right after the winning of the auction. The company was not able

[174] <www.gabettigroup.com> *Hotel report – Q4 2020.* Gabetti group. April 2021. (p.10)

to cover the expenses to build a hotel, as the required financial resources increased rapidly.
This is the scenario to be kept in mind when valuing Ca' di Dio: the property's needs for refurbishment and construction (no less than € 17 million), an annual rental burden of € 1.350.000 for 27 years, the ultimate purpose to build a hotel, a sector where the potential growth and attractiveness are very high. Another important factor is the timing: the valuation must be performed in 2018, before the Covid-period and when the sector was performing very well.

The financial expert and trusted consultant Tyler Davis defines the appraised value as: *"(...) what a professional appraiser determines a property is worth. The market value is what buyers are willing to pay. Those numbers could be within close range of each other or different."*[175]
This concept is a key point in this study: "a property's worth" versus "its market value". The former is the estate's fair value, while the latter is what the market thinks the same estate is valued.
This distinction is the core of Chapter 4, where Ca' di Dio's appraisal is performed and then confronted with the market value.
As Davis says, those number may differ for several reasons. In this case, the potential difference could be explained by the additional hidden value. The property is meant to become a luxury hotel, with a unique position in one of the most mesmerizing cities in the world. May not all these factors justify for a higher market value?
After conducting the appraisal, the market value (€ 36.450.000[176]) will be compared with the property's fair value in order to check the linkage with Crown Jewels[177].

[175] <www.saundersrealestate.com> *The Difference Between an Appraisal vs. Valuation.* Davis T. (24-02-2023)
[176] For the sake of simplicity, it is the total rent to be paid to Ire (€ 1.350.000 x 27).
[177] In real estate, Crown Jewels are referred to as property acquisitions whose price is much higher than their fair value. After the appraisal, it will be explained how this is possible and why it happens.

Analyzing the market, estimate its potential trends, predict the prospective revenues and compare them with the costs incurred are among the steps of the assessment. However, before starting, the analyst should decide which is the best appraisal method to apply. Each of them is singularly analyzed below.

COMPARATIVE METHOD

In the Comparative Method, the object property (Ca' di Dio) is evaluated on the basis of other similar properties. The main elements to take into account in this case are the following: geographical location, the position in the city and the surroundings, the hotel's classification[178], the structure of the building[179], and price per night.

Despite the presence of many comparable hotels in Venice, the analyst must find the ones that are as similar as possible as Ca' di Dio in accordance with the elements listed. Consequently, this approach implies to know the market very well.

For the purpose of conducting the valuation, the Prior Transaction Method may be useful as well. However, at the time of appraisal, the property was destined to a completely different scope and, hence, data is not relevant. More accurately, the valuer should seek for transactions where the property was only projected to become a hotel. Despite the large annual amount of hotel transaction in Venice, this case is not very often encountered. Previous acquired hotels, such as Hotel Bauer and Hotel Daniel, were already operative at time of purchase. Therefore, the appraiser should stick with the traditional Comparative Method.

Due to the large evidence in the market, this approach is totally feasible. Whereas discrepancies with other properties arise, adjustments can be made

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[178] Luxury, 5-stars, 4-stars, etc.

[179] E.g. number of rooms, the presence of restaurant(s) or bar(s), and any other additional facilities (pool, gardens, spa, etc.).

accordingly[180]. Differences may be linked with the size and the average price per night, conserving also the programmed construction and renovations works.
As the market approach relies heavily on Multiple Valuation[181], appropriate comps must be chosen in accordance with the hotel's prospective characteristics. Obviously, the final number to be looking for is the Enterprise Value.

INCOME / RESIDUAL METHOD

The Income Method, instead, relies on future cash flows, which are actualized at the time of valuation. The Discounted Cash Flow is the basis behind it. When the present value of projected cash flows is computed, all costs incurred must be deducted. These costs include both the operating costs for the hotel's opening and, more importantly, the annual rent, renovation, and construction expenses.
Differently from Comparative Method, the Income Method does not look for comparable hotels. It relies solely on projected income and costs which, considering the peculiarity of the case, is not suggested[182]. The main reason is because the Income Method would require a prediction of the costs (both linked with the programmed works and the operating costs), which is very difficult to perform without a comparison with the market.
Nevertheless, it must be considered that the object of the assessment is a *development property*. It would be more appropriate to apply the Residual Method where cash flows are replaced by the final value of the project on completion, that can be estimated only by looking at the market. Consequently, the analysis

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[180] <https://www.ivsc.org/> International Valuation Standards Council (2021). *IVS Framework*. (paragraph 30.8).
[181] See Chapter 3.2.
[182] <https://www.ivsc.org/> International Valuation Standard Council (2014) *Development property – exposure draft*. (paragraph 28.)

of the hotel luxury market should be performed anyways to determine the property's worth[183].

In conclusion, the Residual Method could be applied to estimate the future potential inflows (income items in the balance sheet), but it would replicate the Market Approach.

COST METHOD

Lastly, the Cost Method is based on the concept that the price of a property should equal the price of another property with the same utility. In this case, Ca' di Dio's expected return (expression of "utility") should reflect other comparable hotels, after development and construction costs have been deducted.

As mentioned in Chapter 3.3.3., this approach should firstly identify comparable hotels with similar prospective results. On the basis of the market analysis and statistics, the estimated profit of the target property can be computed. After that, annual rent, renovation expenses, and operating costs are deducted from the estimated profit to obtain Ca' di Dio's "fair value".

Nevertheless, this process would faintly replicate the Residual Method which, in turn, is based on the Comparative Method. Furthermore, applying the Cost Approach in this case would not be practical due to the many assumptions[184] implied.

In conclusion, Ca' di Dio's best approach for appraisal relies on the Comparative Method for the following reasons. First of all, the wide evidence of market record allows to find the most adequate comparables. Secondly, this method is the most appropriate because, at the time of the valuation (2018), the hotel had not open yet and previous data is not available. Moreover, it was

[183] Performing a market analysis implies partially to use the Comparative Method to determine potential cash flows, operating costs and predicted income.

[184] Assumptions are related to the projected operating costs and income, which are based on other hotel data.

destined to a completely different purpose before the acquisition took place. For this reason, looking at other hotels' performance would reflect the prospects of the investment. Lastly, whereas discrepancies[185] arise, corrections could be made to Ca' di Dio's value.

4.3 Ca' di Dio's Appraisal: Comparative Method step-by-step

Chapter 3.3.1. presented in detail how the Comparative Method should be performed. The whole procedure will simulate Ca' di Dio's appraisal by Alpitour in 2018.
The International Valuation Standards Council has presented a step-by-step list[186] to implement the Comparative Method. During the application of this approach, however, the analyst must keep in mind that the property had not been a hotel yet. In 2018, it had to be considered a developed property aimed to be a 5-star luxury hotel.

With this in mind, the appraisal should start by identifying the units of comparison used by participants in the reference market[187]. In the hotel market, common units of comparison are linked to the hotel's position, the firm's properties and size, the average price per night, and the amenities offered. They will be essential to find the most appropriate comparable hotels. If any differences arise, the valuer should adjust them to the valued estate.

[185] This is because no properties, as well as businesses, are exactly identical.
[186] International Valuation Standards Council has presented it in the *IVS Framework* (2021).
[187] <https://www.ivsc.org/> International Valuation Standards Council (2021). *IVS Framework*. (paragraph 30.6).

The Comparative Approach relates with the Multiple Valuation[188] because, as the name says, the property appraisal is based on comparable hotels. Consequently, choosing the right comps is the first and most important phase. This choice, along with the criteria used to evaluate them, will determine the final valuation range of the object property, Ca' di Dio.

Recalling the Multiple Valuation approach, after the elements outlining the property have been identified, the procedure is the following. Each step will be further explained when performing the valuation.

1) Look for the units of comparisons that will help **defining comparable firms, properties, or markets**. In this case, comps are hotels with similar units of comparison.
2) **Define the right multiples** for the valuation.
3) Collect market information and compute the future expected measures of performance for the valued firm. In the applied case, this step will be based on comparables' projected measures. They will be important to **calculate the basis for multiples in the future**.
4) Determine the **average across industry** for the multiple(s) selected.
5) **Value the property,** by comparing comparables' multiples and adjusting the property's value.

4.3.1. Defining comparable hotels

The elements to focus on when selecting comparable hotels mainly relate to expected risk and growth factors. Both could be found by looking at the current and expected state of the luxury hospitality sector in Venice at time of valuation. Reports released in 2018 registered an increase tourist flow with respect to the previous 5 years. According to World Capital Group, the hospitality sector in

[188] See Chapter 3.2.

