

A Work Project, presented as part of the requirements for the Award of a Master Degree in Finance from the
NOVA – School of Business and Economics.

Modest growth ahead

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Abstract

We conduct an analysis on Booking Holdings, Inc. and the Online Travel Market in which it operates to understand the trends opportunities and risks driving the market. Following this analysis, we focus on a Discounted Cash Flow model to derive a forecasted stock price for Booking Holdings, Inc. as of December 2020.

Keywords: booking, accommodations, travel, priceline

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BOOKING HOLDINGS INC.

COMPANY REPORT

ONLINE TRAVEL MARKET

03 JANUARY 2020

JOSÉ MARIA JONET, RITA FERREIRA GOMES

Modest growth ahead

In the search for room nights

- Based on our FY20 target price \$2,102.97, with total return of 7.6%, we issue a HOLD recommendation for BKNG. We expect share repurchases of \$4.2 billion in 2020, accounting for 5.2% of total return.
- BKNG's room nights **growth has slowed** from 21.1% in 2017 to 10.9% in 2019, as the shift from offline to online bookings in Europe and the U.S. matures. The Group's future performance is highly dependent on its ability to find new sources to derive room nights growth. Until 2026, we expect its **room nights to grow at an 8.7% CAGR**.
- We believe BKNG has clear opportunities to boost room nights growth, through: 1) further expansion in China and Southeast Asia, driven by strategic partnerships, 2) winning the race to deliver innovative and differentiated products as the Connected Trip and 3) capturing a share of the emerging alternative accommodations market.
- We see the Group's future performance threatened by key risks in the market, particularly 1) the loss of direct channel traffic to Google Travel, resulting in higher performance marketing costs and lower margins, and 2) macroeconomic instability taking a negative toll on demand in the travel sector.

Company description

Booking Holdings Inc. is a leading Online Travel Agency, connecting customers to travel service providers in over 230 countries and territories. The Group operates six primary brands: Booking.com, KAYAK, priceline.com, agoda, Rentalcars.com and OpenTable.

Recommendation: **HOLD**

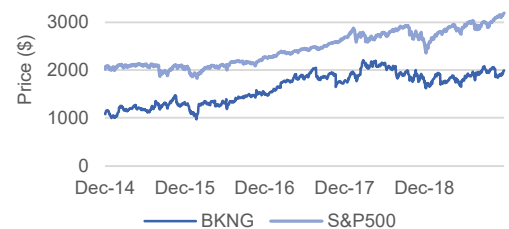
Price Target FY20: **2,101.46 \$**

Price (as of 31-12-2019) **2,053.03 \$**

Reuters: Bloomberg: BKNG

52-week range (USD)	1,606.27 - 2,082.67
Market Cap (USD M)	85.9
Outstanding Shares (M)	41.86

Figure 1: BKNG vs S&P500 share price; Source: Bloomberg



(Values in USD millions)	2018	2019E	2020F
Revenues	14,527	15,041	16,895
Revenue growth	14.6%	3.5%	12.3%
Performance MKT / Rev	30.61%	29.31%	28.95%
EBITDA	5,767	5,742	5,742
NOPLAT	4,429	4,346	5,063
EPS (\$)	45	109	126
P / E	21	19	17
Economic Profit / Rev	27.8%	26.0%	27.5%

Source: Booking Holdings Annual Reports, analyst estimates

THIS REPORT WAS PREPARED EXCLUSIVELY FOR ACADEMIC PURPOSES BY JOSÉ MARIA JONET AND RITA FERREIRA GOMES, MASTER IN FINANCE STUDENTS OF THE NOVA SCHOOL OF BUSINESS AND ECONOMICS. THE REPORT WAS SUPERVISED BY A NOVA SBE FACULTY MEMBER, ACTING IN A MERE ACADEMIC CAPACITY, WHO REVIEWED THE VALUATION METHODOLOGY AND THE FINANCIAL MODEL.

(PLEASE REFER TO THE DISCLOSURES AND DISCLAIMERS AT END OF THE DOCUMENT)

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Company overview

Company description

Booking Holdings recognizes Booking.com, Rentalcars.com, agoda, priceline.com, KAYAK and OpenTable as its 6 primary brands, which manage a variety of other secondary subsidiaries. Before 2018, the name of the group was “Priceline Group”, named after its flagship brand at the time. In this report, we refer to Booking Holdings, Inc. as Booking Holdings, Booking, BKNG, the Group, the company and to the brand Booking.com as Booking.com.

Priceline.com became popular for its innovative “Name Your Own Price” option, which allowed consumers to bid on the price they wanted to pay for a product without previous knowledge of the name of the provider. Despite its success, Priceline gradually phased out this service. Today, the brand offers deals on hotel rooms, airline tickets, rental cars, vacation packages and cruises. The move into the retail hotel business was made by several acquisitions, most importantly ActiveHotels in 2004.

Booking.com grew from a small start-up to one of the largest travel e-commerce companies in the world, providing room nights, car rentals and airline tickets reservations. A little over 10 years after Booking.com was acquired by Priceline, the Group changed its name to Booking Holdings, in recognition of its main revenue source, Booking.com. The company generates approximately 76% of the group’s revenues every year.

Like booking.com, **agoda** is an online accommodation reservation service that operates mainly in the Asia-Pacific (APAC) region. It was acquired as a key strategic move into the Asian market.

