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COVID-19: THE IMPACT ON THE HOTEL INDUSTRY

The NH Hotel Group Case Study

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Abstract

This work project aims at measuring the impact of the COVID-19 outbreak on the hotel industry by taking NH Hotel Group as a case study. Firstly, an analysis of the surrounding environment and the crisis originated by the pandemic was performed, focusing on the tourism sector and, specifically, the lodging industry. Thereafter, a research on the above-mentioned company was conducted in order to understand its business model and market context. Finally, a valuation of NH Hotel Group was completed based on a 5-year business plan under three different scenarios related with a vaccine development. An enterprise value of €5,063 million and €2,786 million was obtained in the best and worst-case scenarios, respectively, which translated to a stock price of €7.25 and €1.44 in each. These results illustrate how a faster vaccine development is expected to lead to a lower COVID-19 outbreak impact on NH Hotel Group value.

Keywords

Hotel industry; COVID-19; Vaccine; Pandemic; NH Hotel Group

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Background

In December 2019, occurred in Wuhan, a city in China, an outbreak of severe acute respiratory syndrome coronavirus 2 infection, which later spread globally (*Exhibit 1*). The World Health Organization officially named the disease caused by the novel coronavirus as coronavirus disease 2019 (COVID-19) on February 12, 2020 (Zu et al. 2020). The appearance of the disease and its rapid spread led various Governments to outline unprecedented containment and mitigation measures of varying degrees, useful for slowing the spread of COVID-19 at national or community level, later referred to as "The Great Lockdown".

In the European Union context, all Member States have prohibited public gatherings, closed (totally or partially) schools and introduced border/travel restrictions. More than half of the EU's Member States have proclaimed a state of emergency. These restrictive measures came at a high social and economic cost, not yet measurable (European Commission 2020b).

In Spain[1], the first 15-day state of emergency was declared on the 14th March, banning any movement except to buy food, medicine and to work. There was a mandatory isolation for people under disease surveillance, isolation of individuals that belonged to risk groups and a lockdown duty for those without health problems. Public services were reduced, except those considered priority services. Teleworking became mandatory whenever possible and bars, restaurants and shops selling non-essential items shut. On April 2, Spain was the country with second highest number of deaths from COVID-19 (Reuters 2020).

As a consequence of the pandemic, the World Bank predicted in June 2020 a contraction in the global economy of 5.2%, the deepest global recession since the 1945-46 crisis, that would affect most countries. This recession is expected to bring consequences, such as lower investment,

[1] NH Hotel Group is headquartered in Madrid, Spain. This is the reason why a special highlight on this country is done when analysing the COVID-19 and industry contexts.

erosion of human capital and the fragmentation of global trade. In addition, the World Bank stated that "per capita incomes in the vast majority of emerging market and developing economies are expected to shrink this year [2020], tipping many millions back into poverty" (World Bank 2020).

The Tourism Sector in the World and in Spain

The tourism sector has experienced a significant growth in the last decades, justified by factors such as a robust economy, a rising global consumer purchasing power, the increased use of internet and other modern communication channels, driven by digital innovation, and the change in consumer choices (Deloitte 2019).

The travel and tourism sector played until now a fundamental role in the global economy and community. In 2018, the industry generated 10.4% of the World GDP and a similar share of employment (World Economic Forum 2019). In 2020, it was expected to register a revenue of US$711,944 million (Statista 2019b). However, due to the unexpected appearance of the pandemic, this sector experienced a significant contraction in that year and this number was estimated to decrease to US$447,412 million, which represents a reduction of 37.16% relatively to the initial forecast.

The predicted employment loss in the travel and tourism industry due to the pandemic amounts to 100.8 million worldwide. Asia Pacific is the region with the highest number, 63.4 million, followed by Europe, which is expected to register 13 million job losses (Statista 2020c).

Spain is one of the leading travel destinations in Europe. The tourism sector was one of the main contributors to the Spanish economy, representing around 11.1% of the country's gross domestic product (GDP) and generating 13% of its total employment (OECD 2020). Similarly to what happened in other countries, this sector has been growing in Spain in the last years, but was strongly impacted by COVID-19.

In 2019, tourist Spain arrivals reached 83.7 million, which represents an increase of approximately 1.1% when compared to the value registered in 2018 (Reuters 2020). The top three inbound markets for Spain were the United Kingdom, Germany and France, representing 22.4%, 13.8% and 13.6% of total tourist arrivals, respectively. On the other hand, domestic tourism presented also a significant expression in this country, assembling 173.755 million trips in 2019 (Statista 2019a).

Hotels are a fundamental segment in this market, being the one generating the highest revenue worldwide in 2018 - US$355.3 billion, which represented about 53.7% of the total sector revenue. The European market was the largest, followed by the United States and China with revenues of US$99.2 billion, US$82.5 billion and US$67.2 billion in 2018, respectively. As of February 2018, there were 184,299 hotels worldwide, which represents an increase of almost 14.3 thousand hotels globally over the past decade, and a total of 16.97 million hotel rooms, corresponding to an increase of over 2.5 million over the same period (Statista 2020d).

The accommodation activity, namely hotels, was also expected to follow the above-mentioned trend of the sector in 2020. However, the opposite effect was also observed. There was a dramatic year-on-year drop in hotel occupancy. Countries such as Italy and China were very affected, registering a decreasing rate of -96% and -68%, respectively. As a consequence, the monthly hotel revenue per available room declined from US$44.27 to US$15.38 in Asia, US$81.05 to US$17.22 in the Americas, US$71.75 to US$9.45 in Europe and from US$84.22 to US$24.77 in the Middle East and Africa in the period between February 2020 and April 2020 (Statista 2020b). In Spain, the industry revenue of hotels and similar establishments is expected to amount to US$11.29 billion in 2020, a decline of 57.4% when compared to the previous year (*Exhibits 2*, *3 and 4*) (Statista 2020a).

NH Hotel Group

NH Hotel Group was founded in 1978 with the opening of its first establishment - the Ciudad de Pamplona hotel. Four years later, the chain was already moving beyond the region of Navarra by adding the NH Calderón de Barcelona to its portfolio.

One decade from its foundation, the company established itself as one of Spain's leading chains, running hotels in Madrid, Barcelona and Zaragoza. In 1988, *Corporación Financiera Reunida*, S.A. (COFIR) became the company's core shareholder.

By the end of 1995, NH counts with 54 establishments located nationwide and, in the following years, COFIR acquires 100% of NH's equity. One year later, there is a merger of the former COFIR and NH Hoteles in an attempt to radically change the company's strategy.

Later the company starts an international expansion, putting it in place in 1998 and 1999 in Latin America and Europe, respectively. The latter is marked by the acquisition of a stake in Jolly Hotels (19.1%). At that time the company's portfolio counted with 88 hotels and it was included in Spain's stock index, the IBEX 35.

In 2000, NH was running 168 hotels, had 7,300 employees and a footprint in 15 countries, being positioned as Europe's third largest hotel chain and as the leading player in most of its top city destinations. In the following years, NH continued its growth strategy in markets such as the German, Austrian, Italian, UK and French ones.

In 2007, NH Hotel counted with 31 hotels in 21 countries on 3 different continents, 49 projects in the pipeline and 19,000 employees from 115 different nationalities.

By 2011, the company was positioned as one of the world's top 25 hotels and one of Europe's most important chains, with around 400 establishments and 60,000 rooms.

A new corporate governance model was articulated in 2012, by the appointment of a new non-executive to chair its highest governing body and a new CEO, splitting these roles. This change is later materialized in 2013 in the company's transformation. NH Hotel Group increases its liquidity and solvency by issuing equity to its new core shareholder, HNA, while going through an asset restructuring plan. All the initiatives from that point onwards were focused on increasing revenues, improving margins, growing, and optimizing the management and organization capabilities.

In the beginning of 2015, the acquisition of the Latin American chain Hoteles Royal was completed, allowing NH Hotel Group to launch its brands in Colombia and increase the presence in Chile and Ecuador.

Since 2019, NH Hotel Group works with Minor Hotels on integrating all of its hotel brands under a single corporate umbrella brand with presence in over 50 countries worldwide. (NH Hotel Group 2020b). Minor Hotels is a subsidiary of Minor International which is also NH Hotel Group's major shareholder (*Exhibit 5*).

Currently the company is one of the 30 largest hotel companies in the world with close to 400 hotels in 29 countries across Europe, America and Africa. It operates under three different brands (*Exhibit 6*): NH Collection, for premium hotels located in major capitals across Europe and America; NH Hotels, for three or four-star urban hotels "with the best price/quality relation"; and nhow Hotels, for design hotels that are unconventional and cosmopolitan (NH Hotel Group 2020e). The company has a solid geographical diversification concentrated in 5 key markets: Benelux, Germany, Italy, Spain and Latin America (mainly Colombia, Mexico and Argentina).

In previous years, NH Hotel Group has boosted its expansion strategy and presented favourable results (*Exhibits 7 and 8*). In 2019, the company registered an "excellent year", according to its CEO, Ramón Aragonés, overachieving its financial targets. Revenues increased by 7.1% at a constant exchange rate, driven by an excellent performance in Spain and a solid growth in Benelux and Italy. This represents an increase of more than €244 million since 2016. The Group registered an EBITDA of €294 million and a total net income of €90 million in the referred year (NH Hotel Group 2019).

NH Hotel Group and COVID-19

As previously analysed, the hospitality demand has declined sharply due to the outbreak of COVID-19 and the measures taken with the objective of diminishing its impact on public health.

During April and May, 95% of NH Hotel Group's hotels were closed and the remaining 5% were open for solidarity purposes[2]. A contingency plan was implemented as to guarantee the business sustainability (*Exhibits 9 and 10*). There were also measures to preserve and reinforce the Group's liquidity – on 30th June 2020, available liquidity amounted to €600 million.

Despite Moody's corporate rating downgrade on 23rd June 2020 from B1 to B3 following the outbreak of the virus, the "strong liquidity position" of the company allowed to justify the Stable outlook in comparison to other players in the market (NH Hotel Group 2020d).

In the first half of 2020, revenue declined to €309 million, a variation of -62.4% compared to the same period of the previous year. The second quarter of 2020 has been the most impacted – revenue decreased 93.6% to €30 million during this period. The occupancy rate presented a decline of 69.4 p.p. when compared to the Q2 of 2019. The reported total net income in the first semester reached -€218.5 million due to the values registered since end of February.

These results and the uncertainty regarding the future were also reflected on the company's stock price. On the 2nd January 2020, the NH Hotel Group share price was €4.70, while, on the 31st July of the same year, it traded for €2.56 – one of the lowest values in the last five years -, which represents a decrease of approximately 50% (*Exhibit 11*) (Bloomberg 2020).

[2] The company made its resources available to Spanish authorities and non-profit organizations. NH Hotel Group efforts aimed at supporting local communities, healthcare workers, and families in need by donating food, material resources and accommodations wherever possible (EDGE Media Network 2020).

The company started its reopening in Europe in June. It intended to follow a progressive path as to achieve a profitability improvement with low incremental fixed costs. On the 30th June, approximately 60% of the portfolio was open, reaching 70% by the end of the following month. Indeed, the NH Hotel Group presents a strong market positioning in European countries, excellent hotel locations and high brand awareness as well as a high domestic demand. It believes that the recovery will be driven initially by the domestic and intra-European demand and by the B2C segment, due to the low international mobility and the restrictions in the size of events, respectively (NH Hotel Group 2020c).

NH Hotel Group management team would like to understand how the pandemic crisis can impact the company's results in order to implement the appropriate measures in response to the possible outcome.

Uncertain Times

The current period is characterized by a significant level of uncertainty. The severity of global shocks in the economy and public health are dependent on the development of a vaccine for COVID-19. Great efforts have been made in this direction: funding poured in from governments, multilateral agencies, not-for-profit institutions and the private sector. COVID-19 specific vaccines have received more funding than any prior vaccine, both in "normal" scenarios and pandemic scenarios. The US National Institute of Allergy and Infectious Diseases received $1.5 billion in the first six months of 2020 to support efforts to develop a COVID-19 vaccine. This factor contributed for the acceleration of the process. By July 2020, more than 250 vaccine candidates were being pursued globally, with 30 already in clinical studies and another 25 or so poised to enter human trials in 2020 (Agrawal et al. 2020).

It is possible to shorten the time of this process by combining several phases and testing vaccines on more people without as much waiting. However, this presents some risks and raises some questions about safety. Following the trials phases, the vaccine manufacturing, approval and distribution constitute also very challenging steps of the process (*Exhibit 12*).

Usually, companies build new facilities tailored to any vaccine, given the different equipment requirements. Those factories follow strict guidelines and usually take around 5 years to build. Relatively to approvals, they typically take a full year in order to guarantee that the vaccine is as safe and effective as stated by drug makers. Also, despite the unprecedent push for a vaccine, less than 10% of drug trials are ultimately approved by the US Food and Drug Administration (F.D.A) (Thompson 2020).

While some officials estimated the vaccine could arrive in at least 12 to 18 months (Chadwick 2020), others considered this schedule "unrealistic", as it was the case of the vaccine design expert Maria Bottazzi of Baylor College of Medicine in Houston, Texas by April 2020 (Arnold 2020). In addition, according to the Wellcome Trust, taking into consideration all the specific steps in the process, a vaccine can take more than 10 years to fully develop (Broom 2020). The record for an entirely new vaccine occurred when developing the mumps vaccine and it took at least four years.

Teaching Notes

Case Overview

In December 2019, occurred in China an outbreak of severe acute respiratory syndrome coronavirus 2 infection, which later spread globally. This caused the greatest lockdown in History. One of COVID-19's consequences was an economic downturn that affected significantly various industries, being one of them the hotel industry, due to travel and social distancing restrictions. NH Hotel Group management aims at understanding the impact of this crisis on the company's results in order to implement the appropriate measures in response to the possible outcome.

Teaching Objectives

The case main goal is to understand the impact of an unexpected crisis on the hotel industry, highlighting the importance of strong leadership and effective crisis management team. Another aspect of the case is the reflection on the possible threats this industry may face and the measures to be implemented in order to overcome this type of crisis.

Course(s)

Instructors will find this case useful in courses on corporate valuation, corporate finance and hotel management.

Teaching Strategy

The instructor should divide the class into groups of four to five students to work on the NH Hotel Group Case Study. The approach and results of each team should then be discussed in a class context.