Italy is worth more than 100 billion euro in 2018, along with a tourist average expense of 50 billion euro. Luxury hotels in Venice reported the highest values, reaching € 1.5 million per room[189]. More generally, tourist attractiveness to the city is very high, both in the center and in metropolitan areas. Regarding tourists' arrivals, the Municipality of Venice has moved from 17,1% in 2014-2017 to 11,2% only in the last referred year. Moreover, tourist revenues constitute a large part of the city inflows: from 2016 to 2017 they have grown by +16.7%[190].

The Tourism Department Office in Venice had analyzed and published the trends of tourism in the previous five years[191]. The tables below summarize the most relevant data for this market analysis, highlighting tourist arrivals according to the type of accommodation and the location.

year	Total		Hotels only	
	Arrivals (k)	% change	Arrivals (k)	% change
2014	4.281		3.411	
2015	4.496	5.0%	3.526	3.3%
2016	4.646	3.3%	3.591	1.9%
2017	5.035	8.4%	3.709	3.3%
2018	5.255	4.4%	3.756	1.3%

Table 2. Tourist arrivals and percentage variation

[189] <www.ilsole24ore.com> *Gli hotel in Italia valgono cento miliardi, a Venezia i valori più alti*. Il Sole 24 Ore. Chierchia, V. (17-12-2018)
[190] <www.ilsole24ore.com> *Gli hotel in Italia valgono cento miliardi, a Venezia i valori più alti*. Il Sole 24 Ore. Chierchia, V. (17-12-2018)
[191] <www.comune.venezia.it> *Annuario del turismo dati 2018.* Assessorato al Turismo, Città di Venezia (2018).

year	Total arrivals (k)			Hotels-only arrivals (k)		
	Center	Lido	Mainland	Center	Lido	Mainland
2014	2.599	184	1.498	1.955	165	1.291
2015	2.777	189	1.530	2.067	161	1.291
2016	2.896	186	1.564	2.121	159	1.311
2017	3.156	185	1.695	2.172	158	1.379
2018	3.325	162	1.768	2.209	140	1.406

Table 3. Tourist arrivals by location

According to statistics, tourism has soared since 2014, although the last year available shows a slightly decrease in the number of tourist arrivals. However, experts in the sector predicted a positive trend for the years following. In particular, 2019 is expected to be more profitable due to the increasingly high demand in the hospitality sector, a number of private events to be hosted in luxury hotels, and the daily rise of flights booked.
Forward expectations[192] are optimistic indeed, even though the market does not expect to perform as well as for the next year.

Having a promising market scenario ahead, the analyst must search for appropriate comparable hotels which highlight the most relevant aspects in the luxury hospitality sector.
Ca' di Dio's comps have been chosen according to several comparative criteria. First of all, hotels in Venice belonging to the same category – 5-star luxury – were picked. This step would allow to avoid including hotels whose value may be misleading[193].
The second factor considered is the location: the stunning view of the canals and the beauty of the palaces is per-se an indicator of the hotel's worth. The

[192] From 2 to 5 years from the valuation date (2018).
[193] Classifying hotels in 3, 4, or 5 stars gives a guidance from the beginning.

most valuable properties are located in San Marco Sestiere, in proximity with Grand Canal, and wherever you have a 360° view of the Venetian lagoon.
Ca' di Dio is located in Riva degli Schiavoni, only a 15-minute walk from St. Mark's Square, near the famous Art Exhibition "La Biennale" and has a wonderful view of the Island of San Giorgio. Consequently, hotels with the same classification but whose location did not match these features were avoided.
The third relevant unit of comparison is the medium price per night. Being a 5-star luxury hotel implies providing clients with high-standard services, 24 hours availability, multilingual staff, and similar. All these will eventually be reflected in the price per night charged to customers. Taking under consideration the ongoing opening periods, the average price per night from May to October[194] was calculated for the candidate comps. After that, they were compared to the targeted hotel's price, assumed to range between € 700-800 per night[195].
Another important factor that the price entails is the building's prestige: historical renowned hotels where famous people have stayed gives a surplus to the business. Since it does not apply for Ca' di Dio, whereas comps of this kind were included, their value shall be adjusted accordingly.
The last features examined were the size of the building, captured by the number of rooms and floors. Ca' di Dio's project aimed to have 4 floors, hosting 66 rooms in total. In addition, the type of services and amenities offered was noted for comparability.
The entire procedure aims to closely assess each of those characteristics for similar hotels, relatively to the targeted one. At the end, the overall list of similar hotels was drafted, and each of them was evaluated according to their units of comparability[196].

[194] <https://www.google.com/travel/>
[195] The estimated price reflects both company's and market's expectations.
[196] See Appendix 1.

Furthermore, comps were divided into two groups, each with different weights, according to the noted features. Group 1 reflects the most similar ones in terms of size of the property, average price per night, and location. Instead, Group 2 comprehends other comparable hotels which lack some factors. Some of them may have too high standards with the target, and/or a different structure (also in financial terms). For example, the St. Regis Hotel is different than Ca' di Dio both in size and property's management[197], however the exclusive location and the recent renovations make it a valuable comparable.
Whenever candidate hotels shared common features with the target, they were included in the valuation, but with a lower weight.
Group 1 would be given a weight of 80%, while Group 2 of 20%.
The final list of comparable hotels is hereby reported, along with their specifics.

Comparables	Group	Avg. price/night	[198]Avg no. employees	No. rooms	No. floors
Hotel Metropole Venezia	1	€ 508	66	67	4
Londra Palace Venezia	1	€ 843	79	52	5
The Gritti Palace	1	€ 1.449	159	84	4
Baglioni Hotel Luna	1	€ 1.193	33,63	91	5
Belmond Hotel Cipriani	1	€ 1.891	33	96	4
NH Collection Venezia	1	€ 488	30	64	4
Hotel Excelsior	2	€ 469	33	196	7
Ausonia Hungaria	2	€ 324	30	60	4
The St. Regis Venice	2	€ 1.380	52,67	169	5
Hilton Molino Stucky	2	€ 681	187	379	7
Hotel Danieli Venezia	2	€ 1.138	175	201	4

Table 4. List of comparable hotels

[197] St. Regis belongs to Marriott International Group, one of the biggest in the luxury hospitality sector.
[198] Average of the years 2014-2018

Once the comparable hotels had been selected, the most relevant financial figures were collected for each of them[199]. To conduct a multiple valuation, the selected data from the company's balance sheet should reflect the size, profitability, and prospective growth. It may also include any other information relevant to the appraisal.

The most important balance sheet figures regarding the size are the Equity Value and the Enterprise Value. The latter is equal to the Equity Value plus Net Debt[200]. Net Sales[201] and EBITDA are other size factors included.

Concerning profitability, Return On Asset (ROA[202]) and Return On Sales (ROS[203]) are the most commonly used. In this type of valuation, the Ebitda-to-sales ratio could be included as well. Calculated as the ratio between EBITDA and Net Sales, it shows how much cash a company generates from each euro of sales. The maximum reachable value is 1, where the sales are equal to the EBITDA. In the applied case, the values were multiplied by 100, showing the result in percentage terms. A low Ebitda-to-sales ratio may lead to low profitability for the company and problems with cash flows. On the other hand, a high ratio implies solid and stable earnings[204].

Since the ratio does not take into account the impact of debt, highly leveraged firms should not be evaluated according to this criterion. Bearing an elevated leverage implies higher risk, while a low one suggests that the business is not fully exploiting the benefits[205] of external sources of financing.

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[199] <https://aida-r1.bvdinfo.com/> (Accessed on 01-10-23)

[200] Total debt – Cash and cash equivalents

[201] Net Sales represent the income of the main activity, while the total Sales include also minor sources of income. In hospitality, "Net Sales" indicates, above all, the revenue per room and, then, other income services from bar, restaurant, pool, room-service, and so on.

[202] Net income / Total capital

[203] EBIT / Net Sales

[204] < https://www.investopedia.com/>

[205] Benefits regard the financial impact on taxes: with a high leverage, interest expenses increases, lowering net income and, finally, the taxes calculated on it.