Rentalcars.com, formerly known as TravelJigsaw, is a leading car hire booking service. It connects its customers to car hiring companies, enabling them to compare between agencies and choose the best price. As of 2018, Rentalcars.com integrated the business of Booking.com.

KAYAK is a leading online meta-search service that searches and compares rates for airline tickets, accommodation and rental cars from hundreds of travel websites at once. KAYAK operates 7 international brands: KAYAK, SWOODOO, checkfelix, momondo, Cheapflights, Mundi and HotelsCombined.

Finally, **OpenTable** is a restaurant reservations and information service. As a result of an internationalization strategy in the past years, it now has offices in the U.S., U.K., India, Australia and Mexico.



1120 employees

Founded in 1998

IPO value: \$115 million



17,000 employees

Acquired in 2005

Acquisition value: \$133 million



4,000 employees

Acquired in 2007

Acquisition value: not disclosed



1,200 employees

Acquired in 2010

Acquisition value: \$146 million



1,000 employees

Acquired in 2013

Acquisition value: \$1.8 billion



180 employees

Acquired in 2014

Acquisition value: \$2.6 billion

Although OpenTable works quite independently, the remaining 5 main brands have their business **highly interconnected**. For instance, agoda and Booking provide flight comparison and car rental services on their websites that are operated *de facto* by KAYAK or priceline.com (flights search) and Rentalcars.com (car rentals). Furthermore, depending on its characteristics, a property listed on priceline.com or Booking.com can also be automatically listed on agoda and vice versa. This allows customers to keep using the website they are familiar with even in countries or regions where it has little or no representation.

Business model

Booking Holdings Inc., as a technological company operating in the travel services industry, has a rather complex revenue model that can be broken down into three main revenue streams: **Agency revenues, Merchant revenues, and Advertising & Other revenues** (Figure 2). The first two are mainly derived from Booking.com, agoda, priceline.com and Rentalcars.com, while Advertisement & Other revenues are earned through KAYAK and OpenTable.

Figure 2: Revenues streams as a % of total revenues; Source: Company reports, Analysts estimates

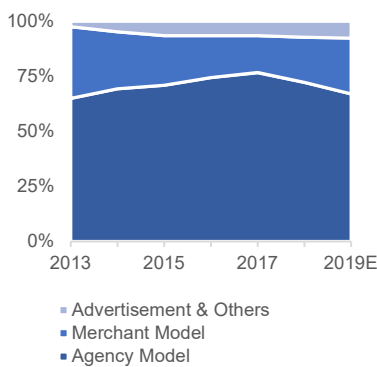


Figure 3: Gross bookings and Room nights; Source: Company reports, Analysts estimates

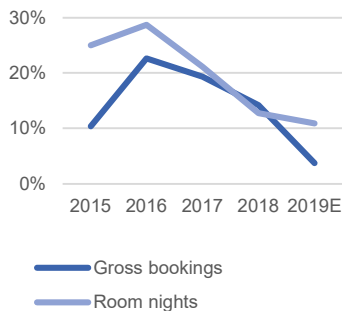
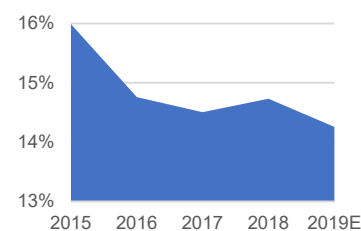


Figure 4: Accommodations' average fee charged; Source: Company reports, Analysts estimates



Agency and Merchant revenues

Agency and Merchant revenues are mostly derived from the sale of **room nights, rental car days and airline tickets** to travellers, but (at a much smaller scale) also include the sale of travel packages, cruise tickets, tours, activities and airport taxis. **Room nights sold** is the most important driver for the company, accounting for 93.7% of the total **Agency** and **Merchant** revenues, and 86.5% of total revenues in 2019, according to our estimates. In the same year, our estimates point to the sale of 843 million room nights, 77 million rental car days and 7 million airline tickets, which lead to total **Gross bookings**¹ of \$97 billion (Figure 3). We estimate 2019's average fee charged to be 14.3% for room nights, 25.0% for rental cars and 3.5% for rental car days² (Figure 4).

Agency revenues are those where the Group does not receive payments directly from travellers, but rather from the travel service provider (accommodation owners, car rental companies, airlines), typically at the end of the month. Most of these revenues come from reservation commissions (on **room nights, rental car days and airline tickets**) and a small fraction is derived from ancillary fees, such as transaction fees and some travel insurance products.

In the **Merchant model**, travellers make payments directly to the Group, most commonly at the time of booking. Merchant revenues include the net transaction

¹ Gross bookings is the annual sum of total bookings paid by the final customers in agency and merchant models.

² Detailed information about estimation's assumptions in Revenues Model Chapter.