Assignment Questions

1. How does the economic downturn driven by COVID-19 differ from other financial crises in History?

2. How did the pandemic impact the Spanish hotel industry until June 2020, based on Exhibits 3 and 4?

3. Elaborate a brief description on hotels' business model, taking NH Hotel Group as example.

4. Identify the different players/competitors in the lodging industry.

5. What is NH Hotel Group long-term value under the following scenarios:

(A) Vaccine developed by December 2020

(B) Vaccine developed by December 2021

(C) Vaccine developed by December 2023?

6. How do the obtained results translate the impact of COVID-19? Does the current stock price differ from the estimated one?

7. What threats does this industry face?

8. What measures could be implemented to overcome this type of crisis?

Analysis

1. How does the economic downturn driven by COVID-19 differ from other financial crises in History?

All crises in History differ in terms of their cause and, as a consequence, a different public policy response is also expected for each of them.

One of the few similarities between the economic downturn caused by COVID-19 and the other financial crises in History corresponds to the decline in the economic activity. While they share the same effect, the magnitude of the effects surely differs.

The main difference between them is that those earlier crises were caused by financial imbalances, which implied that the responsible institutions, such as Central Banks and

Governments, could enforce the necessary measures to moderate its consequences. The Great Recession of 2008-09, for example, was preceded by a financial crisis that was caused by imbalances in the financial system associated with financing of subprime mortgages (Engemann 2020). Monetary and fiscal measures were launched to stimulate the economy. The recovery was very slow, followed by eight years of half-speed (2%) annual growth.

Concerning the crisis driven by COVID-19, economic conditions are too closely tied to the pandemic's trajectory. The decline in output and employment was much more significant and unexpected than in the Great Recession. Due to its nature, this crisis requires a higher investment in public health and the canalization of resources to this sector, which restricted, on the other hand, consumers from non-essential activities, such as restaurants or leisure trips (Boskin 2020).

Additionally, this more recent crisis exerted a more abrupt effect, shortening both supply and demand immediately, and its economic slump is expected to affect all regions and countries, requiring a faster action than in other crises. While during the 2008-09 crisis Governments implemented measures to stimulate demand, there is doubt over whether this would be a possible solution for the pandemic crisis. Plant closures, initially in China, caused supply lines to dry up and the uncertainty felt incentivized consumers to increase personal saving instead of consumption. Governments response included large-scale rescue packages, significantly larger than their equivalents in the 2008 financial crisis, to ensure the survival of their economies.

Another aspect is that the COVID-19 pandemic is hitting many industries harder than the 2008 financial crisis, and it is expected that most industries will take longer to recover from the losses caused by the coronavirus outbreak. One of these is the Travel and Tourism sector, which became redundant in the referred crisis. Restrictive measures such as border closures, quarantine regulations and entry bans, have made it very difficult for this industry to make up for all its losses during the crisis period (Roland Berger 2020).

The likely long-run effects include a huge loss of small businesses and human capital, more permanent telecommuting, acceleration of the digital transformation and increased concentration and decreased competition in some sectors (Boskin 2020). Individuals are working and consuming differently and, similarly to any other crisis, it is expected that the one driven by the pandemic leaves marks in the World.

2. How did the pandemic impact the Spanish hotel industry until June 2020, based on Exhibits 3 and 4?

The coronavirus pandemic had a tremendous impact on the hotel industry, both worldwide and in the Spanish panorama. Indeed, the country was one of the first ones to be affected and it will probably be one of the last to recover.

In April 2020, according to the *Instituto Nacional de Estadística*, the number of open establishments was null in Spain and in May and June of the same year this indicator was very small compared to the one of 2019. In May, only 1,567 hotels were open, representing a decrease of 90.3% relatively to the previous year. Although in June a slight increase in this number was verified, amounting to 5,896 open establishments in total, there was still a negative variation (-64.6%) of this value comparing to June 2019. Concerning the bedrooms rate of occupancy, there was a significant decrease in the 2nd trimester of 2020 when compared to the values of 2019: from 66.02% to 0% in April, which corresponds to the period when the country went through the strongest lockdown; from 72.85% to 19.24% in May and 74.34% to 24.15% in June. Relatively to the revenue per available room, it decreased from 67.95€ to 13.16€, which represents approximately an 81% decline in June 2020 relative to the homologous period of 2019 and a similar trend was observed in the precedent months. There was also a substantial number of job losses in the hotel industry. When comparing the number of personnel employed in 2020 with the one of 2019, a decrease of 95.35% is observed in the 2nd trimester of the year under analysis.

After a careful analysis of the data of the first semester of the year, one concludes that the effects of the coronavirus were more noticeable in the second half of that period, which coincides with the Easter holiday period and also with the lockdown in the country. Until July 2020, no one was allowed to travel between provinces and the borders were closed, which means there were no foreign tourists during this period (Downer 2020).

3. Elaborate a brief description on hotels business model, taking NH Hotel Group as example.

In the hotel industry, revenues are generated mainly from rooms rentals, food and beverage sales and meeting rooms rentals, being the first the greatest source of revenue. This is also the case of NH Hotel Group that, in 2018 and 2019, had a total hotel occupancy revenue of approximately 71% of the company's total revenues.

Other sources can be telecommunications, commissions, fitness and recreation facilities.

There are three relevant metrics when considering hotels business model: (1) Occupancy rate, the percent ratio of room nights sold during a specified period divided by the total number of rooms available for each day during that period, (2) Revenue per available room (RevPAR), expressed as the total amount of revenues in a specific time period, generated by each available room during that same period and (3) Average daily rate (ADR), which corresponds to the ratio between total rooms revenues and total rooms sold or the ratio between RevPAR and Occupancy Rate (Napierała, Leśniewska-Napierała, and Burski 2020). In addition, the total number of rooms must also be taken into consideration.

Considering this last variable, an aspect that can also influence rooms rentals revenues is the type of contract in place. Rooms can be leased, owned, managed or franchised. In NH Hotel Group's hotel occupancy revenues, only the owned and leased rooms are taken into consideration since the franchised account as a fee (*Exhibit 13*).

Regarding operating costs, some examples are personnel expenses - which corresponded to the highest of NH Hotel Group in 2019 -, outsourcing of services, supplies, maintenance and cleaning, laundry, marketing and merchandising, advisory services, among others.

Finally, there are a few considerations to highlight regarding the hotel industry. Firstly, this is an industry characterized by a relatively higher income elasticity of demand than the other sectors. Therefore, in a crisis where a fall in consumers income is verified, a deeper fall in the consumption of tourist services is expected (Napierała, Leśniewska-Napierała, and Burski 2020). Secondly, hotel occupancy revenues are subject to foreign currency risk when the company operates in countries where transactions are made in a different currency which is also dependent on the company's hotels and rooms portfolio in geographical terms[3]. Usually, multinationals have a higher capacity of diversifying away this risk when compared to domestic firms, by increasing the degree of operational hedging and franchising (Lee and Jang 2010). Finally, in this specific context, the number of COVID-19 cases in each of the cities or countries in which the company's hotels are located also influences the obtained revenues. A higher number of cases in proportion to the country's total population is usually associated with more restrictive measures and also with a perception of a high-risk destination in terms of the virus transmission for international tourists. Consequently, this would generate a decline both in domestic and international hotel guests and, therefore, in the occupancy rate in these destinations.

4. Identify the different players/competitors in the lodging industry.

When considering the lodging industry, there is a diverse range of accommodation types. In order to better understand the market dynamics, one should distinguish between direct and indirect competitors.

[3] The one of NH Hotel Group in 2019 is presented in *Exhibit 14*.

Direct competitors are those that offer the same product and share an identical goal. Hotels, hostels and guest houses are included in this category. Hotels can offer most facilities, are focused on short-term stays and are rated according to a stars' system. NH Hotel Group is inserted in the hotel type. Accor Hotels, Intercontinental Hotel Group and Meliã Hotels International SA are some of its competitors, presented in *Exhibit 15*. Regarding hostels and guest houses, although they have different characteristics, they should also be perceived as competitors. These are often the cheapest type of accommodation and more focused on younger segments.

In what concerns indirect competitors, those offer a different product but aim at satisfying the same consumer's necessity. Self-catered accommodation, mainly through private rentals, has been disrupting the lodging industry. An illustrative example is Airbnb. Founded in 2008, this firm was able to put pressure on hotels rates and occupancy levels. In a pandemic context, it is not clear who has a clear advantage when considering hotels versus private accommodation as Airbnb. In a way, the vacation rental industry can position itself as social distancing friendly and consumers can perceive it as safer from a health standpoint than the shared spaces in hotels, such as elevators and lobbies. However, regarding cleaning and hygienic methods, hotels have an advantage related to staff training on cleaning standards and to the use of professional or industrial-grade cleaning products (Glusac 2020).

Even though it is important to have a broader perspective of the market, for valuation, strategy formulation and performance evaluation purposes one should recognize a more limited competitive set (Kim and Canina 2011).

5. What is NH Hotel Group long-term value under the following scenarios: (A) Vaccine developed by December 2020; (B) Vaccine developed by December 2021 and (C) Vaccine developed by December 2023?

A. The COVID Crisis and the Financial Crisis

As stated in question 1, the downturn caused by the pandemic is certainly different from the Global Financial Crisis (GFC). The main differentiation factor is their nature - the first caused by a virus spread and the latter by fragilities in the financial system. Although the current crisis origin does not lie in financial markets, we can still observe an impact on them. The widening of equity spreads, the significant decline in company valuations, the rapid and significant increase in equity market volatility, some degree of stress and credit losses priced in the corporate bond and loan markets and the increase in price volatility and risk premium of sovereign bond markets are some of the negative reactions of the European capital markets (Kanapickiene et al. 2020). At the retail level, until the date of this report, no bank runs happened, and both the payment and credit systems appear normal, contrarily to what was observed during the GFC. Also, the increase in highly rated corporate debt spreads may be a sign of investors' excessive risk aversion. Nevertheless, when comparing the current context to the GFC, in which the high uncertainty drove a large portion of panic, one would expect the uncertainty not to be as serious.

Besides the differences between the two crises and the high level of uncertainty during the pandemic under analysis, one assumed that the Global Financial Crisis would be a reasonable proxy to predict NH Hotel Group results for the following 5 years. Despite the differences between the two economic downturns, one can still identify some similarities. Firstly, an impact in financial markets is transversal to both and taking the US as an example, one can observe that the Fed's current intervention is similar to the action taken to respond to the GFC (Martin 2020), which reinforces the idea that they are comparable.

Secondly, although the hotel industry is widely recognized as a crucial element for the world economy (Assaf and Cvelbar 2010), it is also one of the most sensitive sectors to events such as terrorist attacks, SARS epidemic and the Global Financial Crisis, decreasing not only its revenues during these crises but also increasing the perceived risk of investments in the sector (Chen 2011). It is relevant to take into consideration that epidemics and financial crises are the occurrences whose effects took longer (Napierała, Leśniewska-Napierała, and Burski 2020), which is one of the factors that also make a comparison between the two relevant in this context. Finally, even though there are some pessimistic perspectives, such as Roland Berger's, previously presented, that advocate that the recession caused by COVID-19 would hit harder than GFC, others such as Kanapickiene et al. believe that this pandemic downturn will have less impact than initially expected by economists, due to some positive signs observed in European countries in May and a less pessimistic situation in sectors such as construction, retail and industrial ones. However, it is also stated that consumer confidence is likely not to improve so quickly (Kanapickiene et al. 2020).

These aspects sustain the parallelism between the pandemic downturn and the one of 2007-2008 used for valuation purposes.

B. Different Scenarios and Assumptions

In the performed valuation, the different scenarios assumed are strongly related with the development of a vaccine as explained in the "Uncertain Times" section of the Student Copy. The first one assumes that an effective vaccine will be ready by December 2020 (Scenario 1) – 12 months from the virus appearance -, the second scenario by December 2021 (Scenario 2) – more than 18 months from the virus appearance -, while the third assumes a longer development period which coincides with the historical record time for developing a vaccine – 4 years (Scenario 3). The effectiveness of the vaccine depends on several factors, among which are how infectious the disease is, how effective is the vaccine in retaining transmission, how effective is the distribution and how many people are vaccinated as well as the restrictions measures in place during the entire process. McKinsey & Company predicted in November 2020, after final data on Pfizer/BioNTech and Moderna trial was released, that the peak probability of herd immunity in the US would correspond to the Q3 or Q4 of 2021 (Charumilind et al. 2020). However, a different time length was assumed in NH Hotel Group valuation – 2 years would be the period to reach herd immunity from the moment the vaccine development, meaning the trials phase, is concluded. To sustain this assumption, one considered European Commission forecasts, which assume that containment measures remain to some degree until 2022 (European Commission 2020a). This seems to be a fairer assumption partially due to the fact that the US has direct access to the vaccine, since the pharmaceutical companies in the front line at the time of the elaboration of this report were based in the aforementioned country, easing some phases of the process, namely distribution.

As previously stated, one assumed that the GFC data would be the best proxy to forecast some of the used variables in the NH Hotel Group valuation. The methodology used in this process consisted in collecting data regarding the payout ratio, goodwill, short-term and long-term debt of 76 companies in the hotel industry of European Union countries and the occupancy rate of the hotel industry in the United States in the period from 2002 until 2017. The annual change of each of the variables was computed for each company for each of the years in the above-mentioned period, except the one of payout ratio – an already normalized variable – (*Exhibit 16*) and occupancy rate. Finally, the industry average annual change rate was calculated in each year excluding 20% of the outliers.

To understand which period should correspond to the years under forecast, the Spanish GDP annual change (*Exhibit 17*) was taken into consideration from 2002 until 2017. The year 2009 was considered the year when the financial crisis hits the Spanish economy due to the significant negative growth registered. From 2010 until 2014 the impact of the financial crisis is still present in the country through a slow recovery or even negative growth rates, which can be referred to as "recovery" levels. From 2015 onwards, the values presented are closer to the ones registered during the period pre-financial crisis and, therefore, were considered as the "normal" levels. Following this rationale, 2020 would correspond to 2009 levels, the following years until the vaccine development (year x) and the additional 2 years necessary to achieve herd immunity would correspond to 2010 levels onwards (until x+2) – the "recovery" period - and afterwards the 2015 variables average and following years values – the "normal" levels - were considered. The assumptions for each scenario are detailed in *Exhibit 18*.