In this regard, leverage ratios are useful to assess the company's ability to meet its financial obligations. The most common is the debt-to-equity ratio, which assesses how much the company is relying on debt, with respect to equity. Two types of this ratio have been considered: D/E and D/E with external financing. The latter indicates the overall impact of debt (both short-term and long-term), while the former comprehends only outstanding debt towards lenders. Whereas D/E has a positive ratio and D/E with external financing is zero, the whole capital is fund by the company itself.
Another important measure is the liquidity index[206], which reflects how easily a company can convert its assets into cash. For example, receivables can be quickly converted into cash but require the client to pay, whereas inventories and financial assets need more time to become liquid.
A liquidity index which is close to 1 implies that all the liabilities can be paid by the firm's assets. The most desirable outcome is having a value higher than 1, which means that the current liabilities could be "covered" by the current assets.
The last figure is the historical change in Ebitda and Sales, which could be helpful to compare past growth among the comps. Particularly in this case, the growth was computed considering a time gap of three years (from 2015 to 2018).
After all data had been collected, the overall mean and median of comps was computed, applying a weight of 80% to Group 1 and 20% to Group 2[207].

4.3.2. Defining the right multiples

Comparable's figures are essential to find the best scaling measures that allows a direct comparison between them.
The Multiple Valuation is indeed conducted on comparable hotels to determine Ca' di Dio's possible valuation range. Such range is built on the basis of the

[206] (current assets + long-term assets) / (current liabilities + long-term liabilities)
[207] See Appendix 2 for detailed data.

average multiples across comparables, multiplying them by a performance measure of the valued firm. In this case, both the mean and median[208] were considered.
As seen in Chapter 3.2, multiples are computed applying the following formula:

$$Multiple = \frac{Price\ you\ pay\ for\ the\ asset}{Revenue\ generated\ by\ the\ asset}$$

The numerator reflects what the analyst wants to assess: the Enterprise or the Equity Value. In Ca' di Dio's application, it is most appropriate to look for the Enterprise Value (EV), because the potential buyer would be interested in the overall business value. Moreover, the Equity Value would be difficult to determine since, as in 2017, the owner's shares were not exchanged in the stock market. Due to the lack of information about both the shares outstanding and comparable companies' shareholders, the stock price was disregarded for the analysis. The Enterprise Value was the only one considered for the appraisal.
Conversely, the denominator shows the most pertinent performance indicator according to the valuation's purpose. The *Revenue generated by the asset* may indicate either sales multiple (Net sales) or earnings multiple (Ebitda). In this case, both of them were taken into account to have two points of view in the valuation.

The time perspective of multiples is important as well. Usually, the most applied time frames are three[209]:

- LTM (Last Twelve Months): multiples are computed on the basis of the last available information. In the applied case, considering the soon-to-be released balance sheet on 31st December 2018.

[208] Being the midpoint of data, the median is useful whereas values have a very large range.
[209]Pearl,J. Rosenbaum J. (2020) *Investment Banking: Valuation, LBOs, M&A, and IPOs*. 3rd Edition. Wiley.

- NTM (Next Twelve Months): multiples are calculated on the expectations for next year (2019)[210].
- FY2 (Forward – Next Fiscal Year): multiples rely on predictions two years from the valuation date.

For NTM and FY2 time frames, the valuer should build estimations according to analysts' predictions, both for each hotel and for the overall industry. Since the valuer is conducting the analysis at the end of 2018, future expectations should reflect the same point in time. Consequently, subsequent worldwide implications, such as the Russia-Ukraine War (2022) and especially Covid-19 (2020), shall be disregarded[211].

Summarizing, so far the multiples picked for the valuation have been:

1) EV/Sales (LTM, NTM, FY2)
2) EV/EBITDA (LTM, NTM, FY2)

Pondering the market being analyzed, however, leads to include another type of multiple. The hospitality sector has a wide range of prices, particularly for the hotels selected. Obviously, financial data could not entirely reflect discrepancies in terms of price between one hotel and the other, even though the two were identical for the services and amenities offered.

A multiple of this kind is defined as *quantifiable*[212] because it relies on clearly visible market data. This approach allows to create an ad-hoc scaling measure on average: EV/Price per night.

[210] Future expectations are important to determine how profitable the property will be in the future. Despite its appeal, NTM relies on estimates.

[211] In 2018 analysts could not possibly predict those tragic events.

[212] Scardovi, C. Bezzecchi, A. (2014) Banking e Real Estate. Egea spa.

4.3.3. Project bases for the valued property

Since Ca' di Dio had not been completed yet, financial figures for the company did not exist at the end of 2018. Whenever information of the valued property is lacking, the appraiser can look at the performance of its comparables. Obviously, the same reasoning applies to future expected results.

To overcome this problem, the market approach can be implemented. Whereas the targeted property does not have available data, the analyst firstly collects comparable hotels' financial figures, from which he will predict their future performance. Secondly, assuming the target will follow the same trend of the market, he establishes the appropriate actualization rate to apply. After that, property's values for the future are estimated by taking the mean (or median) of the comps' expected figures. Finally, those values are discounted at the time of valuation according to the market-based actualization rate.

This chapter will give a detail explanation of each of these steps.

After the collection of the most relevant financial figures[213], future values of the comps should be predicted. The criteria applied for such estimation is mainly based on historical change[214] and on analysts' predictions[215] regarding single hotels and the overall industry. Historical industry values, that are reported in detail in Appendix 3, constitute the starting point for estimations in the future. Analysts' expectations were implemented as well to predict the percentage change in the market for the next four years (2019-2022).

The goal of this process is to provide an overview of the variations expected in the future. Historical and expected variations in financial measures within the market analyzed are summarized in Figure 3. It reports only the most relevant measures, in percentage terms, and divides them according to the assigned

213 See Appendix 2.

214 <https://aida-r1.bvdinfo.com/> (Accessed on 01-10-23)

215 <https://aida-r1.bvdinfo.com/> (Accessed on 01-10-23)

group. They will be used in the following step to compute Ca' di Dio's values in 2018.

MEASURES		Group 1 (80%)		Group 2 (20%)		OVERALL	
		MEAN	MEDIAN	MEAN	MEDIAN	MEAN	MEDIAN
Sales	LTM	-4%	-4%	-14%	-4%	-6%	-4%
	NTM	8%	9%	25%	1%	12%	7%
	FY2	-50%	-48%	-26%	-40%	-45%	-47%
EBITDA	LTM	-29%	-18%	36%	-3%	-16%	-15%
	NTM	56%	30%	-48%	-8%	35%	22%
	FY2	-631%	-53%	-133%	-56%	-531%	-53%
Equity Value	LTM	9%	5%	44%	3%	16%	5%
	NTM	-3%	0%	-5%	-5%	-3%	-1%
	FY2	161%	23%	-128%	-124%	103%	-6%
Net Income	LTM	-27%	-20%	-523%	156%	-126%	16%
	NTM	7%	0%	48%	95%	15%	19%
	FY2	103%	-85%	-971%	-16%	-112%	-71%
ROA (%)	LTM	-2,82	-3,04	-3,01	-0,99	-2,85	-2,63
	NTM	1,97	2,51	-0,07	0,21	1,56	2,05
	FY2	-7,64	-6,80	-9,06	-3,88	-7,92	-6,22
D/E ratio (%)	LTM	-0,01	0,00	-13,11	-1,33	-2,63	-0,26
	NTM	0,13	-0,01	-0,44	0,45	0,02	0,08
	FY2	0,14	-0,06	-14,12	-16,11	-2,71	-3,27
Net Debt / Tot. Capital	LTM	0%	2%	-6%	-1%	-1%	1%
	NTM	5%	0%	7%	5%	5%	1%
	FY2	9%	10%	27%	32%	12%	14%
Net Debt	LTM	40%	27%	-15%	-5%	29%	20%
	NTM	73%	1%	29%	30%	64%	6%
	FY2	29%	-56%	187%	71%	61%	-31%

Figure 3. Comparables future measures (2019E-2022E)

It is noticeable the high volatility among the historical (LTM), next year (NTM) and the forward estimated percentage change (FY2). LTM values show the difference between 2018, the current year, and 2017. NTM values represent the expected variability for next year, while forward rates are estimated by the difference predicted in 2021 and 2018.

The percentage estimations were computed for all comparable hotels, keeping in mind the group division. Group 1 was given a weight of 80% and Group 2 of 20%. The overall weighted mean and median for each figure would be the starting point for Ca' di Dio's estimation values.

The results show that the median is relatively lower than the mean, due to the wide range of hotels' financial measures. Whereas the mean takes the average

of all the numbers, the median shows the midpoint value of the ones considered. Because of the different and wide values, only the median was taken for the purpose of the valuation.