Figure 5: Global eCom Payment Methods' forecast; Source: Worldpay

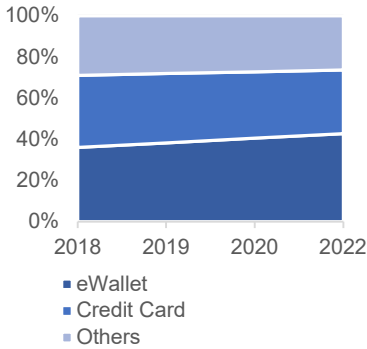


Figure 6: BKNG's revenue and revenue's growth; Source: Company reports, Analysts estimates

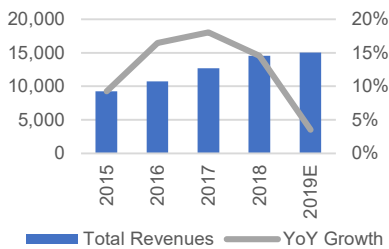


Figure 7: Driver's year-on-year growth; Source: Company reports, Analysts estimates

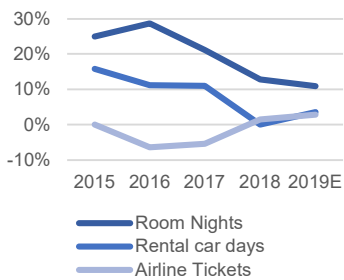
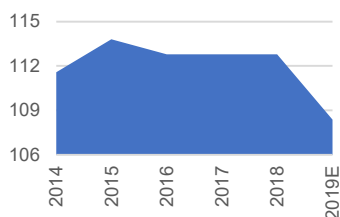


Figure 8: Estimated Room nights Average Daily Rate (USD); Source: Analysts estimates



revenues, ie the difference between the price charged to travellers and the amount the Group owes to travel service providers, as well as ancillary fees, credit card processing rebates and customer processing fees.

The Group is currently investing in having more properties operating under the Merchant Model (Figure 2). This comes as a response to customers' increasing demand for different online payment options (Figure 5), which many property owners – particularly in the alternative accommodations market, with less resources available – do not have the ability to provide.

Advertising & Other revenues

The last stream of revenues, **Advertising and Other revenues**, is derived by KAYAK's and OpenTable's websites. While KAYAK offers metasearch engines, which earn revenues by displaying advertisements or when customers purchase rooms, flights and car rentals through referrals, OpenTable collects revenues through restaurant reservations and subscription fees.

A dynamic overview

Revenues: BKNG's revenues have grown at a double-digit rate from 2015 to 2018 (CAGR of 12.2%, Figure 6), mostly driven by growth in room nights. From 2016 onwards, room nights' growth has decelerated (Figure 7) dragging revenues growth down.

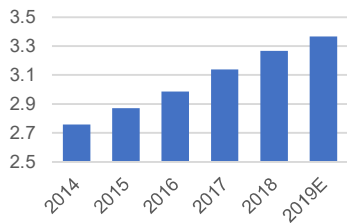
However, in 2019E, although room nights grew 10.9%, revenues only grew 3.5%. This was due to a 3.4% estimated decrease in Average Daily Rates (ADR) for room nights (Figure 8). The steep drop, considering the diversity of geographies in which BKNG operates and the diversity of its brands, can be explained by: 1) higher business volume growth in countries with lower ADRs (Southeast Asia, China), and slower growth in countries with higher ADRs (Western Europe, U.S.); 2) a shift in demand towards alternative accommodations, which are typically cheaper; and 3) higher price competition pressures, which we attribute mostly to increasing popularity of metasearch price comparison tools (such as Google Travel)³.

Room nights: in the past few years, BKNG's room nights growth was achieved mainly through organic expansion, although strategical acquisitions also played a role. The organic increase in the number of room nights was derived from two main factors: 1) increasing market share in countries where BKNG's products were not fully established, namely Southeast Asia and China⁴ and 2) increasing market demand for room nights in locations where Booking was already well established,

³ Detailed explanation further in Competitors chapter.

⁴ Read Opportunities Chapter for further detail.

Figure 9: Number of nights spent in tourist accommodations in Europe (billion); Source: Eurostat [32]



such as Europe (Figure 9). Regarding inorganic growth, the acquisition of HotelsCombined, in 2018 was the only acquisition in the past 5 years contributing to room nights growth. According to our estimates, HotelsCombined sold approximately 11 million room nights in 2017, accounting for 2% of BKNG's 13% room nights growth in 2018.

Rental car days: following the same pattern as room nights, rental car days growth also decreased in the past three years (Figure 7). In 2019E, however, it is expected to grow 3.5%, as a consequence of the recent integration of Rentalcars.com with Booking.com. The strategical integration is part of a broader strategy to invest in the Connected Trip: a consumer experience with less frictions, allowing costumers to plan their whole trip online (flight, accommodation, car, experiences, airport taxis, etc)⁵.

Airline tickets: airline tickets followed a different path in the last years, with negative growth in 2016 and 2017 and a recovery in 2018 and 2019 (Figure 7). While we associate the slowdown to higher competition in the market, propelled by metasearch engines' predominance (which favour a more balanced distribution of market shares), we consider the recovery in 2018 and 2019 might be a consequence of efforts related to the Connected Trip. However, it is hard to isolate the different factors weighing in on these results and reach an absolute conclusion.

Cost Structure

The company's largest costs are Performance marketing (29.3% as a percentage of revenues), Brand Marketing (3.6% as a percentage of revenues) and personnel-related costs (14.9% as a percentage of revenues). Nevertheless, BKNG's EBITDA margin, at 38.2% in 2019E, is one of its most important competitive advantages (Table 1).