C. Approach Limitations

It is relevant to recall that this is a context of great uncertainty and, therefore, the stated assumptions have some limitations. One of them is the comparison with the 2007-08 financial crisis, which was a recession with a different origin from the one under analysis, as mentioned previously. Besides this, since the scenarios were constructed considering an annual basis, there could be temporal lags following the simplicity of this assumption.

Finally, the correspondence of "crisis peak", "recovery period" and "normal levels" constitutes a simplified but not flawless method.

In what regards the specificities of the company, an additional limitation is the fact that the consequences of the pandemic would affect countries in different levels and, therefore, the company's results should include this effect, considering the respective hotel portfolio.

It is important to take these aspects into account. Nevertheless, the conducted analysis remains relevant, allowing to evaluate the sensitivity of the company's results to the shock considered.

D. NH Hotel Group Valuation through Discounted Cash Flows method

To obtain NH Hotel Group value as of 31st December 2019 the preferred method for the presented analysis was the Discounted Cash Flows (DCF). This is one of the most consensual valuation methods and represents an intrinsic value approach that relies on the free cash flows of the firm, which are partially related to the strategy defined.

Main Business Drivers

Revenues

Revenues are a driver of extreme importance in the DCF valuation. NH Hotel Group revenue sources are: 1) Hotel occupancy, 2) Catering, 3) Meeting rooms and Others and 4) Rentals and Other Services. The first is the one with the highest weight in total revenue, therefore it was also estimated with greater detail.

In order to forecast hotel occupancy revenue values, a parallelism with the financial crisis was conducted as previously mentioned. However, the differences in terms of impact in this industry were taken into consideration due to the different nature of the COVID crisis. Firstly, one estimated the occupancy rate of the NH Hotel Group in 2020 using the already known values registered in the first, second and third quarter of that year (*Exhibit 19a*). To determine the predicted occupancy rate in the fourth quarter one applied the average difference between those values and the ones observed in each quarter of 2019. Taking the average of the four quarters of 2020, the yearly occupancy rate for NH Hotel Group was computed. Given the previously mentioned assumption to correspond 2009 values to 2020s, it was possible to capture the differences in the two crisis effects and to analyse company's specific factors.

The observed difference in percentage points was applied to the occupancy rates in the US hotel industry from 2010 to 2014 so as to get its equivalent for NH Hotel Group in the crisis under analysis. From 2015 onwards the 2019 occupancy rate of NH Hotel Group was considered (*Exhibit 19b*). Regarding the ADR and the total rooms available for sale, those were assumed to be the same as the values registered in 2019 and to remain unchanged during the period under forecast. With all these variables the RevPAR and total room revenues were obtained for each year, the first by multiplying ADR by Occupancy Rate and the second by multiplying the RevPAR by the total rooms available for sale.

Relatively to the remaining sources of revenues, those were computed as a percentage of the total revenue: ~28%, which corresponds to the one observed in 2019 and is in line with the two previous years. Revenues and key metrics in the three different scenarios are presented in *Exhibit 20*.

Operating Costs

Another important driver when obtaining the unlevered free cash flow (UFCF) is operating costs. The distinction between variable costs and fixed costs is very important in this context to understand and reflect the firm's ability to adapt to a crisis in the different scenarios. In NH Hotel Group's case, one considered as variable costs the following: procurements, staff costs, outsourcing of services, commissions and bonuses for customers, supplies and laundry and related costs. These were assumed to correspond to a percentage of revenues, which was assumed to be the one registered in 2019 for each of them. Relatively to leases, maintenance and cleaning, costs associated with information technologies, marketing and advertising and other external services, those were assumed to be fixed costs and, therefore, corresponded to the value registered in 2019 for the period under forecast. Concerning Net Profits/(Losses) from Asset Impairment, a recurring item on the company's Profit & Loss Statement, one assumed it to be zero in the projections. The final values forecasted in the period under the defined scenarios are in *Exhibit 21.*

Tax Rate

Relatively to the tax rate, the Spanish Income tax rate was considered from 2020 until 2025 for simplicity, assuming no change would be observed during this period.

Depreciation Expenses

Concerning depreciation charges, one analysed to which percentage of Property, Plant & Equipment (PPE) corresponded this expense. As this relationship held fairly constant in the historic data from the three previous years, one assumed the levels would not change in the future.

Capital Expenditures

NH Hotel Group Capital Expenditures (CAPEX) consists of Maintenance CAPEX, which includes the repairs, ordinary course maintenance expenses and others necessary to comply with legal requirements, such as health and safety standards, and Repositioning CAPEX, related with the opening of new hotels and information technologies. Both these variables were computed as a function of revenues. For Maintenance CAPEX this percentage was assumed to be the same as in 2019 throughout the forecasted period. Concerning Expansion CAPEX, although the company was going through an expansion strategy, with this unexpected event NH Hotel Group management decided to reduce CAPEX in the second half of 2020 and continue this measure next year (NH Hotel Group 2020a). Based on this measure, one assumed it to be 0 in the recovery years of each scenario and in the "normal levels" years, which corresponds to the period of time that begins two years after the vaccine development, it would return to the same percentage of revenues of 2019.

Unlevered Free Cash Flows

Based on the previously mentioned assumptions, variables such as the operating EBIT, the company's Net Income and the Unlevered Free Cash Flows were estimated. Those values are presented in *Exhibit 22* for each scenario.

The Perpetual Growth Rate

After 2025 one assumed that NH Hotel Group will have a perpetual growth of 1.7%, which, according to IMF, would correspond to the expected Spanish inflation in that year. This assumption does not consider any potential growth or contraction in the hotel industry or specific to the company, so that these results can be used as a base case and not consider other aspects, given the uncertainty of the economic panorama. However, a sensitivity analysis is presented in one of the following sections.

Weighted Average Cost of Capital (WACC)

After calculating the company's free cash flows, one proceeded to the estimation of NH Hotel Group WACC, which required the cost of debt, cost of equity and targeted debt to equity ratio. Concerning the first one, the current cost of debt was considered – 3.60% accordingly to the Moody's Credit Opinion of April 2020 on the company – and assumed it to remain unchanged. Regarding the cost of equity, it was computed using the CAPM, with the market return being the one of the MSCI World Index (4.36%), which is considered to be representative of the market, and as risk-free rate the Euro Area 5Y Yield (-0.76%). The NHH Bloomberg Raw Beta of 0.177 was also considered in the cost of equity estimation.

The targeted debt to equity ratio was assumed to correspond to the current one, obtained using the market capitalization and the enterprise value from Bloomberg.

Taking into account the presented values and a tax rate of 25%, a WACC of 4.24% was considered in the Discounted Cash Flows (DCF) method (*Exhibit 23*).

This discount rate should incorporate a sustainable capital structure and the business risk estimation should be aligned with the expected industry conditions. Although these can vary in the three presented scenarios, one considered the rate to be transversal to all of them so as to obtain a base line environment with respect to this factor and be able to isolate the crisis impact by not considering this effect.

In what concerns other valuation methods used in the presented analysis, the Unlevered Cost of Capital corresponds to 4.80%, which requires also the above-mentioned variables, excepting the tax rate.

Results

Considering the above-mentioned assumptions and the 5-year free cash flows, an enterprise value of €5,063 million, €4,781 million and €2,786 million was obtained in Scenario 1, 2 and 3, respectively, through the DCF valuation method. Furthermore, those translate into an equity value of €2,843 million, €2,560 million and €565 million in each scenario, which corresponds to a stock price of €7.25, €6.53 and €1.44 (*Exhibit 24*).

Intuitively, these results coincide with the expectations and illustrate the importance of a vaccine development in the pandemic context as well as in the hotel industry results. Moreover, one should take into account that the presented results refer solely to the fundamentals of the company and it is very sensitive to the range of mentioned assumptions.

E. NH Hotel Group Valuation by Other Methods

Besides the DCF method, one also applied the Adjusted Present Value (APV) and Flow to Equity (FTE) methods in order to compare the results (*Exhibit 24*).

The APV method separates the unlevered value of operations, which coincides with the unlevered cash flows previously used, from any value created by financing such as tax shields values. The discount rate considered is, differently from what was done in DCF, the unlevered cost of capital. APV presents also its limitations. Sometimes the value of a company is overestimated due to the fact that financial distress effects are not considered and for a high leverage firm tax benefits of debt usually do not overweight bankruptcy costs.

When comparing the achieved results, one can conclude that the ones obtained with DCF and APV are fairly similar, although the latter presents a slightly higher company value for all the scenarios: €5,148 million (+1,7%), €4,881 million (+2,1%) and €3,292 million (+18,2%) in Scenarios 1, 2 and 3, respectively. In the last scenario, this difference is justified by the tax shields present value, that increases significantly the firm's valuation.

While DCF and APV value a company based on its free cash flow, FTE calculates the free cash flow available to equity holders after taking into consideration all payments to and from debtholders. In this case, the discount rate used is the equity cost of capital.

In the first scenario, the value of equity amounted to €2,883 million, a difference of 1% when compared to the DCF results. In the remaining scenarios, the values obtained differ slightly. Using FTE, an equity value of €1,408 million and €1,783 million is computed for Scenarios 2 and 3 comparing to €2,560 million and €565 million in DCF, respectively. This implies a stock price of €7.35, €3.59 and €4.55 in Scenarios 1, 2 and 3, contrasting to the €7.25, €6.53 and €1.44 obtained with DCF. This difference can be justified by the fact that the net borrowing is taken into account in this method and assumed to be significantly higher in Scenario 3 than in Scenario 2 in the last year of the forecasted period.

F. Relative Valuation

In order to complement the analysis, as an alternative method, a multiple-based valuation was performed. This is a method that can provide valuable information about the company, since it uses key statistics related to investment decisions. However, it simplifies complex information into a value that can lead to misinterpretation and difficulties in understanding the various effects involved, which can be a disadvantage and a factor to take into account.

Initially, an already short list of companies was obtained through Bloomberg Industry Classification Systems Best Fit algorithm and by narrowing the search through geography in order to consider only the companies whose part of operations are in Europe. Although the business of these companies was similar to NH Hotel Group, a complementary selection was made to ensure the comparability between them, based on factors such as the company size (market capitalization), capital structure (debt to equity ratio), profitability (ROE) and expected growth rate (assumed to be the last year's revenue growth).

The enterprise value multiple considered was EV/EBITDA, which is related with the values presented on NH Hotel Group's business plan. This multiple in commonly used in capital-intensive companies, like the airline and hospitality industries. Additionally, since this company is leveraged, an EV multiple is preferred over the price-earnings ratio, considering that the later does not take into account its capital structure. Also, capital expenditures can vary substantially from period to period, therefore, EV/EBITDA is the preferred enterprise value multiple.

In this specific case, it is important to notice that the different scenarios previously mentioned do not play a material role when considering this valuation method. The long-run EBITDA considered, meaning the value registered by the firm when there are no shocks or crises, was the one of 2019, since one expects the firm will eventually go back to these levels in the medium/long-term.

After computing the multiples in each of the selected companies (*Exhibit 25*) an average was calculated so as to be used as an input to obtain NH Hotel Group's enterprise value. An EV/EBITDA average multiple of 12.25 was obtained, resulting in an enterprise value of €7,007 million. Assuming the same debt to equity ratio, this corresponds to an equity value and a stock price of €7,696 million and €19.62, respectively.

G. Sensitivity Analysis

After the conclusion of NH Hotel Group valuation, a sensitivity analysis was conducted so as to test some of the most important inputs used in the valuation model: the growth rate and the WACC. The results for the three presented scenarios are in *Exhibit 26* both for the enterprise value and the stock price.

The growth rate was set between -1% and 3% in all cases, while the WACC was tested between 3.2% and 5.2%. For both variables, it is possible to conclude that the company's valuation can change significantly. Changes in the growth rate of 1% can lead to an increase of more than 50% or decreases of more than 20% in some cases. Similarly, changes in WACC have also a significant impact, although in a higher scale. A change of 1% can lead to an increase of more than 100% or decreases of more than 50% in the company's valuation.

This analysis allows also to determine what would the value of the firm be when considering a higher discount rate in higher risk scenarios. If, for example, one considered a WACC of 4.2%, 4.7% and 5.2% in Scenarios 1, 2 and 3, respectively, the highest enterprise value would still be the one of the first scenario and the worst the one in the third as in the above presented analysis. However, the difference between the two, and, therefore, the impact of the vaccine development timing, would be more meaningful.

6. How do the obtained results translate the impact of COVID-19? Does the current stock price differ from the estimated one?

At the beginning of the year, NH Hotel Group stock traded for €4.70. In the following months it started presenting a decreasing trend, reaching the lowest bound – €2.32 – of the first half of the year on the 23rd March 2020, which represented approximately a 50% decrease, reflecting investors perception on the company.

The obtained results illustrate how important a solution for a pandemic with a similar nature of the one originated by coronavirus is in a hotel performance. According to the presented analysis, the sooner a vaccine is developed, the lower the impact for NH Hotel Group. In the scenario where it takes 4 years to develop a vaccine the company's enterprise value is 50% lower than in a scenario where it only takes 1 year. However, NH Hotel Group, which is a solid company with an already established and strong brand reputation, presents negative results in the first years of the forecasted period under both scenarios. When considering smaller players, it is expected that the impact of COVID-19 would be more significant, compromising in some cases their financial sustainability, although this hypothesis was not fully tested in the presented analysis.

As such, given the importance of the overall sector in the world economy, it is crucial that the Government is involved by implementing tourism policies and that local authorities and hotels management teams can work together in order to face the crisis in a more efficient way (Napierała, Leśniewska-Napierała, and Burski 2020).

By 30th November 2020 NH Hotel Group stock traded at €3.80. In the exposed DCF valuation stock prices of €7.25, €6.53 and €1.44 were forecasted for the different scenarios.

Sometimes a stock's trading price does not coincide with the estimated intrinsic value of the company, which can be justified by the fact that the share price results from the supply and the demand levels of that same stock, which depend on many factors such as overall market trends, investors' confidence and company news and not only the company's fundamentals. It can happen that there is a misperception of the market regarding the company and future growth, that the assumptions considered in the performed valuation differ from those expected by the market or that the market is taking into account some factors that are not considered in this analysis.