Furthermore, the expectations imply a very positive increase in Sales next year, with a subsequent fall with respect to the current year. Instead, capital values, such as Equity, were forecasted to have a slight decrease and then rise far above last year. It is clear that all these numbers do not lead to trustworthy predictions, and the reason is because comps' values need to be adjusted.
They comprehend hotels with different capital structures, size, and type of management[216]. As a matter of fact, Ca' di Dio is a new-born hotel and, even if classified as a 5-star, it could not be compared directly with hotels managed by big hospitality chains. An example is Gritti Palace, owned by Marriott International, whose size and profitability are skyrocketing compared to a smaller hotel. The same reasoning applies for Hotel Danieli, whose centennial history and reputation make it one of the most valuable estates in Venice.
Luckily for the appraiser, this situation would not constitute an issue when applying the Multiple Approach, as it allows to adjust the obtained data to the targeted asset.
In the example presented, specifics of each hotel were analyzed, and the overall results were adjusted accordingly. As before, the overall median was computed on the basis of each group's weight. Figure 4 reports the summary of the most important financial measures, in the past 5 years[217], in the ongoing year, and for the future. Grey columns near each of them shows the adjusted percentage change[218] for each of those measures.

[216] Some hotels belong to international chains, while other are only limited companies. Hence, financial resources may change a lot, and the consequences will be reflected on the property's investments.
[217] From 2014 to 2018.
[218] Adjustments were made to reflect Ca' di Dio's peculiarities (e.g. expected outcomes from the refurbishment, standards at which the hotels would want to operate, and such).

MEASURES	COMPS 2014-2018	COMPS 2018	LTM	COMPS 2019E	NTM	COMPS 2020E	COMPS 2021E	COMPS 2022E	FY2
			%		%				%
EV	11.944.851 €	14.124.982 €		17.080.173 €	20,92%	16.620.772 €	22.652.537 €	24.666.808 €	
SALES	8.898.848 €	9.170.361 €	-4,12%	9.555.779 €	9,05%	2.448.755 €	5.275.819 €	10.315.529 €	7,06%
EBITDA	1.066.162 €	1.323.716 €	-14,62%	2.266.427 €	22,10%	-1.282.711 €	297.083 €	2.732.654 €	3,00%
EQUITY VALUE	8.102.158 €	10.396.222 €	4,55%	9.324.753 €	15,09%	8.537.878 €	13.402.642 €	19.933.151 €	9,82%
Net income	530.328 €	1.667.780 €	15,62%	666.493 €	25,68%	-1.890.212 €	152.516 €	1.305.148 €	20,00%
ROA (%)	4,93	3,84	-2,63	7,80	3,95	-11,46	-0,55	7,52	3,68
D/E RATIO (%)	1,13	0,81	-0,26	0,95	0,14	0,33	-0,71	0,15	-0,66
Net debt / total cap.	17,95%	12,91%	1,16%	15,52%	2,62%	18,89%	15,24%	7,01%	14,01%
Net debt	3.209.915 €	3.810.676 €	20,47%	5.436.167 €	42,66%	5.990.036 €	5.260.252 €	1.440.417 €	25,00%

Figure 4. Summary of adjusted financial measures

Starting from the LTM, NTM and FY2 adjusted percentage changes, the actualization rate was computed. The actualization rate of some measures, such as Net Income and Ebitda, is the variations' average reported in Figure 4. Instead, other percentage differences' measures such as Sales and Equity Value were estimated considering the possible implications a new-born hotel may incur in.

In particular, adjustments for Ca' di Dio were made taking into account that the main revenue drivers (Sales, Ebitda) and Equity Value are expected to be overvalued with respect to comparables. This is because a new-born hotel would inevitably incur in higher expenses the first year, especially due to the projected refurbishment and construction costs. In addition, the price per night to charge at the beginning is expected to be 25%[219] lower to face competitors. As a consequence, Sales are expected to be moderately smaller than comps' averages.

Finally, the estimated financial measures of 2019 were discounted by one year, applying the following formula for each of them.

$$V_{2018} = \frac{V_{2019E}}{(1+r)}$$

where V identifies the financial values, and r the discount rate.

[219] Considering the actual price charged once the hotel opened, with respect to comparable hotels.

The actualization rates computed and Ca' di Dio's estimated financial figures at the end of this process are hereby reported.

MEASURES	COMPS 2018	LTM	COMPS 2019E	NTM	FY2	*actualization rate (%)*	CA' DI DIO 2018
		%		*%*	*%*		
EV	14.124.982 €		17.080.173 €	*20,92%*			
SALES	9.170.361 €	*-4,12%*	9.555.779 €	*9,05%*	*7,06%*	***25,00%***	**5.644.623 €**
EBITDA	1.323.716 €	*-14,62%*	2.266.427 €	*22,10%*	*3,00%*	***3,49%***	**689.945 €**
EQUITY VALUE	10.396.222 €	*4,55%*	9.324.753 €	*15,09%*	*9,82%*	***28,31%***	**5.267.362 €**
Net income	1.667.780 €	*15,62%*	666.493 €	*25,68%*	*20,00%*	***20,43%***	**553.417 €**
ROA (%)	3,84	*-2,63*	7,80	*3,95*	*3,68*	***1,67***	**2,92**
D/E RATIO (%)	0,81	*-0,26*	0,95	*0,14*	*-0,66*	***-0,26***	**1,29**
Net debt / total cap.	12,91%	*1,16%*	15,52%	*2,62%*	*14,01%*	***-5,04%***	**16,35%**
Net debt	3.810.676 €	*20,47%*	5.436.167 €	*42,66%*	*25,00%*	***29,38%***	**4.201.846,59 €**

Figure 5. Ca' di Dio's estimated financial measures (2018)

The image also shows the net debt, according to historical and prospective adjusted comps' values. However, from the resulting Net Debt (€ 4.201.847) it should be added the initial restructuring expenses, around at least € 17.000.000. As you may notice from Figure 6, the Enterprise Value (EV) is not calculated. EV could be derived by the sum of the estimated Equity Value and Net Debt. However, it is not reliable to apply this procedure because of the many variables related to Ca' di Dio' values in 2018. Computing EV at this stage would mean that Ca' di Dio's assessment is based purely on comparables' future expectations and on discount rate assumptions. Instead, the Multiple Valuation is implemented as the final stage of the appraisal.

4.3.4. Average across industry

Ca' di Dio's financial measures for the current assessment year, 2018, are essential for the Multiple Valuation. At the end of the assessment process, those values will be multiplied by the resulting overall comparables' multiples. The ultimate goal is obtaining Ca' di Dio's Enterprise Value.

As a matter of fact, without the target hotel's financial measures the valuation would not be possible because of the missing data regarding the business in 2018. Instead, as shown in the previous chapter, the analyst tries to predict them on the basis of similar hotel's performance.

The most suitable multiples had already been selected in Chapter 4.3.2., the appraiser has to calculate them for each comparable hotel. Recalling the multiples chosen, he applies the following formulas.

$$EV/R_{LTM} = \frac{EV(X)_{2018}}{R\ (X)_{2018}}$$

$$EV/R_{NTM} = \frac{EV(X)_{2018}}{R\ (X)_{2019E}}$$

$$EV/R_{FY2} = \frac{EV(X)_{2018}}{R\ (X)_{2021E}}$$

where *R* stands for "Revenue", indicating both EBITDA and Sales, and *X* represents comparable hotels.

These formulas are applied both for EV/Ebitda and EV/Sales multiples. After all hotels' multiples have been computed, they were weighted according to the belonging group. The resulting median is considered the weighted "scaling measure" for all comparables, which will be then multiplied by the appropriate measure of Ca' di Dio.

In addition, the analyst has included two quantity multiples, which reflect market's measures:

$$EV/P = \frac{EV(X)_{2018}}{Price\ per\ night\ (X)_{2018}}$$

$$Sales/P = \frac{EV(X)_{2018}}{Price\ per\ night\ (X)_{2018}}$$

They follow the same procedure as before, with the only difference that, at the end, they will be scaled back to Ca' di Dio's values by its estimated price per night[220].

Organizing the multiples together leads to the following results.