BKNG's marketing costs can be separated into performance and brand marketing: **performance marketing** includes search engines' keywords (Google AdWords) and metasearch referrals (Google Travel, SkyScanner, TripAdvisor), while **brand marketing**, as the name suggests, includes brand awareness campaigns on social media, TV and outdoor advertising. As a percentage of revenues, the latter has been increasing in the past years, while the former started decreasing in 2018. This decrease is part of the **company's strategy to be less dependent on indirect channels** (Table 1), due to alleged lower return on investment in paid channels.

Table 1: BKNG's cost structure; Source: Company reports, Analysts estimates

	2017	2018	2019E
Perf Mktg	4,161	4,447	4,409
% of revenues	32,8%	30,6%	29,3%
Brand Mktg	435	509	546
% of revenues	3,4%	3,5%	3,6%
Sales & others	759	830	993
% of revenues	6,0%	5,7%	6,6%
Personnel	1,660	2,042	2,244
% of revenues	13,1%	14,1%	14,9%
Gen & admin	576	699	832
% of revenues	4,5%	4,8%	5,5%
Inform tech	189	233	275
% of revenues	1,5%	1,6%	1,8%
EBITDA	4,901	5,767	5,742
% of revenues	38,6%	39,7%	38,2%

⁵ Read the Chapter Opportunities for further detail

Figure 10: 2018's peers' EBITDA Margin; Source: Companies reports

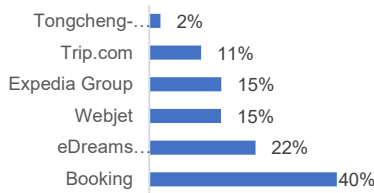


Figure 11: Keyword's interest over time Source: Google Trends

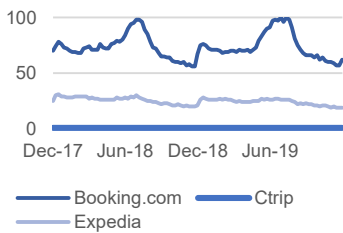


Figure 12: Personnel costs (thousands); Source: Companies reports

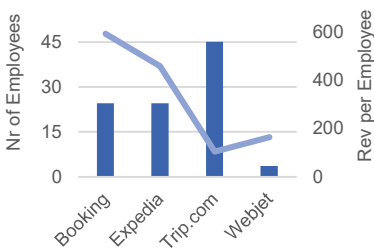
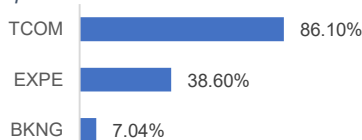


Table 2: Peer's 2018's operating invested capital; Source: Companies reports

	TCOM	EXPE	BKNG
Net PP&E	854	1,877	656
% of Revenues	53.4%	16.8%	4.5%
Net Intangibles	1,996	1,992	2,125
% of Revenues	124.8%	17.8%	14.6%
Goodwill	8,439	8,120	2,910
% of Revenues	527.4%	72.5%	20.0%
Working Cap	-2,605	-4,302	258
% of Revenues	-162.8%	-38.4%	1.8%
Op lease assets	14	570	621
Def inc taxes	-434	1	-370
US tax liability	0	0	-1,166

Figure 13: Deferred merchant bookings (% of revenues): Source: Companies reports



BKNG's EBITDA margin is relatively high when compared to its peers (Figure 10), standing at 40% in 2018, while Expedia's stood at 15% and Trip.com's at 12%. Two competitive advantages of the Group justify these differences.

The first relates to the Group's low dependence on marketing costs, given its stronger brand recognition (stronger direct channels lead to lower dependence on paid channels⁶, Figure 11). For BKNG, Marketing & Sales costs reached 39.8% of Revenues in 2018, while for Expedia, for example, this figure was as high as 51.4%. Conversely, Trip.com presented Sales & Marketing costs even lower than Booking's, at 31%. We believe the low figure is justified by the absence of Google in Trip.com's largest market, China.

Secondly, BKNG benefits from large economies of scale, resulting in lower personnel costs (as a % of sales). While Booking's revenues per employee in 2018 were \$593 thousand, Expedia's stood at \$458 thousand and Trip.com's at \$104 thousand (Figure 12). The latter is quite low even when considering lower average wages in China. Despite high revenue per employee when compared to its peers, the Group reports growing costs per employee. Personnel costs as a percentage of total revenues were 14.1%, up from 2017 and 2016's 13.1% and 12.6%, respectively. We interpret growing costs per employee as a consequence of the expansion of the merchant model, which requires higher personnel costs per sale. Moreover, we believe workforce specialization also plays a role in increasing costs per employee, particularly as data analysis and AI have become part of the Group's core offer.

Invested Capital

Booking is non capital-intensive company and in 2018 its operating invested capital was 34.7% as a percentage of revenues, a rather low value comparing with Expedia's 68.6% and Trip.com's 516.5% (Table 2). This difference is explained by lower values of PP&E and Goodwill (as a percentage of revenues) and higher Working Capital (as a percentage of revenues). BKNG's PP&E is related to the company's buildings and offices, as well as "Capitalized software development". TCOM's (Trip.com's ticker) PP&E is higher, since the company has a higher number of offices and buildings, due to customer service needs related to its transportation tickets business. EXPE (Expedia's ticker), in its turn, manages more brands than Booking (and therefore, has more offices and buildings) and has more "Capitalized software development".