7. What threats does this industry face?

One of the most significant consequences of the pandemic in this industry coincides with a major impact in demand due to the implemented restrictions and travel measures as previously explained. Other consequences correspond to the change in consumer preferences and in the mix of domestic and international demand. Relatively to the first, consumers' growing concern regarding hygiene conditions is a direct implication of this crisis. Consumers look for safe places with strict hygiene and sanitary measures, which must be taken into account by hotels management (Hao, Xiao, and Chon 2020). Secondly, with the COVID-19 and all the imposed travel restrictions, there is an intrinsic attractiveness for domestic destinations, which will have a high impact in this industry and constitutes a driver for sustaining domestic travel (Borko, Geerts, and Wang 2020).

Another consequence corresponds to the decrease in the business travel segment demand. This has typically been a more pronounced segment than the leisure one in the past and this new trend can require a revision of hotels' strategy. Another factor related to this matter is the drastic decline in the number of in-person events, meetings and conferences (Financial Times 2020), which also corresponded to another revenue source of hotels.

Additionally, the competition of Airbnb can constitute a threat. Sainaghi et al. suggest the absence of substitution threats between hotels and Airbnb in the case of business segments. Nevertheless, there is evidence of a good synchronization between the two lodging supplies in the case of leisure segments, creating a possible competitive threat. In this crisis in specific, where social distancing is imperative, it is possible that a shift to Airbnb – a more isolated service, with less human contact – is verified in the future. At the same time, it can also happen that hotels are perceived as more secure and more trustable in what concerns hygienic and sanitary measures (Sainaghi and Baggio 2020).

According to Skift Research and McKinsey & Company, with the pandemic "the hotel sector has seen revenue declines more than four times greater than during the previous two crises combined" (Borko, Geerts, and Wang 2020). The financial sustainability of these firms can be in danger, especially in more pessimistic scenarios with a slower recovery. This is the reason why management plays a fundamental role also regarding this aspect. Before the crisis, the travel industry already faced difficulties. Many companies mastered the challenges of digitization and were successful in the changing environment (Uğur and Akbıyık 2020). However, it can happen that firms do not have the incentive to invest in this context and continue the process of innovation previously needed or already started by the company.

Finally, a change in the hotel industry market composition can also be considered a consequence of coronavirus. Owing to the pandemic, smaller hotels are likely to suffer more severely than large hotels chains. In specific, and taking China as a reference point, during the pandemic, the branded hotel chains emerged more competitive due to their advantages in the business model, disaster management mechanism, and proficient operation (Hao, Xiao, and Chon 2020). The advantage may actually belong to those players that have scale or target specific niches. Hotels need to ensure they have the financial strength to maintain ownership, maintain the product quality, and can continue to operate (Borko, Geerts, and Wang 2020).

The magnitude of the threats this industry will be facing depend on how long it will take to return to the new normal. If the virus impacts the economy for the next four or five years, it will be expected that many changes in consumer behaviours are observed. However, if the situation presents a short-term length, it is possible that these preferences return approximately to what they were before the pandemic.

8. What measures could be implemented to overcome this type of crisis?

This type of crisis is not easily predictable. For that reason, one of the most important things to do in an initial stage is to define an efficient and responsible disaster management team to deal with all the uncertainty. It is crucial to have a concise leadership, define clear action and institute effective communication channels with constant information exchange regarding decision-making.

Secondly, hotels should strive to retain employees during the pandemic, namely those who presented an outstanding performance throughout time, which are considered valuables assets for the firm during difficult times. Ensuring employees' physical and psychological well-being is also critical. In addition, some hotels share staff with sectors that face a labour shortage and there is a trend to retrain staff to multitask as to improve work flexibility and for human resources allocation optimization purposes. Maintaining staff training and development is also crucial.

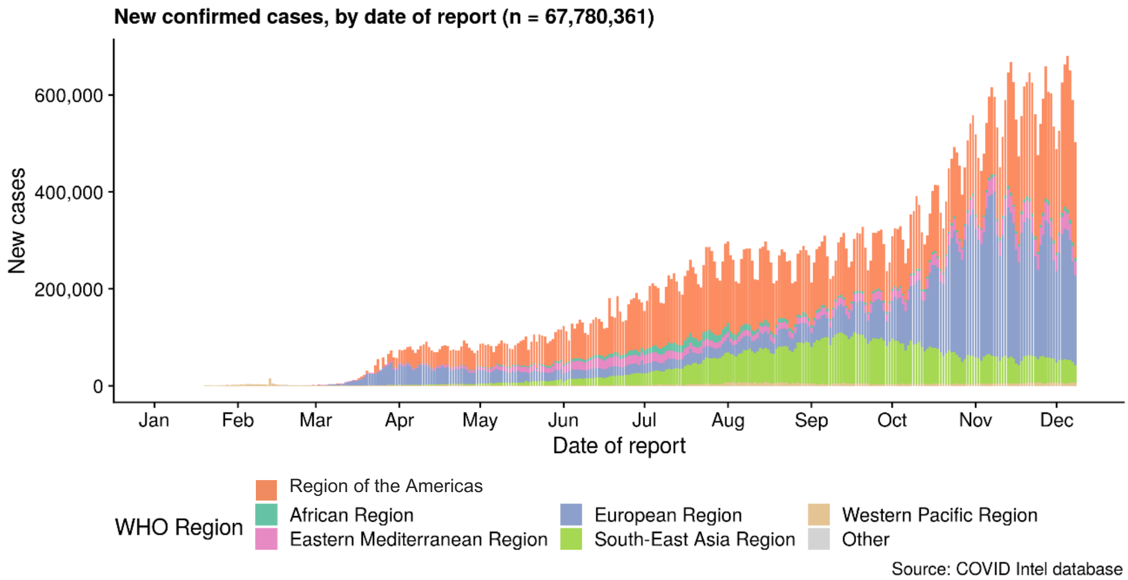
Concerning the hotels services, strict hygiene and sanitary measures will contribute to restore customers' confidence. This includes measures such as conducting complete disinfection, controlling food hygiene, distributing masks, detecting the health of customers and employees; and shutting down laundry rooms, gyms, and other public areas and facilities. Technological solutions such as self-check-in, face scanning and voice control of room service, can also be implemented to provide contactless service and assure customers of service safety.

Relatively to hotels' financial sustainability, firms should focus on government agencies policies and financial aids from authorities. Hotels should also implement their own strategies, reduce non-essential costs, enhance operating capabilities, monitor cash flow predictions, and make dynamic adjustments on a constantly changing environment. Engage with customers and develop sales strategies is also key in this context. Advance sale, package sale, and flexible daily pricing strategies can be some options in this situation (Hao, Xiao, and Chon 2020). Moreover, travel insurance became a relevant topic in this context, being on the list of must-haves from now on. Travel insurance and the possibility of change of date or location without paying a fee can encourage travellers to make future travel plans and ensure tourist mobility. This can be a solution implemented by hotels solely or integrated in the full travel chain (Uğur and Akbıyık 2020).

Finally, hotel brands must collaborate with their parent firms to overcome financial hurdles, through the reduction of management and franchise fees, for example.

Case Exhibits

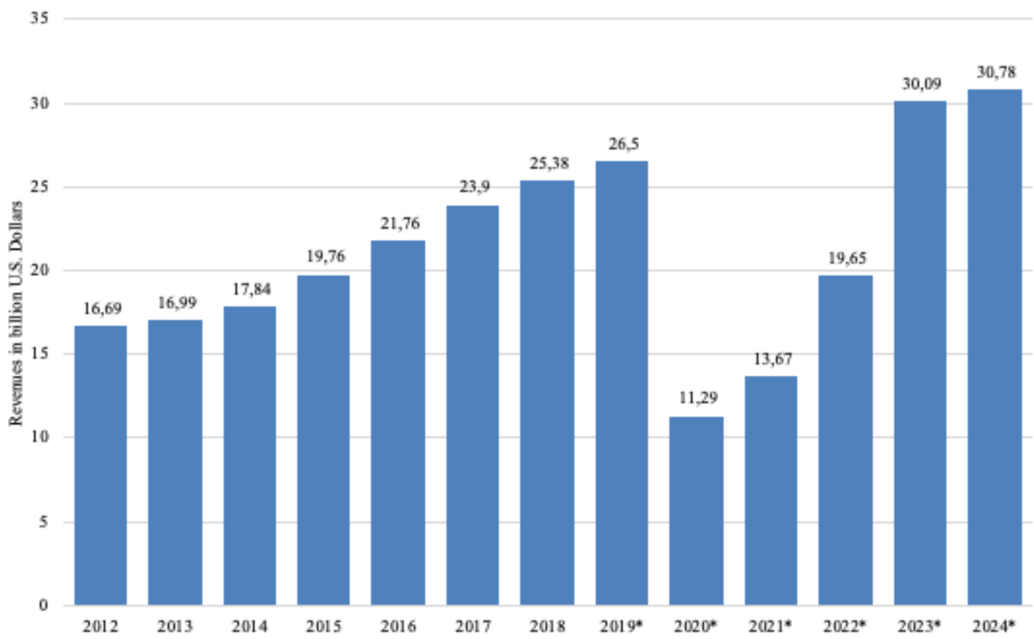
Exhibit 1 COVID-19 Cases in the World (Jan 2020 – Dec 2020)



* Other refers to international conveyances including cruise ships.

Source: World Health Organization (accessed 9 December 2020)

Exhibit 2 Industry revenue of "hotels and similar accommodation" in Spain



*Estimate - This also applies for past years as data provided by statistical institutions often is not available for more recent years.

Source: Statista; Eurostat (accessed 26 September 2020)

Exhibit 3a Indicators in the Spanish Hotel Industry in 2020

		Estimated number of open establishments	Estimated number of rooms	Occupancy rate of bedrooms (%)	Employed personnel
2020	January	11 987	534 405	54,44	155 521
	February	12 662	571 823	59,74	164 710
	March	10 768	449 303	34,67	123 711
	April	0	0	0,00	0
	May	1 567	41 628	19,24	5 526
	June	5 896	162 252	24,15	28 341

Source: INE (accessed 26 September 2020)

Exhibit 3b Indicators in the Spanish Hotel Industry in 2019

		Estimated number of open establishments	Estimated number of rooms	Occupancy rate of bedrooms (%)	Employed personnel
2019	January	11 995	533 152	53,26	153 568
	February	12 749	571 877	58,97	161 563
	March	13 808	627 646	62,29	179 138
	April	15 203	719 243	64,64	210 245
	May	16 175	840 169	66,02	249 961
	June	16 663	870 232	72,85	268 005

Source: INE (accessed 26 September 2020)

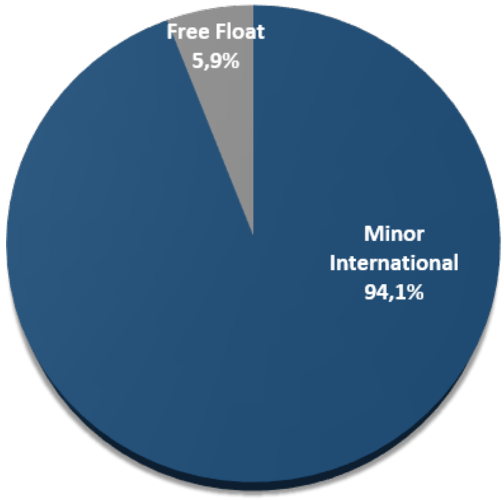
Exhibit 4 Revenue Per Available Room (in euros) in Spanish Hotels

2020					
June	May	April	March	February	January
13,16	..	0,00	29,73	49,43	44,51

2019					
June	May	April	March	February	January
67,95	54,97	53,78	50,38	49,49	43,30

Source: INE (accessed 26 September 2020)

Exhibit 5 NH Hotel Group Shareholder Structure



Source: NH Hotel Group

Exhibit 6 NH Hotel Group Brands

Brands	Description
nH COLLECTION HOTELS	NH Collection, for premium hotels located in major capitals across Europe and America. This category seeks to surprise guests by surpassing their expectations.
nH HOTELS	NH Hotels, for three or four-star urban hotels for guests who demand an excellent location with the best price/quality relationship.
nhow HOTELS	nhow, for design hotels that are unconventional and cosmopolitan, each with a unique personality in major international cities.