Ca' Di Dio

Reference multiples

Company	EV/EBITDA			EV/SALES			EV/P	Sales/P
	LTM	NTM	FY2	LTM	NTM	FY2		
Group 1								
Hotel Metropole Venezia	15,95x	5,28x	18,91x	1,22x	1,09x	1,01x	15.781,07x	12.950,11x
Londra Palace Venezia	2,46x	2,90x	1,27x	0,60x	0,62x	26,31x	4.849,53x	8.148,54x
The Gritti Palace	10,57x	7,49x	5,94x	3,89x	3,28x	2,93x	68.091,54x	17.506,00x
Baglioni Hotel Luna	313,56x	0,00x	0,00x	1,82x	1,76x	0,00x	8.422,70x	4.628,42x
Belmond Hotel Cipriani	6,92x	5,87x	0,00x	1,82x	1,61x	0,00x	28.805,09x	15.790,27x
NH Collection Venezia Grand Hotel dei Dogi	10,59x	5,52x	5,02x	2,19x	2,08x	2,02x	31.515,15x	14.393,70x
Mean	**60,01x**	**4,51x**	**5,19x**	**1,92x**	**1,74x**	**5,38x**	**26.244,18x**	**12.236,17x**
Median	**10,58x**	**5,40x**	**3,14x**	**1,82x**	**1,69x**	**1,52x**	**22.293,08x**	**13.671,90x**
Group 2								
Hotel Excelsior	3,47x	3,83x	1,56x	0,04x	0,04x	0,04x	1.633,99x	38.533,55x
Ausonia Hungaria	50,39x	-39,83x	18,14x	5,30x	7,94x	5,27x	61.091,72x	11.533,86x
The St. Regis Venice	-5,02x	-5,44x	0,00x	2,20x	0,85x	0,00x	4.527,91x	2.060,43x
Hilton Molino Stucky	16,81x	16,81x	24,04x	7,57x	7,93x	7,30x	359.353,16x	47.474,48x
Hotel Danieli Venezia	13,93x	13,70x	0,00x	0,61x	0,58x	0,00x	18.812,91x	31.035,62x
Mean	**15,92x**	**-2,19x**	**8,75x**	**3,14x**	**3,47x**	**2,52x**	**89.083,93x**	**26.127,59x**
Median	**13,93x**	**3,83x**	**1,56x**	**2,20x**	**0,85x**	**0,04x**	**18.812,91x**	**31.035,62x**
OVERALL MEAN (80% + 20%)	**51,19x**	**3,17x**	**5,90x**	**2,17x**	**2,09x**	**4,81x**	**38.812,13x**	**15.014,45x**
OVERALL MEDIAN (80% + 20%)	**11,25x**	**5,09x**	**2,83x**	**1,90x**	**1,52x**	**1,22x**	**21.597,05x**	**17.144,64x**

Figure 6. Comparables' multiples

The green-shaded area shows the resulting multiples' value to apply in the assessment. As before, although both the overall mean and median were computed, the mean will be disregarded because the high volatility among comparable hotels makes it unreliable.

At the end of this process the analyst builds a framework for all the multiples considered.

[220] The estimated price of € 720 is based on the average charge per night applicable at the time, relatively to the market.

4.3.5. Final assessment and observations

The last and final step is to conduct the valuation, by applying the market's scaling measure to Ca' di Dio's estimated values.
According to the multiples chosen (EV/Ebitda, EV/Sales and EV/price), the targeted hotel's financial measures to take for the assessment are Ebitda, Sales and average price per night, as computed in Figure 5.

A lower and upper bound for each multiple is also implemented, in order to give a proper range of assessment for Ca' di Dio[221]. In this way, the price bidden can be directly compared with the final "fair value" range, rather than with a unique number. This would allow to have a proper representation of the prospective value.
The lower (upper) bound was constructed by taking the weighted median – respectively, 80% to Group 1 and 20% to Group 2 - of the three lowest (highest) values. Multiples equal to zero were not considered.
The first two columns in Figure 7 show the lower and upper bound for each multiple selected, built as above, along with the appropriate measures for Ca' di Dio.

[221] Comparable hotels have a wide range of values, and the assumptions made during the valuation process may impact – positively as well as negatively – the final value.

Ca' Di Dio *Multiples valuation*							
			Ca' di Dio	Target Enterprise Value		Target Equity Value	
	Lower	Upper	Measure	Lower	Upper	Lower	Upper
LTM EV/EBITDA	6,23x	19,48x	689.945 €	4.300.574 €	13.442.093 €	98.728 €	9.240.246 €
NTM EV/EBITDA	3,14x	8,39x	689.945 €	2.163.289 €	5.791.867 €	-2.038.557 €	1.590.021 €
FY2 EV/EBITDA	3,55x	9,19x	689.945 €	2.447.558 €	6.340.930 €	-1.754.288 €	2.139.084 €
LTM EV/SALES	1,10x	3,04x	5.644.623 €	6.187.175 €	17.149.611 €	1.985.328 €	12.947.764 €
NTM EV/SALES	0,99x	3,25x	5.644.623 €	5.574.932 €	18.352.750 €	1.373.085 €	14.150.903 €
FY2 EV/SALES	2,15x	3,80x	5.644.623 €	12.128.911 €	21.465.966 €	7.927.064 €	17.264.119 €
EV/PRICE per night	7354,35x	37430,46x	720,00 €	5.295.129 €	26.949.932 €	1.093.282 €	22.748.085 €
SALES/PRICE per night	7878,26x	20338,92x	720,00 €	5.672.345 €	14.644.025 €	1.470.499 €	10.442.178 €

Figure 7. Multiples Valuation

The "Target Enterprise Value" has been obtained by multiplying the lower (and upper) bound by Ca' di Dio's reference measure of revenues. Hence, for EV/Ebitda the proper measure is the target's Ebitda estimate in 2018 (€ 689.945[222]), while for EV/Sales is Ca' di Dio's Sales estimate in the same year (€ 5.644.623[223]).

On the other hand, "Target Equity Value" is simply the "Target Enterprise Value" minus Net Debt, as predicted in 2018 (€ 4.201.847)[224].

Overall, the two columns show the valuation range of Ca' di Dio' EV and Equity Value, respectively.

Moreover, the Multiple Valuation includes the market multiples: EV/P and Sales/P. The reference price of € 720 per night has been estimated assuming that Ca' di Dio would be actively operating at time of valuation.

However, it is noticeable the wide range among the lower and upper bounds constructed from comparables: this is due to the variety of prices among the

[222] See Figure 5.
[223] See Figure 5.
[224] See Figure 5. Ca' di Dio's final valuation range does not comprehend the projected refurbishment works. This is to allow a complete and truthful appraisal, as the hotel had already been operating.

hotel selected. Hence, having such a broad range in the Target Enterprise Value is coherent with collected data.

When performing an appraisal using different approaches, such as this case, it is common practice to have a visual representation of the final valuation ranges. In particular, the Football Field Chart[225] allows to summarize the different valuation ranges and compare them to the acquisition price.

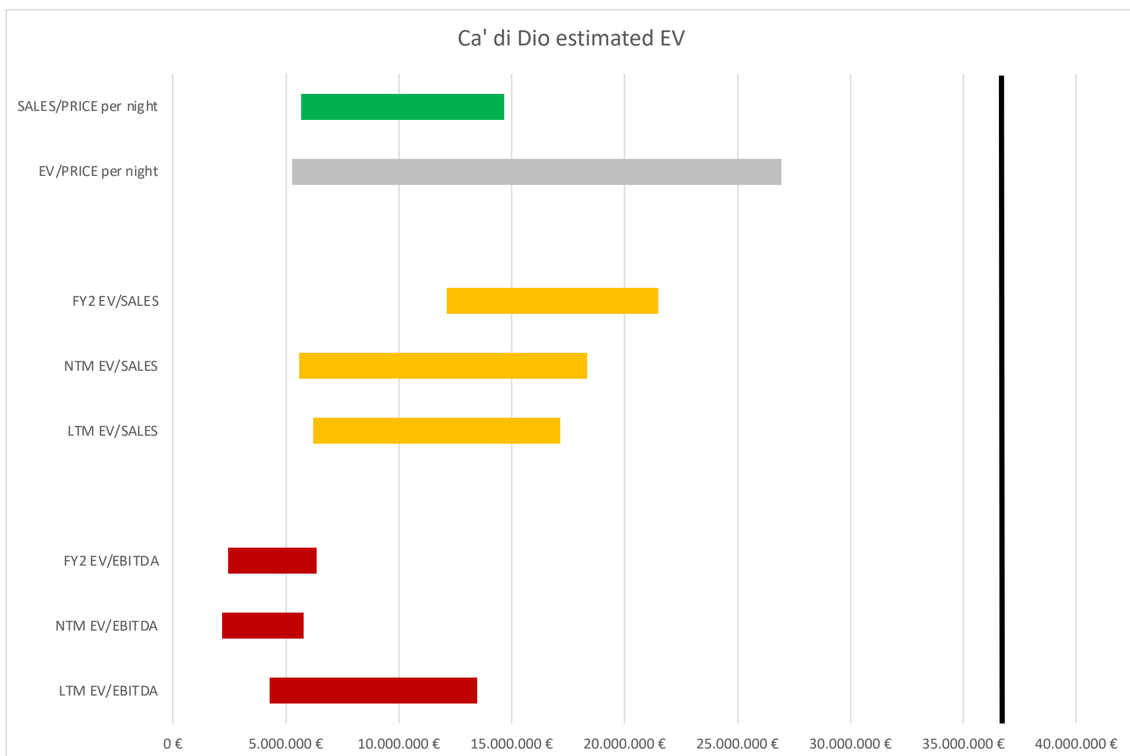

Figure 8. Football Field Chart

From the ranges visualized in Figure 8, the analyst notices that NTM and FY2 EV/EBITDA are much lower than all other multiples. Since both are future performance measures, the modest values may show conservative revenues