⁶ A direct customer goes directly to BKNG's websites, while paid channel's customers are redirected by paid clicks or through metasearch platforms (like TripAdvisor and Google Travel)

BKNG’s Goodwill as a percentage of revenues is much lower than EXPE’s and TCOM’s due to a less aggressive acquisition strategy: since 2014, while BKNG’s acquisitions’ value totalled \$3.5 billion, EXPE’s totalled at least \$6.2 billion⁷ [1]. TCOM’s high Goodwill value is related to its merger with the Chinese company Qunar in 2015.

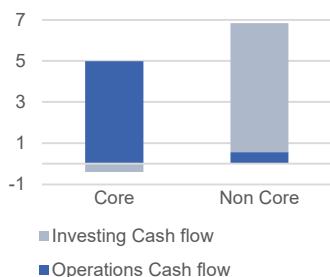
Table 3: BKNG’s net working capital; Sources: Company reports, analysts estimates

	2017	2018	2019E
Operating Cash	254	291	301
% of revenues	2,0%	2,0%	2,0%
Receivables	1,218	1,523	1,430
% of revenues	9,6%	10,5%	9,5%
Prep expenses	415	600	833
% of revenues	3,3%	4,1%	5,5%
Payables	668	1,134	1,107
% of revenues	5,3%	7,8%	7,4%
Def merch bkgs	980	1,022	1,677
% of revenues	7,7%	7,0%	11,1%
Working Cap	239	258	-220

Booking’s **Net Working Capital** was lower than EXPE’s and TCOM’s in 2018 due to lower Deferred merchant bookings (7% as a percentage of revenues against 39% and 86%, respectively, Table 3). In EXPE’s case, this difference is explained by the fact that only 21% of BKNG’s revenues are derived from the Merchant model, while for Expedia this figure is as high as 52%. A Deferred merchant booking corresponds to liabilities owed by OTAs to service providers for receiving payment directly from customers

In 2019E **Deferred merchant booking’s** account as a percentage of revenues increased, justified by Booking’s Merchant revenues’ increase. Moreover, **Accounts receivable**, which is related to Agency revenues (the model in which service providers pay fees to OTAs at the end of the month) has decreased, due to a slowdown in this business model’s revenues in 2019E (Figure 2).

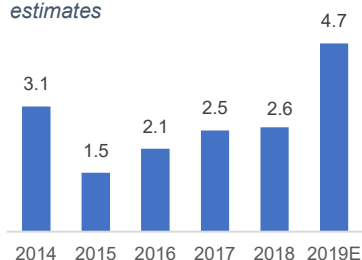
Figure 14: 2019’s Operations and



Cash flow

In 2019E, we expect Core Operating and Investing cash flow to be \$5.0 billion and -\$0.4 billion, respectively, and Non-Core Operating and Investing cash flow to be \$0.5 billion and \$6.3 billion, respectively (Figure 14). The high Non-Core Investing cash flow is linked to a high investment in marketable securities (governments’ bonds, corporate bonds, equity securities). Nevertheless, this value more than halved from 2018 to 2019 due to the maturation of \$6.77 billion of Governments’ bonds, that contributed to historically high cash reserves by the end of the year (at 31% the revenues).

Figure 15: Cash reserves over time; Source: Company reports, Analysts estimates

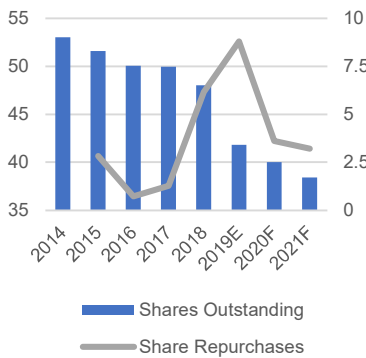


We expect the company to reinvest part of these cash reserves in safe marketable securities, for example US government bonds, as a way to protect its investors against downsides and slowdowns. Moreover, in the past 5 years, the company has been investing in other companies’ securities, mainly in Asia, as part of commercial agreements, (as it is the case with Didi Chuxing, Grab, Meituan and Trip.com)⁸ and we foresee BKNG will continue investing in these agreements, as well as in new agreements, as a way of gaining sales and brand recognition in countries where it has a small market share.

⁷ Not accounting for 3 acquisitions in 2018 and 2019 whose terms were not disclosed.

⁸ Read Oportunities’ chapter for further detail.

Figure 16: Number of shares outstanding (million) and share repurchases (\$ million); Source: Company report, Analysts estimates

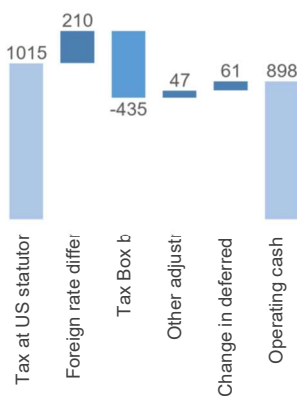


Share Repurchase Program

Although BKNG has never paid dividends and does not expect to do so in the foreseeable future, it has been conducting a **stock repurchase program**, financed by cash reserves. From 2014 to the third quarter of 2019, **the group repurchased 23.7% of its shares outstanding**, worth \$18.7 billion, of which \$6.2 billion were repurchased in 2018 and \$6.8 billion until the third quarter of 2019 (Figure 16). The group has a current authorization to buy back \$10.9 billion worth of shares and expects to complete it in 2 to 3 years. Given the company’s historically high cash reserves, we expect repurchases of \$2.0 billion in the fourth quarter and \$4.2 billion in 2020. The latter account for 5% of our target shareholder’s total return.