Source: NH Hotel Group

Exhibit 7 NH Hotel Group, S.A. – Consolidated Balance Sheets (€ millions)

	2017	2018	2019
Goodwill	112	109	107
Intangible Assets	151	111	84
Investment Property	-	-	3
Property, Plant and Equipment	1 583	1 638	1 713
Right-of-Use Assets	-	-	1 701
Investments Accounted for using the Equity Method	9	9	8
Non-Current Financial Investments	76	54	37
Loans and Accounts Receivable not Available for Trading	65	43	35
Other Non-Current Financial Investments	11	12	2
Deferred Tax Assets	138	139	220
Other Non-Current Assets	16	13	-
Non-Current Assets	2 086	2 073	3 873
Non-Current Assets Classified as Held for Sale	109	56	48
Inventories	10	10	11
Trade Receivables	133	107	106
Non-Trade Receivables	43	38	56
Tax Receivables	24	19	29
Other Non-Trade Debtors	19	19	27
Accounts Receivable from Related Entities	-	1	2
Cash and Cash Equivalents	80	266	289
Other Current Assets	11	12	6
Current Assets	386	490	519
TOTAL ASSETS	2 472	2 563	4 392
Equity Attributable to Shareholders of the Parent Company	1 109	1 452	1 218
Non-controlling Interests	43	52	57
TOTAL EQUITY	1 152	1 504	1 275
Debt Instruments and Other Marketable Securities	388	342	346
Debts with Credit Institutions	71	71	107
Leasing Liabilities	-	-	1 814
Other Financial Liabilities	12	2	1
Other Non-Current Liabilities	39	47	8
Provisions for Contingencies and Charges	50	51	48
Deferred Tax Liabilities	167	177	180
Non-Current Liabilities	728	692	2 504
Liabilities Associated with Non-Current Assets Classified as Held for Sale	2	2	3
Debt Instruments and Other Marketable Securities	246	0	0
Debts with Credit Institutions	12	5	3
Leasing Liabilities	-	-	253
Other Financial Liabilities	12	1	0
Trade and Other Payables	223	253	257
Accounts Payable from Related Entities	-	-	1
Tax Payables	46	59	41
Provisions for Contingencies and Charges	9	3	5
Other Current Liabilities	42	44	49
Current Liabilities	591	367	613
TOTAL LIABILITIES	1 320	1 059	3 116
TOTAL LIABILITIES AND EQUITY	2 472	2 563	4 392

Source: NH Hotel Group

Exhibit 8 NH Hotel Group S.A. and Subsidiaries – Consolidated Financial Statements

(€ millions)

	2017	**2018**	**2019**
Revenues	1 546	1 613	1 708
Other Operating Income	11	6	9
Net Gains on Disposal of Non-Current Assets	30	86	(1)
Operating Costs	(1 309)	(1 351)	(1 145)
Procurements	(76)	(75)	(77)
Staff Costs	(427)	(423)	(449)
Net Profits/(Losses) from Asset Impairment	9	(0)	5
Other Operating Expenses	(815)	(853)	(624)
Depreciation and Amortization Charges	(123)	(116)	(297)
Operating EBIT	155	238	275
Gains on Financial Assets and Liabilities and Other	(2)	(0)	9
Profit (Loss) from Companies Accounted for Using the Equity Method	(0)	(0)	0
Finance Income	3	6	4
Change in Fair Value of Financial Instruments	(0)	-	0
Financial Expenses	(77)	(60)	(135)
Results from Exposure to Hyperinflation	-	1	(0)
Net Exchange Differences (Income/(Expense))	(6)	1	(2)
Impairment on Financial Investments	-	-	(19)
Profit Before Tax from Continuing Operations	73	185	131
Income Tax	(34)	(80)	(39)
Profit/Loss for the Financial Year - Continuing	39	106	93
Profit (loss) from the Year from Discontinued Operations Net of Tax	(0)	(1)	0
Profit/Loss for the Financial Year	39	105	93
Currency Translation Difference	(26)	(2)	4
Income and Expenses Recognised Directly in Equity	(26)	(2)	4
Total Comprehensive Profit / (Loss)	13	103	96

Source: NH Hotel Group

Exhibit 9 NH Hotel Group - Message from the CEO

Message from the CEO

NH | HOTEL GROUP part of MINOR HOTELS

"Dear Shareholders,

*Following the start of the COVID-19 pandemic since mid-March in Europe, the **hospitality demand has declined sharply due to lockdowns, travel restrictions and social distancing**. The lockdown was more intense than expected and mobility remains low.*

*Nearly **95% of our hotels were closed during April and May** and those that remained open were for solidarity purposes. As a result, **Q2 has been the most impacted quarter** with an extremely low level of demand.*

*The Group implemented a **relevant contingency plan to adapt operations and guarantee business sustainability** with the aim at:*

- ***Minimizing costs during the closure of the portfolio in April and May** (total non-rent costs decreased by -70% in Q2)*
- ***Enhancing and preserving the liquidity***
- ***Ensuring that the gradual reactivation of the activity since June is carried out efficiently** and under the premise of maximum guarantees in terms of health and safety*

*To ensure minimizing the cost base, **workforce continues adapted to the current situation**, with temporary layoffs and time & salary reduction. **Additional temporary reduction of fixed leases** to those achieved in Q2 is targeted for the second half.*

To preserve and reinforce liquidity**, apart from the €80m of capex investments cancelation and 2019 dividend withdrawal representing c.€59m, **a €250m 3-year unsecured syndicated facility has been signed in May** and a **waiver for the financial covenants of the €250m RCF** has been approved for June and December 2020. As a result, **available liquidity is c.€600m as of 30th June 2020.

*The flexible cost structure implemented in previous years has allowed a **gradual reopening according to demand since June** and currently c.70% of the portfolio is open. **The recovery is driven initially by B2C domestic demand and July trend continues to show an increase in occupancy.***

*To conclude, **COVID-19 has tested our strength**. The appropriate operating and financial transformation achieved in previous years together with the measures implemented have allowed the Group to overcome the severe lockdown months".*

Ramón Aragonés
CEO, NH Hotel Group

Source: NH Hotel Group

Exhibit 10 NH Hotel Group – COVID-19 Contingency Plan

Contingency Plan to mitigate COVID-19 remains in place

NH | HOTEL GROUP part of MINOR HOTELS

Workforce	▪ Hotels: ○ Europe: temporary layoffs based on Force Majeure or productive reasons extended till end of Q3 ○ In LatAm voluntary working time and salaries reductions remain active ▪ Corporate & Headquarters: temporary layoffs and reduction in working hours extended till October
Other Opex	▪ Supplier agreements reached for longer payment terms ▪ All Group staff travel continues suspended ▪ Low marketing and advertising costs continues despite the need to incentivize revenues
Leases	▪ Additional negotiations with landlords in progress for fixed rent discounts in H2

Relevant Cost base reduction in Q2

€ million	Q2 2020 €m.	Q2 2019 €m.	VAR. €m.	VAR. %.
Staff Cost	(50.6)	(145.3)	94.7	-65.2%
Operating expenses	(32.3)	(126.9)	94.6	-74.6%
TOTAL OPERATIONAL COSTS EXCL. RENTS	**(82.8)**	**(272.2)**	**189.4**	**-69.6%**
Lease payments and property taxes (1) (2)	(64.4)	(86.9)	22.6	-25.9%
TOTAL COSTS (1)	**(147.2)**	**(359.1)**	**211.9**	**-59.0%**

(1) Excludes IFRS 16 impacts for comparison purposes. Includes rent savings for management accounts but pending to be registered in reported figures till accounting rule is endorsed in the EU
(2) Excluding changes of perimeter the decrease amounted €28.3m or -32.8%

Total Non-Rent Cost -70%
Total Cost including rents -59%

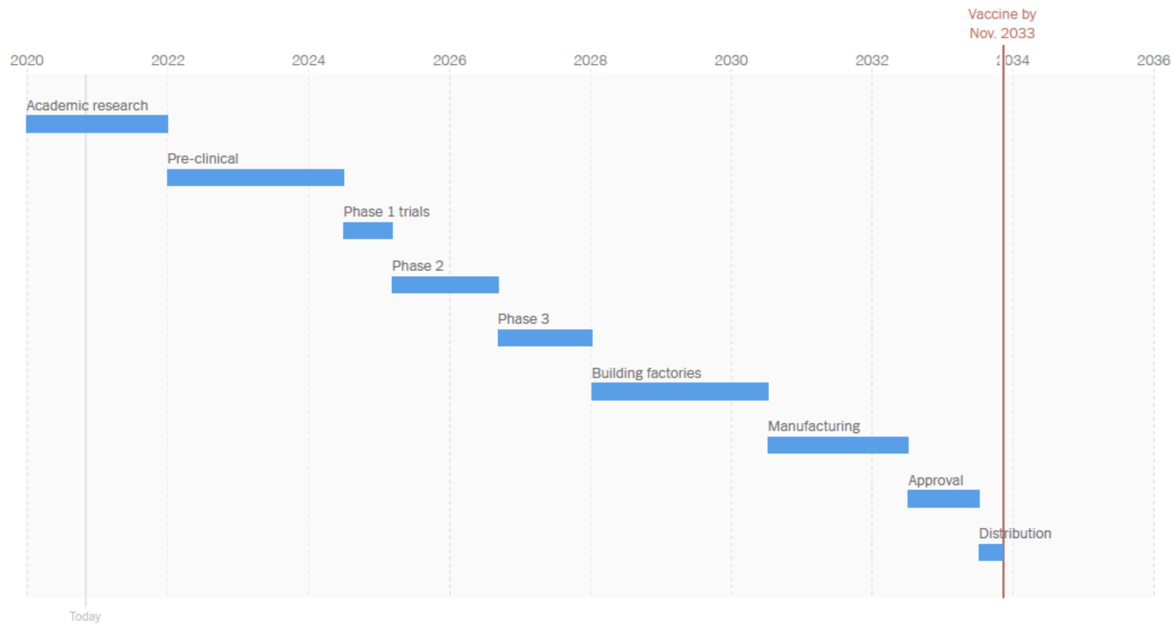
3

Source: NH Hotel Group

Exhibit 11 NH Hotel Group Stock Price

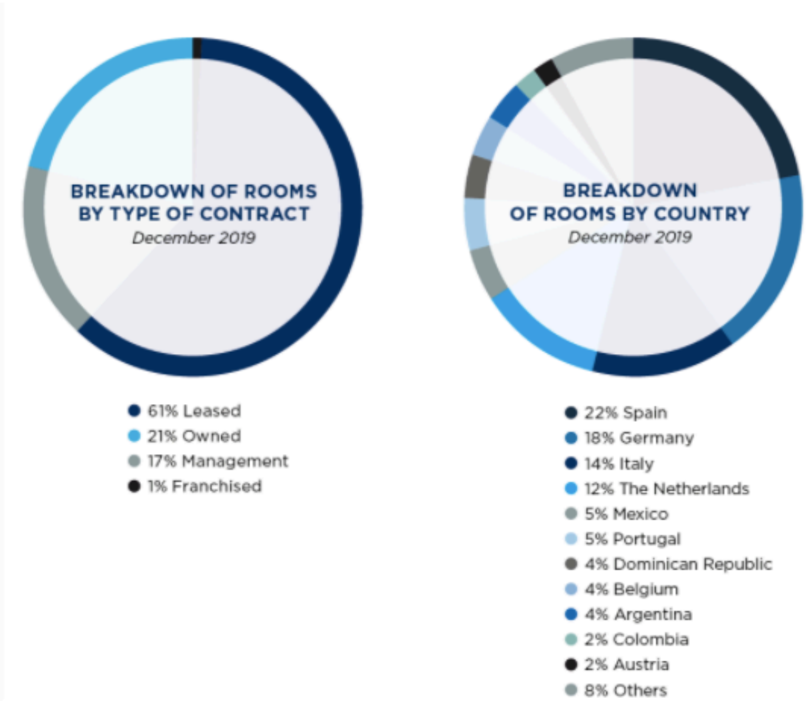
Source: Bloomberg

Exhibit 12 Typical Vaccine Development Timeline



Source: The New York Times

Exhibit 13 NH Hotel Group rooms by type of contract and by country in 2019



Source: NH Hotel Group

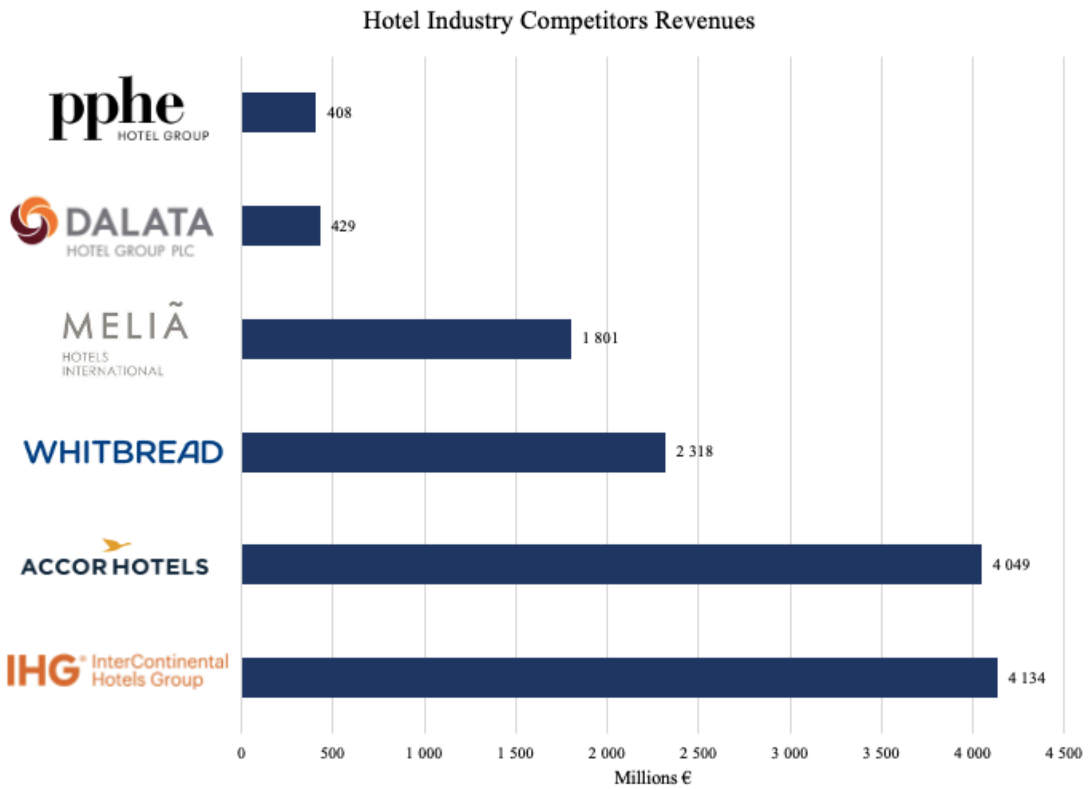
Exhibit 14 NH Hotel Group Hotels Portfolio