[225] Pearl, J. Rosenbaum, J. (2020) *Investment Banking: Valuation, LBOs, M&A, and IPOs*. 3rd edition. Wiley.

forecasts. Being a bottom-line revenue, Ebitda can be influenced by other factors considered by analysts[226].

NTM and FY2 EV/Sales multiples are much higher for the same reason: Sales is a top-line revenue, which depends purely on revenues from the main department of activity.

The expected forward EV/Sales are instead expected to grow at a higher pace than bottom line multiples. While LTM and NTM EV/Sales are consistent with last year's EV/Ebitda, the forward top line multiple is soaring. This is the consequence of a positive-trend expectation in the industry.

Lastly, the highest range is won by EV/Price per night, that registers a value from € 5.295.129 to € 26.949.932. The broad difference, as mentioned earlier in the chapter, highlights the diversification of the hotels chosen in quantity terms. Instead, Sales/Price, the quantity measure scaled by revenues generated, is more modest and is coherent with the other valuation ranges.

Summing up the overall multiples, the Final Valuation Range for Ca' di Dio has been constructed trying to find where most of the values overlaps. The Football Field Chart allows to visually find the Valuation Range and to compare them with the total estimated investment. Particularly in this case, where the acquisition entails an annual rent for 27 years, the price is equal to the overall amount of rental burden: € 36.450.000. This price is visible from the black vertical line in the right side of the Chart.

[226] Although Sales are considered to be the same for the computation of EV/Sales multiple, EV/Ebitda may be lower because it is influenced by costs, or additional minor revenues.

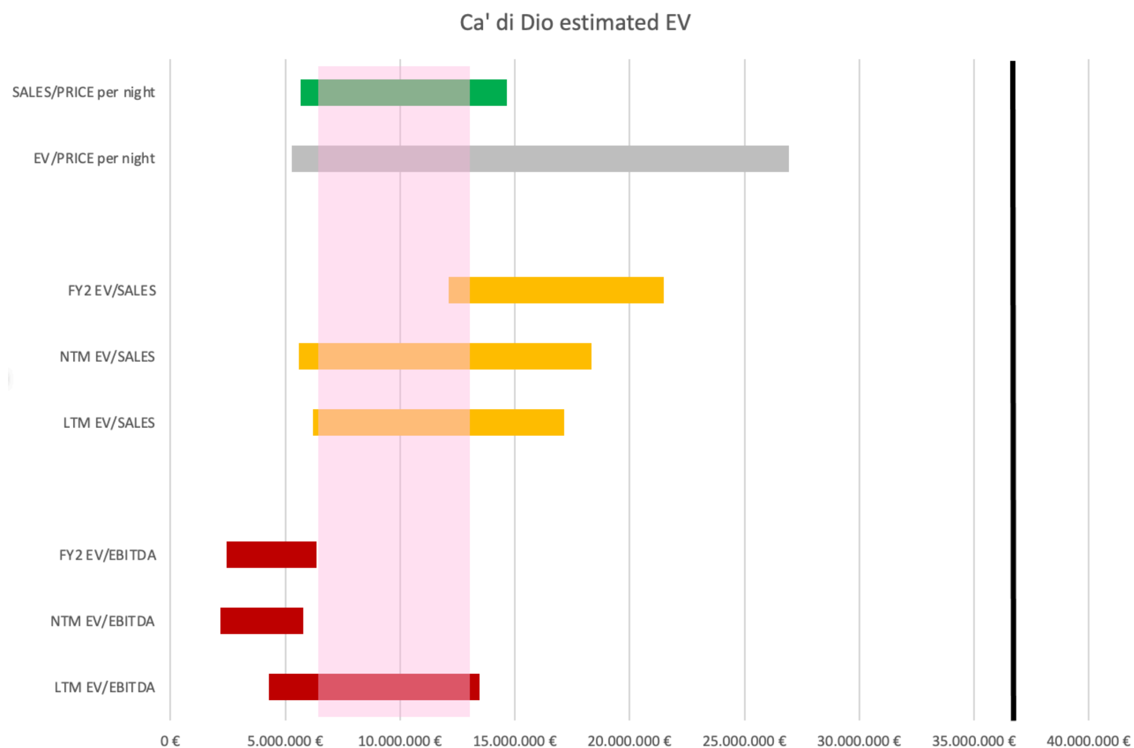

Figure 9. Football Field Chart - Final Valuation Range

The pink rectangular identifies the range of values in agreement by different multiples. In numerical terms, the Valuation Range goes from 7 million to 13 million euros.

Considering the total investment for the property acquisition to be more than 36 million, it is clear that the fair value is considerably lower.

However, why do not potential buyers find this situation awkward?

4.4. "Crown Jewels" and a fairly high price

The term "Crown Jewel" derives from the most valuable treasures owned by sovereigns, such as the crown and the scepter. It is used also to identify the most attractive, or precious, ones in a group or collection[227].

[227] <https://www.merriam-webster.com/dictionary/crown%20jewel> *"Crown jewel." Merriam-Webster Dictionary.* Merriam-Webster. (Accessed 13-01-2024).

In finance, Crown Jewels are the most valuable assets within a company. The "assets" could be a physical good, an entire property, or a profitable item, it depends on the sector and on the business of the firm.
For example, a "crown jewel" can be the secret ingredient used to produce Coca Cola: an irreplaceable drink. In the technological world, it could be the department owning a patent project, thought to be of great value once it will be implemented[228].
In simple terms, they are the most prized assets, for which buyers would be willing to pay any price. This is because the value of the object goes well beyond money.

The easiest way to identify a crown jewel is thinking about luxurious brands and the products sold by them. They are of good quality, nevertheless, but why does a normal leather bag cost 200€ while people buy it from Louis Vuitton at € 2.000?
The answer is because the seller is different. Purchasing a Louis Vuitton bag entails other perks, such as prestigiousness and a certain status-quo with other people. It shows that you can afford a bag for that price. It is not the product per-se, but the impact on the others. This is what a "Crown Jewel" is meant to pass on.

Applying the term in acquisition operations, "Crown Jewels" are also used to identify a defensive strategy against a takeover. When a firm is threatened to be acquired by another company, such firm can use the "crown jewel defense" strategy[229]. Basically, the target firm tries to sell its crown jewel, as to make it less desirable for others to acquire the whole business. Obviously, selling the

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[228] <www.investopedia.com> *Crown Jewels: What it Means, How it Works.* Investopedia.com. Hayes, A. (25-04-2023)
[229] <www.investopedia.com> *Crown Jewels: What it Means, How it Works.* Investopedia.com. Hayes, A. (25-04-2023)

most precious units of the corporation is a big deal, this is why the crown jewel strategy is applied in extreme cases, such as to relieve financial stress or a debt burden.