Through share repurchases the **company is inflating EPS artificially⁹ instead of investing in internal growth**. We understand it might be choosing to return capital to its shareholders over investing for example in Government securities, given the current low interest rate environment. However, it is somewhat concerning that the company is not using this cash to invest in projects that would yield higher returns to investors. The Group’s CEO has stated he is not afraid to make large investments, as long as they are the right investments, hinting he is waiting for a big opportunity in the market, possible another high-profile acquisition.

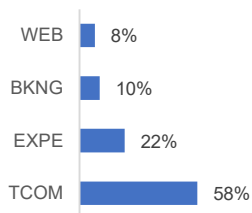
Figure 17: Taxes reconciliation in 2018; Source: Company report, Analysts estimates



Fiscal Policy

In 2018, BKNG paid **\$898 million in operating cash taxes** (Figure 17) at a 17.4% effective tax rate. In the same year, 99.3% of the company’s income came from its international business (Booking.com, agoda and Rentalcars.com). For this business, we considered corporate taxes of 25.0%, 19.0% and 17.0% in the Netherlands, UK and Singapore, respectively. We estimate 47.8% of Booking.com’s income qualifies for the Innovative Tax Box (5.0% until 2018 and 7.0% onwards), a benefit created to attract investment in The Netherlands of companies that can prove to be innovating in their activity. As for KAYAK, priceline.com and OpenTable, we considered the U.S.’s 21.0% corporate tax rate.

Figure 18: Comparables' Market D/E; Source: Companies reports, Bloomberg

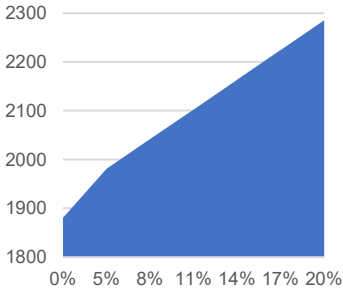


Capital Structure

In December 2019E, we estimate the company’s market Debt-to-Equity (D/E) ratio to be 11.7%, **a low value when compared to the industry’s average** (Figure 18). The company paid \$318 million in interests, at an implicit average interest rate of 3.8% (including operating leases’ implicit interest), obtaining a \$67 million tax shield. The company’s credit rating was recently upgraded from Baa1 to A3 by Moody’s [2]. Moreover, interest coverage ratio was 14.3, a high value, meaning

⁹ An artificial increase in EPS is achieved by decreasing the number of shares, rather than by increasing earnings.

Figure 20: Share price sensitivity to market Debt-to-Equity



the company has the ability to pay its debt obligations, all the more considering its high levels of cash reserves.

Performing a sensitivity analysis to D/E, we acknowledge that while an all-equity discounted cashflow would lead to a share price of \$1,880, a D/E of 20%, closer to the industry’s average, would lead to over \$2,286. The latter would represent an 8.6% increase compared to our target share price at the current 11% D/E (Figure 20). Considering these factors, we believe there are no reason for solvency concerns at the current D/E levels. At this point, there is no evidence the company will change its target D/E level in the short term.

Shareholder’s structure

Institutions hold roughly 95% of all shares outstanding [3], while 4% are held by the general public and less than 1% by employees as part of stock compensation benefits. 41% of the investors pursue an Intrinsic value strategy (long term), 34% pursue a Traders growth strategy (short term) and 25% of the shares are invested mechanically (ETFs, market tracking portfolios). The low share of Traders growth strategy for BKNG’s stock, below the U.S. Equity market’s average [3], **contributes to lower share price volatility**. On the contrary, a higher-than-average Intrinsic strategy share [3] (with lower trading frequency and higher acceptance of short term bad results) should positively influence management to focus on driving long term returns.

Management

Glenn Fogel, BKNG’s CEO since January 2017, joined the group in 2000. While head of BKNG’s Worldwide Strategy division, he was responsible for the acquisitions of ActiveHotels and Booking.com, as well as for commercial partnerships with Chinese companies. We place credibility on his leadership, given his successful history in the company. Although his 2018’s annual compensation was twice the size of the average compensation for CEOs of similar size U.S. companies (\$20 million), 96.3% of his compensation was performance-based.

Industry overview

Bloomberg places Booking Holdings in the Media industry, in the sub industry of Internet Based Services, within the Communications’ Sector. However, we insert the Group in the Travel & Tourism industry for the purpose of analysing it in light of the major market trends, challenges and opportunities, guiding the business forward. Geographically, Booking Holdings’ key markets are Europe, the U.S. and Asia, namely China and Southeast Asia.