	TOTAL		LEASED		OWNED		MANAGED		FRANCHISE	
	Hotels	Rooms	Hotels	Rooms	Hotels	Rooms	Hotels	Rooms	Hotels	Rooms
TOTAL NH HOTEL GROUP	**368**	**57,466**	**230**	**35,006**	**76**	**12,168**	**54**	**9,629**	**8**	**663**
EUROPE										
Spain	102	12,381	72	8,873	13	1,977	12	1,139	5	392
Germany	56	10,425	51	9,425	5	1	-	-	-	-
Italy	52	7,934	36	5,573	13	1,872	3	489	-	-
The Netherlands	35	6,782	20	3,362	14	2,969	1	451	-	-
Portugal	17	2,809	5	854	-	-	11	1,899	1	56
Belgium	14	2,314	6	1,197	8	1,117	-	-	-	-
Austria	7	1,34	7	1,34	-	-	-	-	-	-
France	5	871	4	721	-	-	1	150	-	-
Czech Republic	3	581	-	-	-	-	3	581	-	-
Switzerland	3	382	2	260	-	-	-	-	1	122
Ireland	1	187	1	187	-	-	-	-	-	-
Hungary	1	160	1	160	-	-	-	-	-	-
Rumania	2	159	1	83	-	-	1	76	-	-
Luxemburg	1	148	-	-	1	148	-	-	-	-
United Kingdom	1	121	1	121	-	-	-	-	-	-
Slovakia	1	117	-	-	-	-	1	117	-	-
Poland	1	93	-	-	-	-	-	-	1	93
Andorra	1	60	-	-	-	-	1	60	-	-
TOTAL EUROPE	**303**	**46,864**	**207**	**32,156**	**54**	**9,083**	**34**	**4,962**	**8**	**663**
AMERICA										
Mexico	18	2,814	7	993	4	685	7	1,136	-	-
Argentina	15	2,144	-	-	12	1,524	3	620	-	-
Dominican Republic	6	2,503	-	-	-	-	6	2,503	-	-
Colombia	13	1,355	13	1,355	-	-	-	-	-	-
Chile	5	583	-	-	4	498	1	85	-	-
United States	1	242	-	-	1	242	-	-	-	-
Cuba	2	251	-	-	-	-	2	251	-	-
Brazil	1	180	1	180	-	-	-	-	-	-
Uruguay	1	136	-	-	1	136	-	-	-	-
Ecuador	1	124	1	124	-	-	-	-	-	-
Haiti	1	72	-	-	-	-	1	72	-	-
TOTAL AMERICA	**64**	**10,404**	**22**	**2,652**	**22**	**3,085**	**20**	**4,667**	**-**	**-**
AFRICA										
South Africa	1	198	1	198	-	-	-	-	-	-
TOTAL AFRICA	**1**	**198**	**1**	**198**	**-**	**-**	**-**	**-**	**-**	**-**

** Corporate scope. Figures as of December 31st, 2019.*

Source: NH Hotel Group

Exhibit 15 Some NH Hotel Group Competitors 2019 Revenues



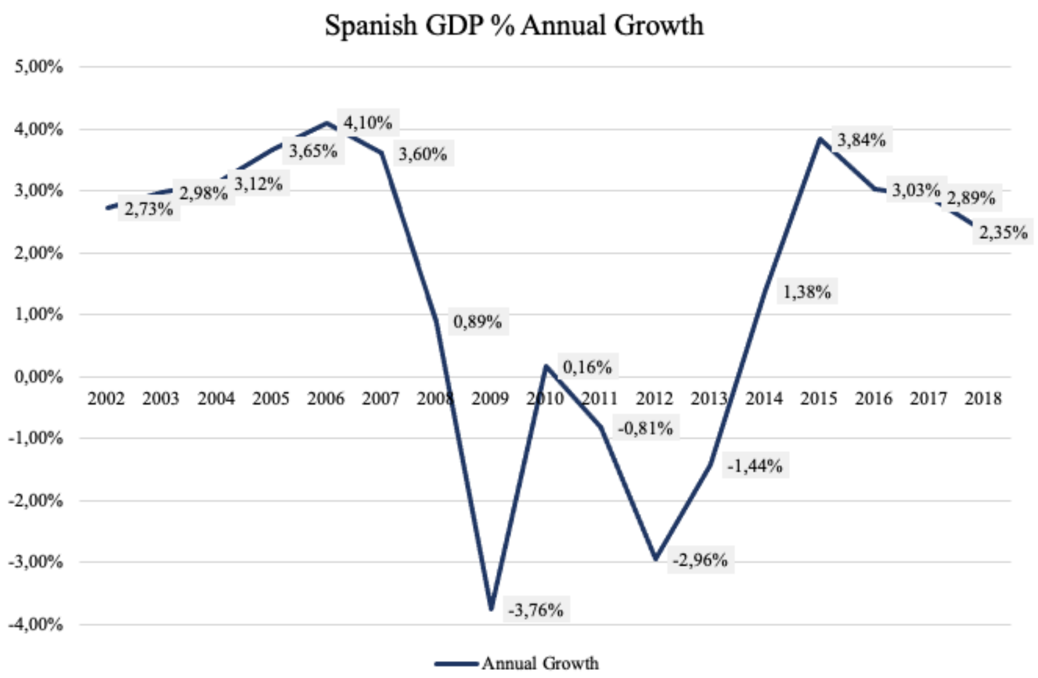
Source: Bloomberg

Exhibit 16 Payout Ratio, Debt and Goodwill Change Rates Assumptions

		Average Annual Growth Rate		
Year	**Payout Ratio**	**Debt in CL**	**Long Term Debt**	**Goodwill**
2009	8,3%	45%	35%	-0,3%
2010	10,0%	4%	62%	0,6%
2011	1,2%	46%	-3%	-2,8%
2012	2,2%	19%	0%	0,4%
2013	1,3%	-6%	8%	-0,3%
2014	12,6%	37%	51%	0,1%
2015	10,8%	35%	33%	8,2%
2016	13,0%	63%	10%	-0,6%
2017	13,1%	46%	38%	0,0%

Source: Compustat Data Base

Exhibit 17 Spanish GDP % Annual Growth from 2002 until 2018



Source: World Bank

Exhibit 18 Valuation Scenarios Definition

	Correspondent Year					
	2020	**2021**	**2022**	**2023**	**2024**	**2025**
Scenario 1: Vaccine in December 2020	2009	2010	2011	2015	2016	2017
Scenario 2: Vaccine in December 2021	2009	2010	2011	2012	2015	2016
Scenario 3: Vaccine in December 2023	2009	2010	2011	2012	2013	2014

Exhibit 19 Occupancy Rates Assumptions

Exhibit 19a NH Hotel Group Occupancy Rates in 2019 and 2020

Quarter	2019	2020	Difference
Q1	66%	46%	-19,50 p.p.
Q2	75%	6%	-69,40 p.p.
Q3	74%	31%	-43,20 p.p.
Q4	72%	28%**	-44,03 p.p.*
Yearly Occ. Rate	72%	28%	

*The value presented is the average of the three previous quarter's annual differences.

**This value was obtained by applying the average difference of the previous quarters to the value registered in Q4 2019.

Exhibit 19b NH Hotel Group forecasted Occupancy Rates

Year	Occupancy Rate US Hotel Industry	COVID Crisis correspondent	Difference
2009	55%	28%*	-27 p.p.**
2010	58%	31%*	
2011	60%	33%*	
2012	61%	34%*	
2013	62%	35%*	
2014	64%	38%*	
2015	-	72%	-
2016	-	72%	-
2017	-	72%	-

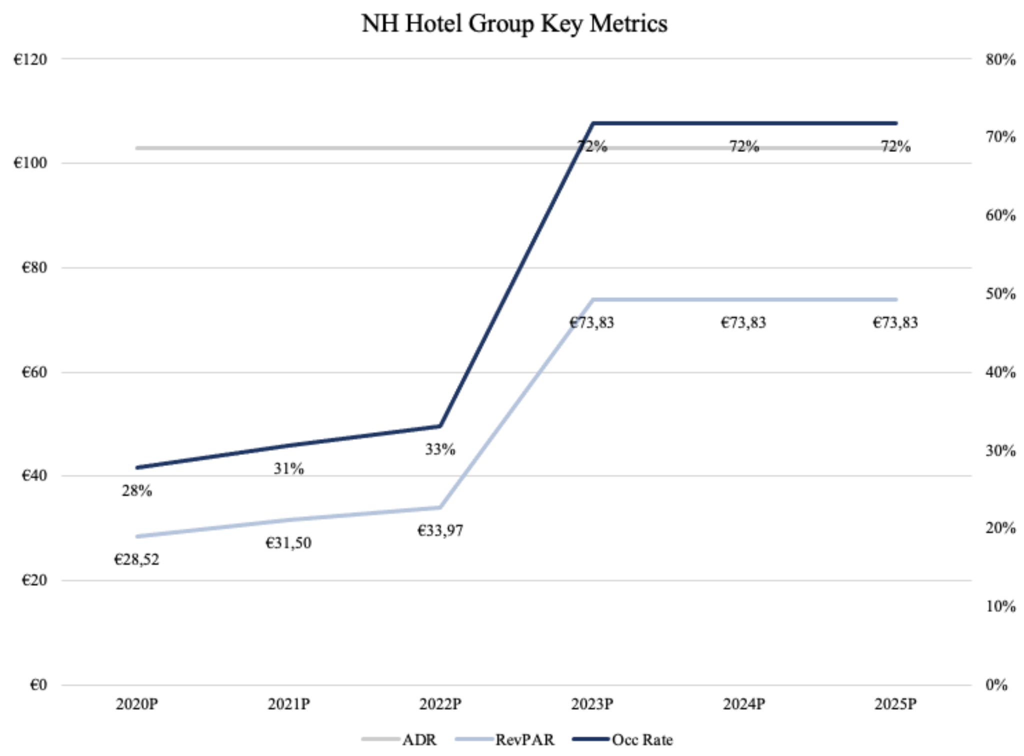
*These are estimated values. The values on the COVID crisis correspondent column from 2010 onwards were obtained by applying the difference to the values observed.

**This value was obtained by calculating the difference between NH Hotel Group occupancy rate in 2020 (28%) – presented in Exhibit 19a - and US Hotel Industry average Occupancy Rate in 2009 (55%).

Source: Statista

Exhibit 20 NH Hotel Group Valuation Expected Revenues and Key Metrics

Exhibit 20a Scenario 1



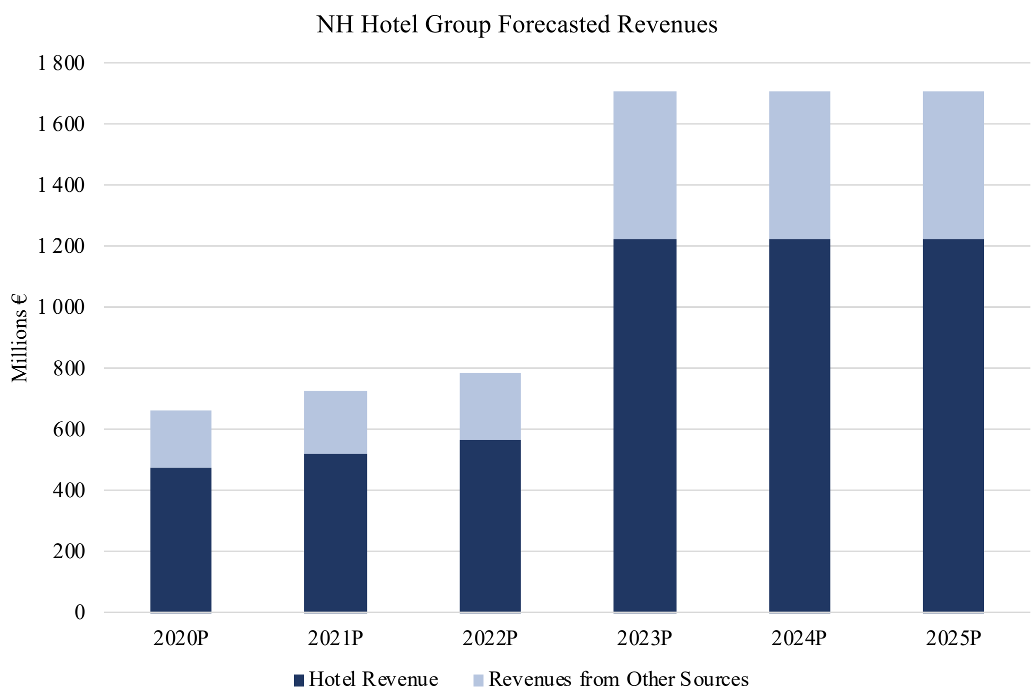
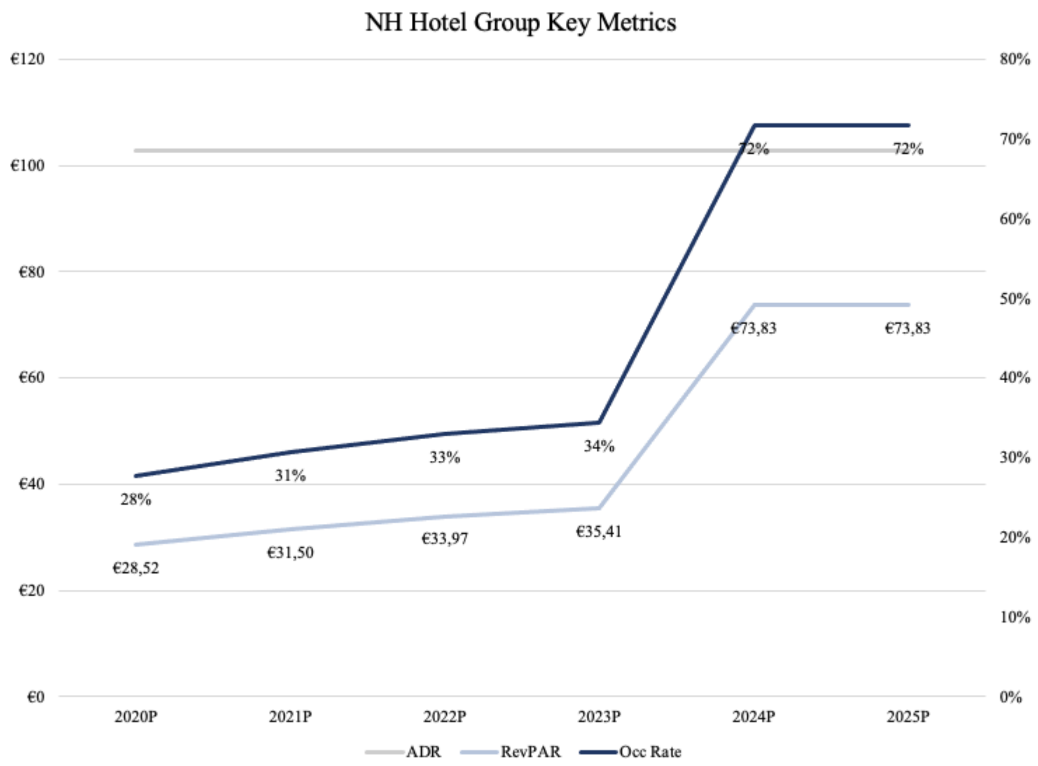