This scenario can be related to Ire' financial situation in 2017. Without the sufficient monetary resources to keep the building operating, it finds selling Ca' di Dio as the only solution.
Why did the Venetian association proceed in this way?
Essentially, facing a huge amount of debt with no prospect of recovery pushed Ire to completely change the nature of the company. Being a public association managing other properties with different activities, Ire preferred to keep its funds for others rather than Ca' di Dio. Back at the time, the property was only seen as a burden because of the lack of people willing to stay there. This translated into no inflows of income.
Despite this sad overview, Ca' di Dio has been seen among the most valuable estates in the Venetian Lagoon. It gives fast access to one of the most beautiful places in the world, St. Mark's Square, it allows a 360° view of the city, along with a façade looking at St. Giorgio' Island and at the sea. The property guarantees to its clients both discretion and accessibility to the city, being also close to taxis and public transports.
All these factors alone identify Ca' di Dio as a "Crown Jewel", meant as an estate in Ire's portfolio. However, the decision to rent the building has increased even more its value: despite facing financial distress, the public association has not been ready to sell it. The attachment to the property links to an additional

value: a status symbol for the locals. Giving the property to the umpteenth international owner would have meant losing a part of the city as well.
Moreover, whereas, on one hand, the decision to renovate it to make it another hotel disappointed residents, on the other it gave space to the estate to be completed and furnished as the best possible.
The refurbishment and renovation conducted from 2019 to 2021 only increased the value of the property. In particular, the management has been particularly attentive to ESG policies once the hotel would have been opened.
Particularly, infrastructures were made expressly to limit environmental impact. The air conditioning system was studied to exploit the lagoon water, allowing to decrease energy consumption by 20% and CO2 emissions by 110t every year[230].
The high value attributes due to the position, mesmerizing view, and history add to the new policies to further increase the prestige of the building.
This is a Crown Jewel: a precious treasure that must be constantly taken care of.

[230] <https://contract.moltenigroup.com/it/ca-di-dio-venezia/> Molteni&C (2021). Ca' di Dio – Venezia.

Concluding remarks

Real Estate is a deep and heterogeneous market. It varies from residential houses to luxurious hotels, from industrial buildings to commercial properties. Assets may be owned, rented, or leased, and their purpose largely differs.
Despite the large differences among each of these kind of estates, they all share a common factor: investing a considerable amount of money.
As part of the five investments' asset classes, Real Estate stands out because of the large sums needed for an investment to be made. It is very common that new-born real estate companies need voluminous mortgages or loans in order to afford the firsts properties' acquisitions.
Acquiring such valuable assets requires massive financial resources. That is where investors and shareholders are needed.
For all properties, within the same or in a different sector, the same concept applies: in order to determine a building's value, a proper assessment must be made. There are three main approaches to conduct the property's appraisal: Comparative, Income, and Cost Methods. Each of them should be taken under consideration for the appraisal and, only after a proper analysis of the market and of the object property, the best will be applied. In synthesis, the variety within the real estate market obliges to value each of them singularly, according to its features and its final use.

In the course of this study, the theoretical concepts of real estate financing and appraisal have been applied in the luxury hospitality sector in Venice. In particular, the reasoning behind Ca' di Dio's acquisition has been analyzed and measured. At the end, the luxury 5-star hotel has been identified as a "Crown Jewel" within the Venice hospitality market. The proof of this is the massive sum invested in the building, which reflects not only the buyer's strong belief

of giving it a new life, but also the attractiveness from big chains all around the world.

As seen throughout Ca' di Dio's appraisal, its fair value is much lower than the total investment made. In this case, shareholders were interested in the prospective profitability from the business, given the high tourism level and the city's exclusiveness.

Ca' di Dio is a true gem overlooking at the mesmerizing Venetian lagoon. The renovated building has been planned meticulously, weighting the tiniest detail. The old pelgrims' refugee was reborn: among the small streets of Venice, the style and elegance stand out. It is a place where tradition and modern melt together to give the guest an unforgettable experience.

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Appendix 1. Assessment of comparable hotels

HOTEL	LOCATION	AVG. PRICE/NIGHT	NO. ROOMS	NO. FLOORS	COMPS	NOTES
Ausonia Hungaria	Lido	324,17 €	60	4	yes	Adjust for price and location
Baglioni Hotel Luna	San Marco	1.192,83 €	91	5	yes	Adjust for price
Bauer Palazzo	San Marco	- €	191	5	no	Uncomplete info
Belmond Hotel Cipriani	Giudecca	1.890,83 €	96	4	yes	Adjust for price
Ca' Sagredo	Canareggio	- €	0	0	no	Recent losses; unreliable info
Hotel Danieli Venezia	San Marco	1.138,33 €	201	4	yes	Adjust for price and size
Hotel Excelsior	Lido	469,33 €	196	7	yes	Adjust for price and location
Hotel Metropole Venezia	San Marco	508,33 €	67	4	yes	---
Hotel Molino Stucky	Giudecca	681,00 €	379	7	yes	Adjust for price and size
JW Marriott Venice	Rose Island	- €	0	0	no	Different location
Londra Palace Venezia	San Marco	842,67 €	52	5	yes	---
NH Collection Grand Hotel dei Dogi	Canareggio	487,50 €	64	4	yes	The location justifies for the lower price
San Clemente Palace	S. Clemente Island	- €	196	3	no	Different location
The Gritti Palace	San Marco	1.448,80 €	84	4	yes	Adjust for price
The St. Regis Venice	San Marco	1.380,00 €	169	5	yes	Recent renovations

Appendix 2. Valuation analysis of comparable hotels (2018)

Ca' Di Dio

Valuation Analysis - Dec. 2018

Company Profile				Size			
Company	Property of	Average price / night	number of employees	EV	EQUITY VALUE	Sales	EBITDA
Ca' Di Dio	VOIHotels spa (Alpitour)	720,00 €	58				
Group 1							
Hotel Metropole Venezia	Metropolitan spa	508,33 €	87	8.022.042 €	9.688.120 €	6.582.971 €	502.849 €
Londra Palace Venezia	S.P.L.I.A. spa	842,67 €	60	4.086.540 €	5.234.626 €	6.866.499 €	1.662.362 €
The Gritti Palace	Gritti Capital srl	1.448,80 €	168	98.651.016 €	94.660.195 €	25.362.693 €	9.329.112 €
Baglioni Hotel Luna	Baglioni Hotels spa	1.192,83 €	41	10.046.872 €	3.829.852 €	5.520.939 €	32.041 €
Belmond Hotel Cipriani	Hotel Cipriani spa	1.890,83 €	40	54.465.631 €	42.399.684 €	29.856.760 €	7.865.109 €
NH Collection Venezia Grand Hotel dei Dogi	NH Italia spa	487,50 €	31	15.363.634 €	13.695.415 €	7.016.927 €	1.450.415 €
Mean		**1.062 €**	**71**	**31.772.623 €**	**28.251.315 €**	**13.534.465 €**	**3.473.648 €**
Median		**1.018 €**	**50**	**12.705.253 €**	**11.691.767 €**	**6.941.713 €**	**1.556.388 €**
Group 2							
Hotel Excelsior	HLU Gestioni srl	469,33 €	32	766.879 €	190.033 €	18.084.953 €	221.246 €
Ausonia Hungaria	Dogale Ospitalità e Benessere srl	324,17 €	44	19.803.898 €	12.068.597 €	3.738.892 €	393.026 €
The St. Regis Venice	Regis Hotels Management Italy s	1.380,00 €	54	6.248.509 €	4.058.376 €	2.843.400 €	-1.245.615 €
Hilton Molino Stucky	GHMS Venezia spa	681,00 €	209	244.719.501 €	12.645.522 €	32.330.122 €	14.553.914 €
Hotel Danieli Venezia	Danieli Management srl	1.138,33 €	246	21.415.358 €	5.214.041 €	35.328.877 €	1.536.941 €
Mean		**799 €**	**117**	**58.590.829 €**	**6.835.314 €**	**18.465.249 €**	**3.091.902 €**
Median		**681 €**	**54**	**19.803.898 €**	**5.214.041 €**	**18.084.953 €**	**393.026 €**
OVERALL MEAN (80% + 20%)		**1.009 €**		**37.136.264 €**	**23.968.115 €**	**14.520.622 €**	**3.397.299 €**
OVERALL MEDIAN (80% + 20%)		**950 €**		**14.124.982 €**	**10.396.222 €**	**9.170.361 €**	**1.323.716 €**