Figure 21: BKNG’s CEO compensation (\$ million); Source: Company report

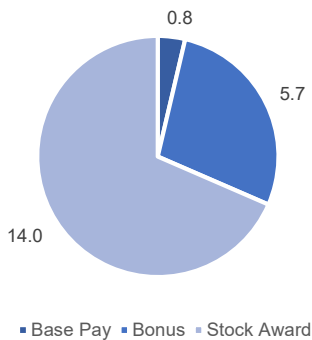


Figure 22: BKNG Revenue Growth highly correlated to Global International Tourism Receipts; Source: Company Reports, UNWTO

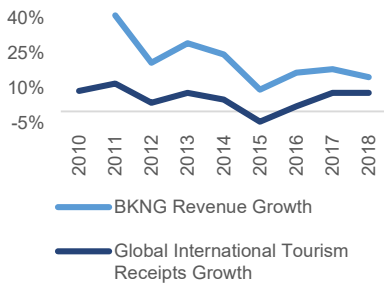


Figure 23: Consumers' spending preferences; Source: Skift's 2017 U.S. Experiential Traveler Survey

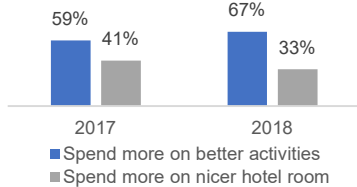


Figure 24: U.S. Digital Travel Sales by Device (in billions of dollars); Source: eMarketer

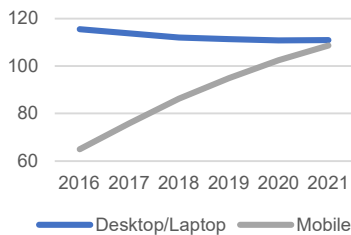


Figure 25: Share of Internet users worldwide who used a mobile payment service in December 2018; Source: Bloomberg Intelligence [8]

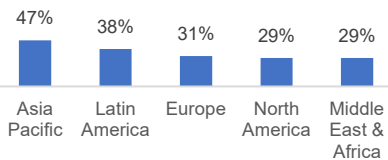
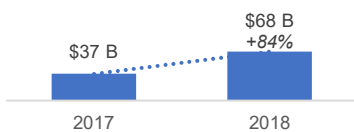


Figure 26: Volume of M&A in Travel & Tourism; Source: BusinessWire [1]



Trends

Travel & Tourism Industry Growth

Booking Holdings' growth is highly correlated to the Travel & Tourism industry's growth. To the exception of 2015, the latter has continuously expanded since the last recession [4]. The sector is driven by economic growth, growing middle class and internet penetration in emerging countries, as well as visa facilitation policies and affordable travel solutions [4].

Growing demand for Tours & Activities

The global market for tours and activities is estimated to be \$150 billion annually, and research suggests expected growth of 9% per year [5]. This market includes a broad range of activities from museum tickets, to tour reservations or multi-day activities. The fact that most of these activities are still likely to be purchased offline (80% as of 2017 [6]), represents an opportunity for Online Travel Agencies to bring these customers online. By expanding their offers to these activities, OTAs are not only responding to customer's demand but also capitalizing on the cross-selling of products in their websites.

Going Mobile

The continuing decrease in the number of computers sold worldwide [7] is evidence of the increasing consumer preference for mobile rather than computer platforms. We believe the shift towards mobile bookings is positive for OTAs, since we expect customers using mobile apps will likely only comparison shop¹⁰ between the apps they have installed and will come back to these same apps whenever they need booking services. These dynamics benefit brands with higher brand recognition, as these will likely be the most downloaded apps. Moreover, mobile sales contribute to the direct channel, as OTAs do not need to incur in any performance marketing costs.

Consolidation

Consolidation has played an important role in the travel industry for some time, particularly in the airlines and hotels business. In a market where differentiation between product offers is low, Booking Holdings and The Expedia Group have used mergers and acquisitions (M&A) to gain scale, strengthening their competitive positions as market leaders [8] and to diversify their offers [9]. Through acquisitions of smaller companies, often tech start-ups, OTAs are able to quickly

¹⁰ Comparison shopping refers to comparing product prices between different stores or suppliers before making a purchase in order to achieve the best deals

Figure 27: BKNG and EXPE's total acquisition deals and highlights; Source: Crunchbase

BKNG acquired 9 companies		
OpenTable	2014	\$2.6 B
Kayak	2013	\$1.8 B
Momondo	2017	\$550 M
Booking.com	2004	\$161 M

EXPE acquired 25 companies		
HomeAway	2015	\$3.9 B
Orbitz Worldwide	2015	\$1.6 B
Wotif	2014	A\$700 M
trivago	2012	\$632 M

Figure 28: Example of a hotel search on Google Maps; Source: Google Maps

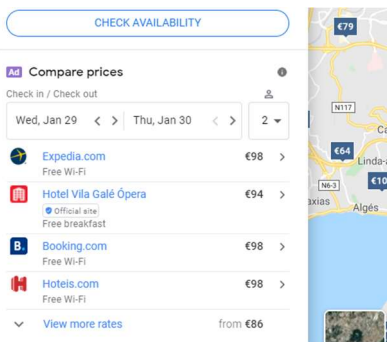


Figure 29: Keyword searches on www.google.com (relative popularity) Source: Google Trends

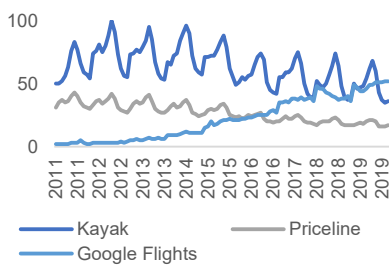
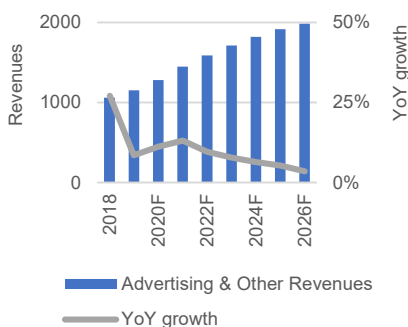


Figure 30: Advertising & Other Revenues forecasts (base case scenario); Source: Company Reports



incorporate new technologies or innovative products in which those start-ups specialize, while maintaining focus on the core aspects of the business [11].