Exhibit 20b Scenario 2



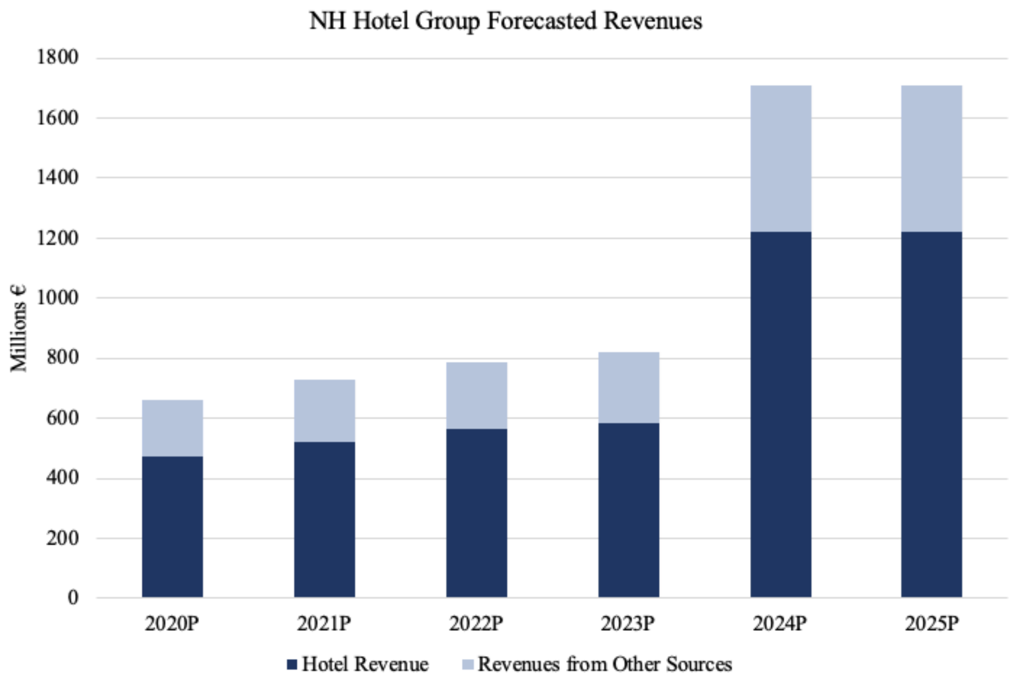
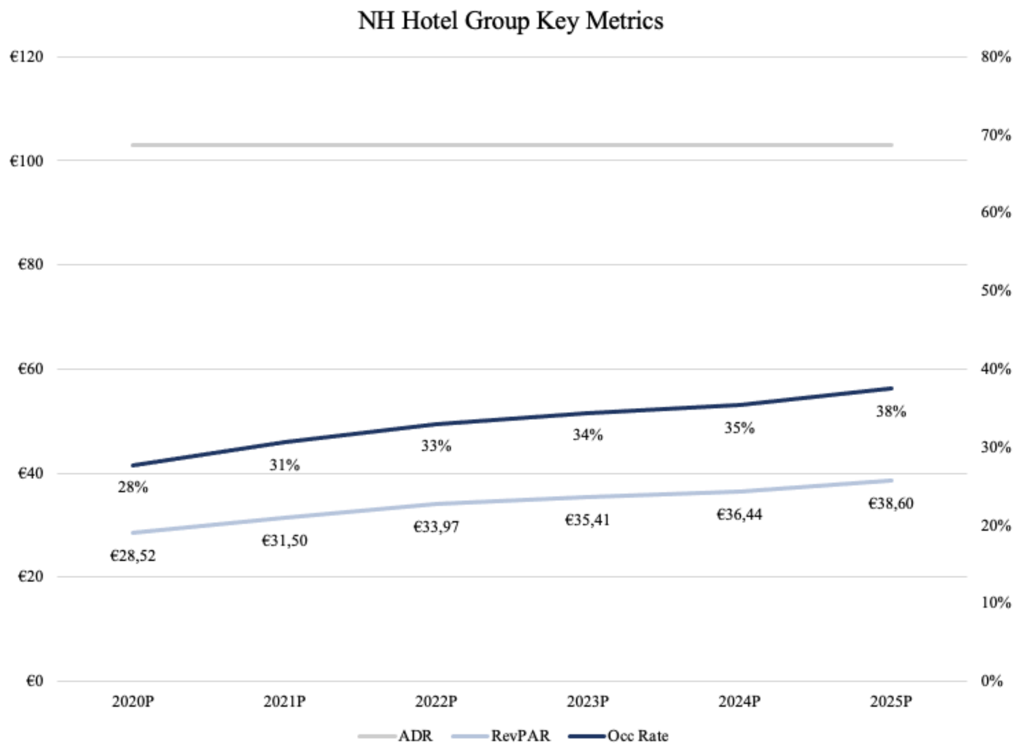
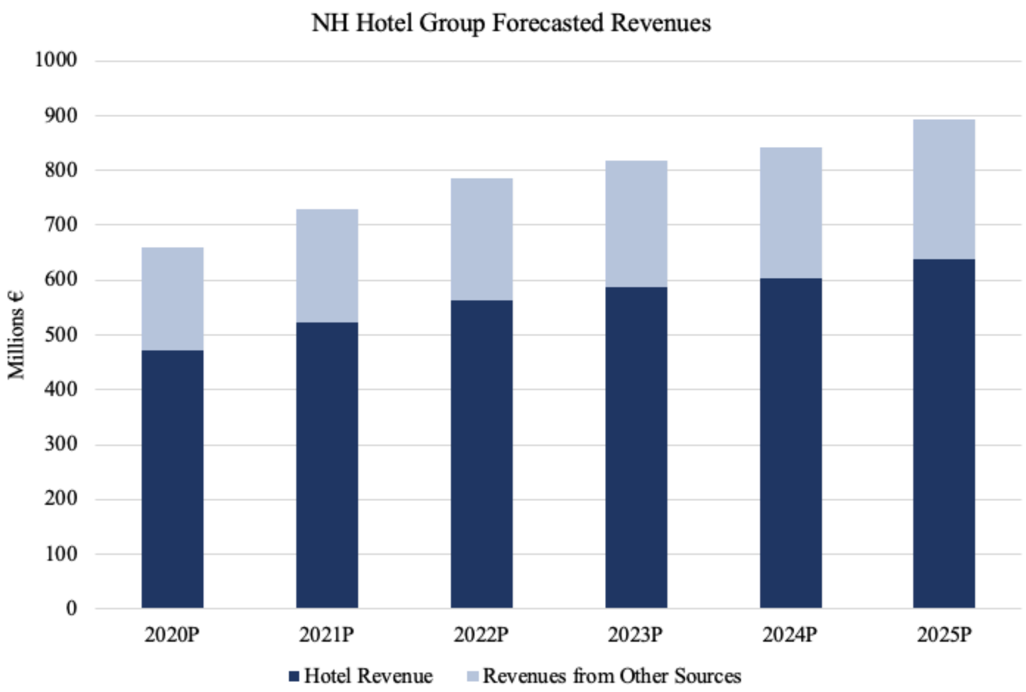


Exhibit 20c Scenario 3





Source: NH Hotel Group Valuation Model

Exhibit 21 NH Hotel Group Valuation Expected Operating Costs

Exhibit 21a Scenario 1

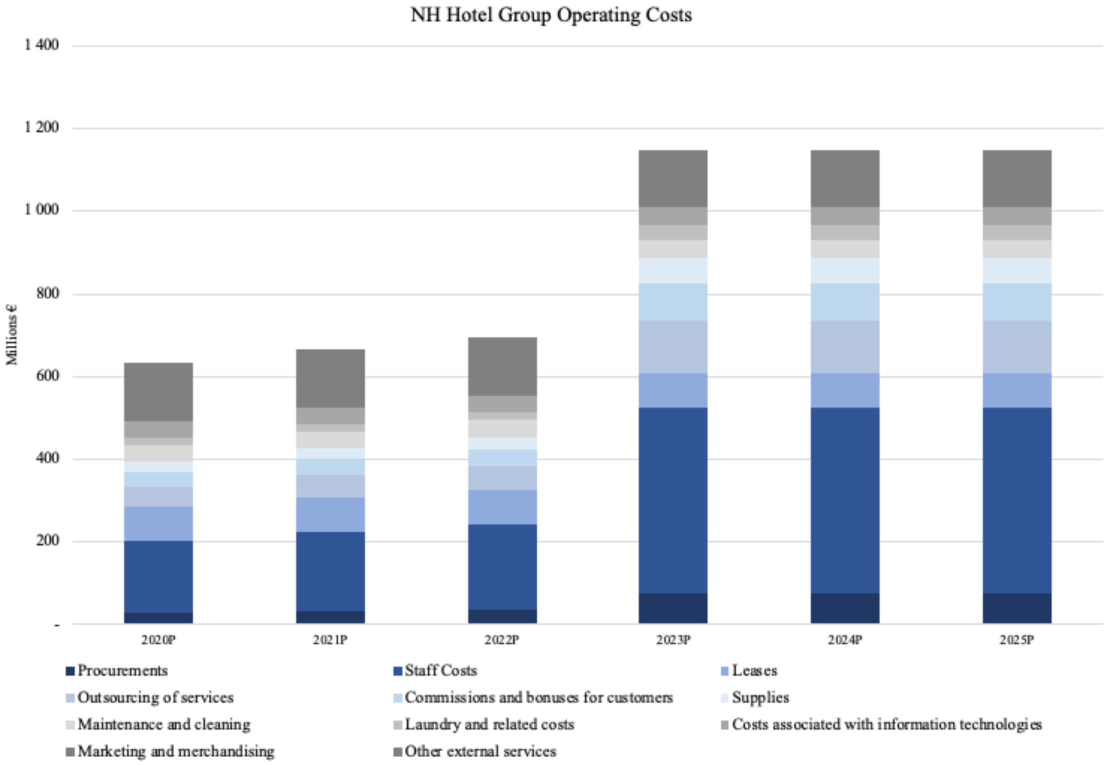


Exhibit 21b Scenario 2

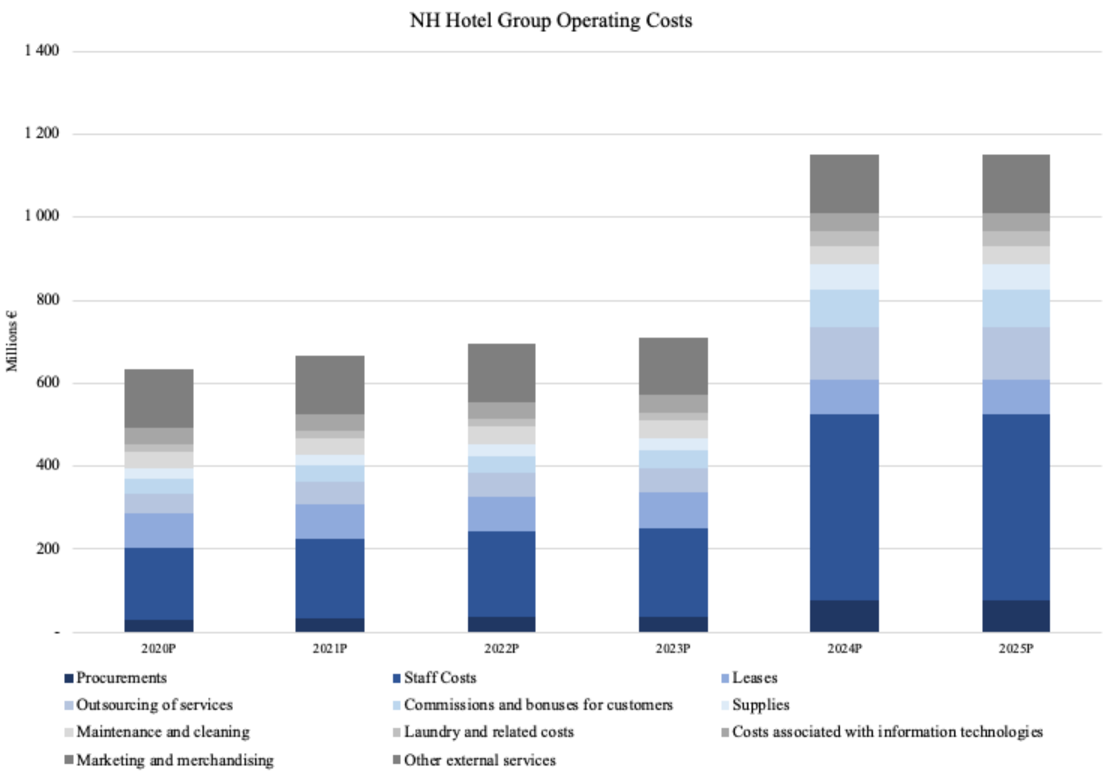
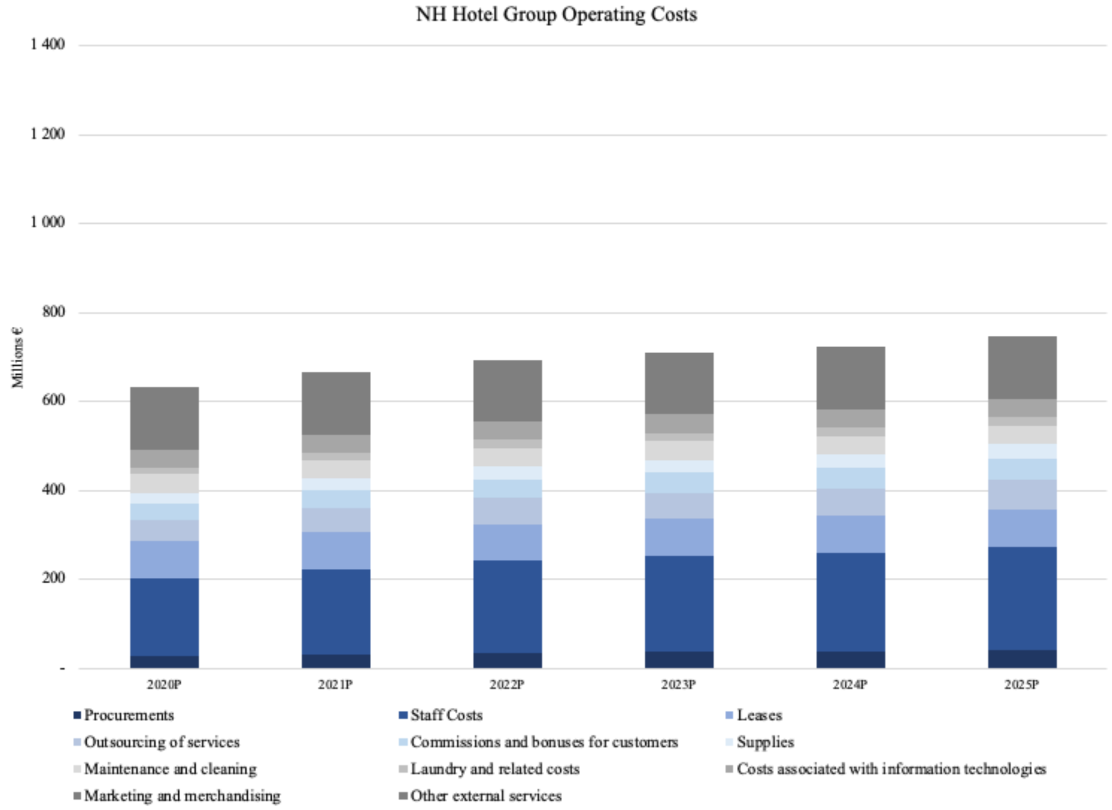