	Profitability				Growth		Leverage			
Company	EBITDA/ Net Sales (%)	ROA (%)	ROS (%)	Liquidity index	EBITDA growth (3Y)	SALES growth (3Y)	D/E ratio	D/E ratio ext. financing	Net debt/ Total cap	Total debt/ Total capital
Ca' Di Dio										
Group 1										
Hotel Metropole Venezia	7,64	1,86	3,02	3,01	-60,58%	-11,85%	0,11	0,00	-15,23%	10,15%
Londra Palace Venezia	24,21	16,88	16,54	2,89	16,47%	6,07%	0,15	0,00	-16,94%	11,81%
The Gritti Palace	36,78	4,61	16,91	0,82	27,36%	19,76%	0,06	0,00	3,95%	6,06%
Baglioni Hotel Luna	0,58	-2,49	-4,50	0,72	-81,20%	-0,09%	1,69	0,28	59,68%	61,98%
Belmond Hotel Cipriani	26,34	9,40	17,23	1,27	-27,48%	-9,09%	0,28	0,00	21,44%	21,44%
NH Collection Venezia Grand Hotel dei Dogi	20,67	4,92	12,30	3,66	6,79%	9,88%	0,13	0,00	9,41%	9,76%
Mean	**19,37**	**5,86**	**10,25**	**2,06**	**-19,77%**	**2,45%**	**0,40**	**0,05**	**10,38%**	**20,20%**
Median	**22,44**	**4,77**	**14,42**	**2,08**	**-10,34%**	**2,99%**	**0,14**	**0,00**	**6,68%**	**10,98%**
Group 2										
Hotel Excelsior	1,22	3,61	0,79	0,93	---	---	19,79	0,00	14,25%	92,91%
Ausonia Hungaria	10,51	-0,73	-3,98	1,04	-42,89%	-1,10%	0,67	0,58	37,81%	39,54%
The St. Regis Venice	-43,81	-24,46	---	0,63	-308,93%	-58,88%	0,69	0,00	30,05%	38,16%
Hilton Molino Stucky	45,02	1,62	11,05	0,59	-2,00%	5,86%	18,79	16,76	84,57%	93,21%
Hotel Danieli Venezia	4,35	0,16	0,11	0,33	8,75%	3,55%	3,51	0,00	64,75%	73,09%
Mean	**3,46**	**-3,96**	**1,99**	**0,70**	**-86%**	**-13%**	**8,69**	**3,47**	**46%**	**67%**
Median	**4,35**	**0,16**	**0,45**	**0,63**	**-22%**	**1%**	**3,51**	**0,00**	**38%**	**73%**
OVERALL MEAN (80% + 20%)	**16,19**	**3,90**	**8,60**	**1,79**	**-33,07%**	**-0,57%**	**2,06**	**0,73**	**17,56%**	**29,64%**
OVERALL MEDIAN (80% + 20%)	**18,82**	**3,84**	**11,63**	**1,79**	**-12,76%**	**2,64%**	**0,81**	**0,00**	**12,91%**	**23,40%**

	Other Factor			
Company	Gross margin	Net debt	Net Working Capital	Net income
Ca' Di Dio				
Group 1				
Hotel Metropole Venezia	203.310 €	-1.666.078 €	2.299.717 €	123.103 €
Londra Palace Venezia	1.144.121 €	-1.148.086 €	-1.948.909 €	800.357 €
The Gritti Palace	4.665.289 €	3.990.821 €	-2.137.658 €	3.330.119 €
Baglioni Hotel Luna	-259.181 €	6.217.020 €	816.529 €	84.277 €
Belmond Hotel Cipriani	5.292.369 €	12.065.947 €	219 €	3.791.651 €
NH Collection Venezia Grand Hotel dei Dogi	871.415 €	1.668.220 €	-30.293 €	3.482.220 €
Mean	**1.986.220 €**	**3.521.307 €**	**-166.733 €**	**1.935.288 €**
Median	**1.007.768 €**	**2.829.520 €**	**-15.037 €**	**2.065.238 €**
Group 2				
Hotel Excelsior	146.186 €	576.846 €	-3.184.535 €	77.948 €
Ausonia Hungaria	-150.135 €	7.735.301 €	6.684.235 €	-251.426 €
The St. Regis Venice	-1.782.080 €	2.190.133 €	-591.082 €	-1.823.351 €
Hilton Molino Stucky	4.441.835 €	232.073.979 €	206.343.711 €	644.449 €
Hotel Danieli Venezia	39.313 €	16.201.317 €	-2.086.927 €	139.891 €
Mean	**539.024 €**	**51.755.515 €**	**41.433.080 €**	**-242.498 €**
Median	**39.313 €**	**7.735.301 €**	**-591.082 €**	**77.948 €**
OVERALL MEAN (80% + 20%)	**1.696.781 €**	**13.168.149 €**	**8.153.230 €**	**1.499.731 €**
OVERALL MEDIAN (80% + 20%)	**814.077 €**	**3.810.676 €**	**-130.246 €**	**1.667.780 €**

Appendix 3. Historical average values of comparables (2014-2018)

Historical values

Comparables average 2014-2018

Company	Size					Profitability				Leverage		
	EV	EQUITY VALUE	Sales	Net income	EBITDA	EBITDA/ Net Sales (%)	ROA (%)	ROS (%)	Liquidity index	Debt/equity ratio	Net debt/ Total cap	Net debt
Group 1												
Hotel Metropole Venezia	6.872.381 €	9.027.825 €	6.854.159 €	521.901 €	1.065.205 €	15,54	7,78	11,48	4,19	0,13	-20,98%	-2.155.444 €
Londra Palace Venezia	6.553.580 €	7.428.789 €	6.055.078 €	475.371 €	1.280.872 €	21,15	9,93	13,66	2,63	0,15	-12,01%	-875.209 €
The Gritti Palace	105.460.611 €	104.370.550 €	24.099.745 €	3.464.272 €	8.821.799 €	36,61	4,26	17,11	1,19	0,04	1,11%	1.090.061 €
Baglioni Hotel Luna	9.313.197 €	4.360.954 €	5.158.569 €	42.480 €	-49.381 €	-0,96	-3,35	-6,73	0,66	1,25	49,83%	4.952.243 €
Belmond Hotel Cipriani	60.241.360 €	24.888.875 €	29.496.372 €	3.393.728 €	9.234.039 €	31,31	9,41	19,45	0,89	1,93	52,52%	35.352.485 €
NH Collection Venezia Grand Hotel dei Dogi	12.758.320 €	8.715.215 €	6.171.285 €	819.894 €	1.027.053 €	16,64	2,00	4,67	1,02	0,49	25,24%	4.043.106 €
Mean	**33.533.242 €**	**26.465.368 €**	**12.972.535 €**	**1.452.941 €**	**3.563.264 €**	**20,05**	**5,01**	**9,94**	**1,76**	**0,67**	**15,95%**	**7.067.874 €**
Median	**11.035.759 €**	**8.871.520 €**	**6.512.722 €**	**670.898 €**	**1.173.039 €**	**18,90**	**6,02**	**12,57**	**1,11**	**0,32**	**13,18%**	**2.566.583 €**
Group 2												
Hotel Excelsior	2.214.610 €	151.060 €	18.443.353 €	90.018 €	318.571 €	1,73	5,12	1,43	0,97	34,82	37,04%	2.063.550 €
Ausonia Hungaria	18.040.075 €	12.256.834 €	3.856.988 €	-31.949 €	638.656 €	16,56	0,55	2,66	0,59	0,56	34,57%	5.783.241 €
The St. Regis Venice	7.140.275 €	5.024.713 €	4.659.153 €	-882.683 €	-460.023 €	-9,87	-12,10	-12,01	0,77	0,59	25,22%	2.115.563 €
Hilton Molino Stucky	191.785.504 €	5.953.157 €	25.340.559 €	989.406 €	11.948.919 €	47,15	1,18	11,68	0,71	51,29	90,60%	185.832.347 €
Hotel Danieli Venezia	15.581.220 €	4.084.903 €	33.034.309 €	-317.630 €	1.156.061 €	3,50	-1,64	-0,76	0,54	4,36	50,33%	11.496.317 €
Mean	**46.952.337 €**	**5.494.133 €**	**17.066.872 €**	**-30.568 €**	**2.720.437 €**	**11,81**	**-1,38**	**0,60**	**0,71**	**18,33**	**47,55%**	**41.458.204 €**
Median	**15.581.220 €**	**5.024.713 €**	**18.443.353 €**	**-31.949 €**	**638.656 €**	**3,50**	**0,55**	**1,43**	**0,71**	**4,36**	**37,04%**	**5.783.241 €**
OVERALL MEAN (80% + 20%)	**36.217.061 €**	**22.271.121 €**	**13.791.402 €**	**1.156.239 €**	**3.394.699 €**	**18,40**	**3,73**	**8,07**	**1,55**	**4,20**	**22,27%**	**13.945.940 €**
OVERALL MEDIAN (80% + 20%)	**11.944.851 €**	**8.102.158 €**	**8.898.848 €**	**530.328 €**	**1.066.162 €**	**15,82**	**4,93**	**10,34**	**1,03**	**1,13**	**17,95%**	**3.209.915 €**