Exhibit 21c Scenario 3



Source: NH Hotel Group Valuation Model

Exhibit 22 NH Hotel Group Valuation Expected Operating EBIT, Net Income and FCF

Exhibit 22a Scenario 1

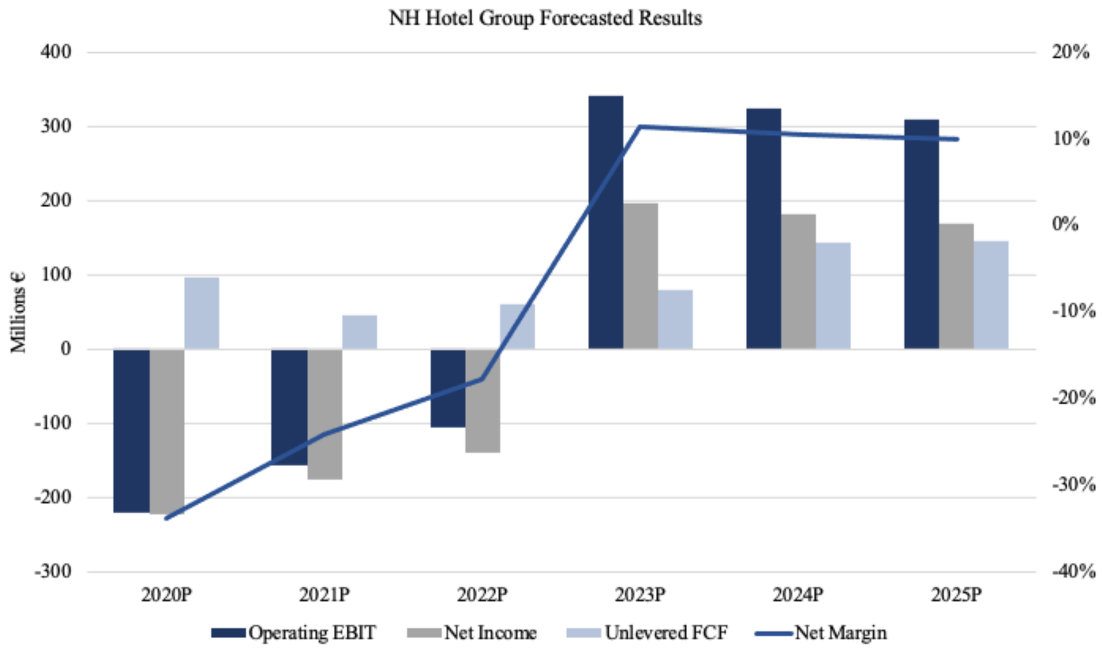


Exhibit 22b Scenario 2

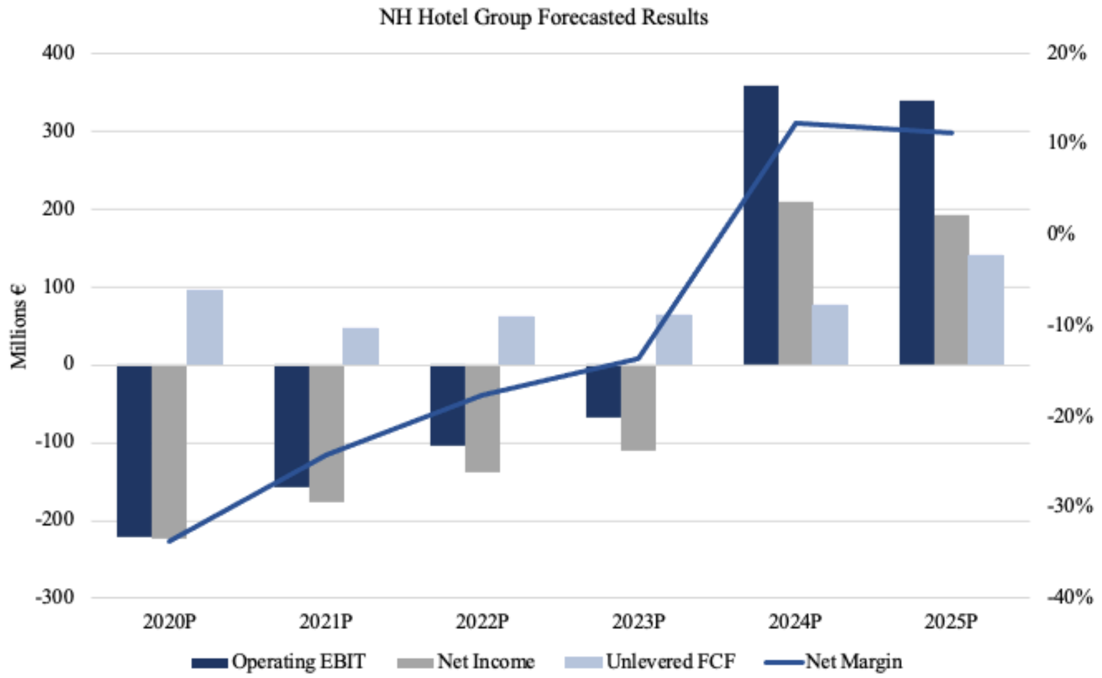
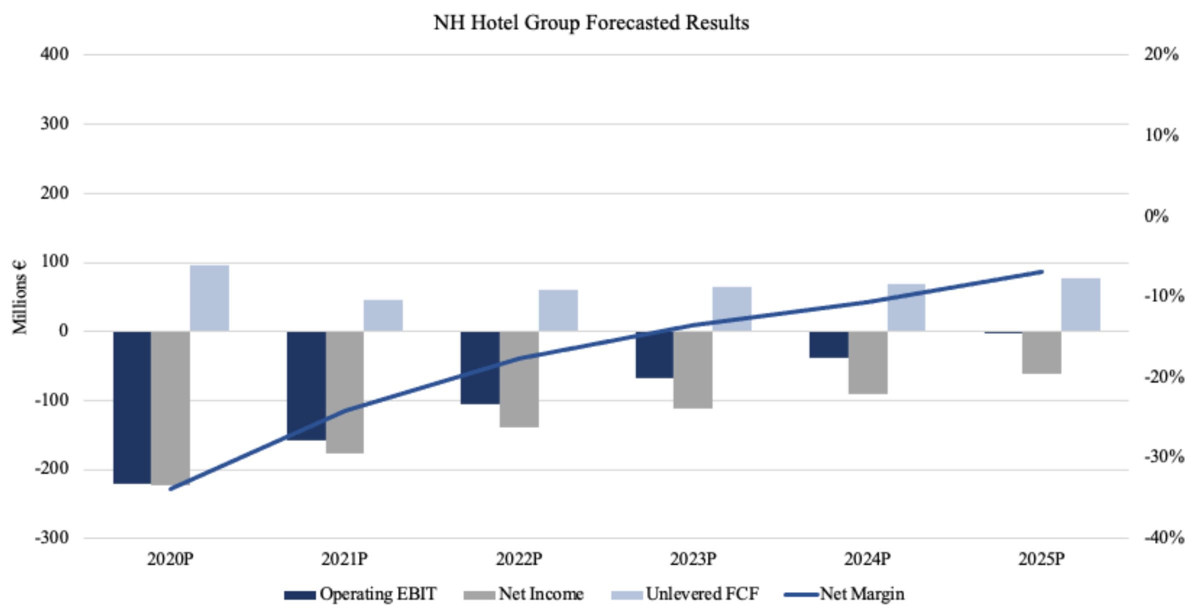


Exhibit 22c Scenario 3



Source: NH Hotel Group Valuation Model

Exhibit 23 WACC Calculation

(millions €)	
Debt	2 652
Equity (Market Cap)	1 575
Enterprise Value	4 226
Tax Rate	25%
Cost of Debt (NHH, 5Y) - Rd	3,60%
Cost of Equity (Re)	6,82%
NHH Raw Beta	1,48
Beta Standard Error	0,18
Market Risk Premium	5,12%
MSCI Index Return	4,36%
Risk free Rate (Euro Area 5Y Yield Curve)	-0,76%
WACC	**4,24%**
Unlevered Cost of Capital (Ru)	**4,80%**

Source: Bloomberg, Moody's, MSCI and ECB

Exhibit 24 NH Hotel Group Valuation Results through DCF, APV and FTE

	Scenario 1			**Scenario 2**			**Scenario 3**		
	EV (in millions €)	Equity (in millions €)	Stock Price	EV (in millions €)	Equity (in millions €)	Stock Price	EV (in millions €)	Equity (in millions €)	Stock Price
DCF	5 063	2 843	€ 7,25	4 781	2 560	€ 6,53	2 786	565	€ 1,44
APV	5 148	2 928	€ 7,46	4 881	2 661	€ 6,78	3 292	1 071	€ 2,73
FTE	-	2 883	€ 7,35	-	1 408	€ 3,59	-	1 783	€ 4,55

Source: NH Hotel Group Valuation Model

Exhibit 25 NH Hotel Group Relative Valuation through EV/EBITDA (in millions €)

	EV/EBITDA
PPHE Hotel Group LTD	11,47
Whitebread PLC	10,33
ACCOR SA	14,79
Intercontinental Hotels Group	17,34
Melia Hotels International	7,96
Dalata Hotel Group PLC	11,62
Average	12,25
Median	11,55
Lowest-Bound	7,96
Uppest-Bound	17,34

	EV/EBITDA
NH Hotel Group EBITDA 2019A	572
EV (Based on Average)	**7007**
EV (Based on Median)	6603
Lowest-Bound	4552
Uppest-Bound	9917
- Net Debt	-2221
Equity Value	**7696**
Stock Price	€19,62
Number of Outstanding Shares (in millions)	392

Source: Bloomberg and NH Hotel Group Valuation Model

Exhibit 26 DCF Valuation Sensitivity Analysis for WACC and Growth Rate

Exhibit 26a Scenario 1

Enterprise Value (in millions €)					
	Growth Rate				
WACC	-1,0%	0,0%	1,7%	2,0%	3,0%
3,24%	3 331	4 242	8 511	10 483	53 178
3,74%	2 951	**3 640**	**6 363**	**7 397**	16 928
4,24%	2 644	**3 181**	**5 063**	**5 693**	9 996
4,74%	2 391	**2 819**	**4 193**	**4 612**	7 057
5,24%	2 180	2 527	3 569	3 866	5 433

Stock Price					
	Growth Rate				
WACC	-1,0%	0,0%	1,7%	2,0%	3,0%
3,24%	€ 2,83	€ 5,15	€ 16,04	€ 21,07	€ 129,93
3,74%	€ 1,86	**€ 3,62**	**€ 10,56**	**€ 13,20**	€ 37,50
4,24%	€ 1,08	**€ 2,45**	**€ 7,25**	**€ 8,85**	€ 19,83
4,74%	€ 0,44	**€ 1,53**	**€ 5,03**	**€ 6,10**	€ 12,33
5,24%	-€ 0,10	€ 0,78	€ 3,44	€ 4,20	€ 8,19

Exhibit 26b Scenario 2

Enterprise Value (in millions €)					
	Growth Rate				
WACC	-1,0%	0,0%	1,7%	2,0%	3,0%
3,24%	3 125	3 994	8 067	9 949	50 683
3,74%	2 764	**3 421**	**6 020**	**7 006**	16 099
4,24%	2 473	**2 985**	**4 781**	**5 381**	9 487
4,74%	2 233	**2 641**	**3 951**	**4 351**	6 684
5,24%	2 032	2 364	3 357	3 641	5 136

Stock Price					
	Growth Rate				
WACC	-1,0%	0,0%	1,7%	2,0%	3,0%
3,24%	€ 2,30	€ 4,51	€ 14,86	€ 19,63	€ 121,70
3,74%	€ 1,38	**€ 3,05**	**€ 9,66**	**€ 12,17**	€ 35,19
4,24%	€ 0,64	**€ 1,94**	**€ 6,51**	**€ 8,04**	€ 18,46
4,74%	€ 0,03	**€ 1,07**	**€ 4,40**	**€ 5,42**	€ 11,35
5,24%	-€ 0,48	€ 0,36	€ 2,89	€ 3,61	€ 7,41

Exhibit 26c Scenario 3

Enterprise Value (in millions €)					
	Growth Rate				
WACC	-1,0%	0,0%	1,7%	2,0%	3,0%
3,24%	1 869	2 352	4 616	5 662	28 304
3,74%	1 667	**2 032**	**3 476**	**4 024**	9 079
4,24%	1 503	**1 787**	**2 786**	**3 120**	5 402
4,74%	1 368	**1 595**	**2 323**	**2 545**	3 842
5,24%	1 255	1 439	1 991	2 149	2 980

Stock Price					
	Growth Rate				
WACC	-1,0%	0,0%	1,7%	2,0%	3,0%
3,24%	-€ 0,90	€ 0,33	€ 6,08	€ 8,73	€ 65,47
3,74%	-€ 1,42	**-€ 0,49**	**€ 3,19**	**€ 4,58**	€ 17,38
4,24%	-€ 1,83	**-€ 1,11**	**€ 1,43**	**€ 2,28**	€ 8,07
4,74%	-€ 2,18	**-€ 1,60**	**€ 0,25**	**€ 0,82**	€ 4,12
5,24%	-€ 2,46	-€ 2,00	-€ 0,59	-€ 0,19	€ 1,93

Source: NH Hotel Group Valuation Model

<u>Note</u>: Exhibits 1–12 are provided to the students together with the Student Copy.

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