Challenges

Google Travel & Google Flights

Google Travel is a **metasearch engine that collects and organizes information** from travel websites and displays it to travellers looking for flights, hotels or car rentals. Launched in 2019, this feature is gradually being integrated into Google's widely used app, Google Maps (Figure 28). It enables easy comparison shopping for travellers who can then make an informed decision on which travel agency to purchase from. These travellers would otherwise search for "hotel room" or "Lisbon to London flight" on Google's search engine and look into the 2 or 3 websites that appeared on top. As such, **Google Travel intensifies competition, particularly price competition**, for large players by giving visibility to smaller (often cheaper) players who might otherwise not even appear on the traveller's radar. We believe Google Travel's increasing popularity will force companies such as Booking and Expedia to lower their commissions at least to some extent in order to stay competitive. We factor this into our forecasted drivers, estimating a gradual decrease in commissions charged across our forecasting period.

Moreover, Google Flights, Google's metasearch engine for flights, launched in 2011, is competing directly against KAYAK and Priceline. Although Google does not disclose any data concerning Google Flights, we know from Google Trends feature **user searches for "google flights" on Google already surpassed those for Priceline.com and KAYAK** (Figure 29). This poses a threat to Booking, as the Group currently derives 7% of its revenues from Advertising & Other revenues, the majority of which corresponds to advertising revenues from KAYAK. This threat is likely to materialize in the near future and, as such, **we expect a decrease in year-on-year revenue growth from Advertising and Other revenues** (Figure 30). Additionally, we analysed a scenario in which a dramatic loss of KAYAK's market share to Google Flights would result in a steep decrease in advertising revenues¹¹. This resulted in a valuation of \$1288 per share, a 40% drop when compared to the base scenario of \$2141 per share.

Google entering the market as an OTA

The advances Google has been making in the OTA business pose yet another risk. Recently, the company offered consumers the **option to book accommodations directly through Google Travel**. Although this offer is still

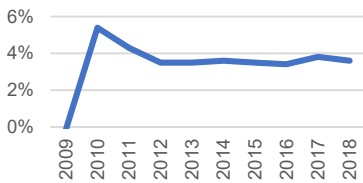
¹¹ Refer to the Chapter "Scenario Analysis" for more detailed information on this analysis

Figure 31: Google Travel's side bar;
Source: Google Travel



limited to selected locations, it might be a **step towards becoming a travel agent itself**. In this scenario, Google would hold **large competitive advantages** such as 1) the fact that **it does not need to pay for advertising**, as it can freely promote its products, and 2) the fact that it has **access to larger amounts of consumer data** than any OTA. Google's entry in this market could, therefore, result in significant loss of market share for Booking Holdings. However, **we do not deem a scenario in which Google would become the leading OTA very likely**. Booking Holdings and the Expedia Group alone spent \$10.6 billion on performance and brand marketing [10], the majority of which (around 80% according to our estimates) went to Google, accounting for advertising revenues. Moreover, **anti-trust** laws would make it difficult for Google to overtake the OTAs market.

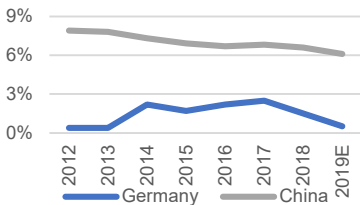
Figure 32: Real GDP (% change);
Source: IMF



Macroeconomic instability

As BKNG's products are essentially consumer goods, they are highly sensitive to economic conditions (in economic expansions consumption of travel products increases and vice versa). Since 2010, the global market has experienced economic expansion (Figure 32) bolstered by Monetary Policy in the U.S. and Europe, namely artificially low interest rates, and a growing middle class in Asia. In the future, we expect this trend to continue in Asia, despite China's Gross Domestic Product (GDP) growth slowdown. Regarding the U.S. and Europe, however, we are concerned that Monetary Policies, which sustained growth in the last decade might not be sustainable. In 2019 the U.S. registered an inversion of the yield curve, which is typically a sign of an upcoming recession, while Europe's largest economy, Germany, suffered a contraction of GDP growth. Although the Group hedges against economic recessions by maintaining Government Securities (in 2018 these accounted for 9% of its total assets), we believe this scenario would cause a significant decrease in room nights, average prices charged and advertising revenues.

Figure 33: Real GDP (% change) by country;
Source: IMF



Currency risks

While the Group reports its results in U.S. dollars (USD), 76% of its revenues were earned in Euros (EUR) in 2018. Therefore, the Group is largely dependent on exchange rates. Although the Group invests in derivative instruments in order to hedge against currency risks, it is still subject to unexpected changes in exchange rates. In 2015, for example, as the USD strengthened against the EUR, BKNG reported lower foreign currency-denominated results. Although this risk has materialised in the past, we do not deem it relevant for our valuation, as currency exchange rates are extremely hard to predict, and we believe that over the long run unexpected currency rate differentials would tend to balance out.

Figure 34: BKNG's revenue growth highly correlated to Euro Dollar exchange rate;
Source: Macrotrends

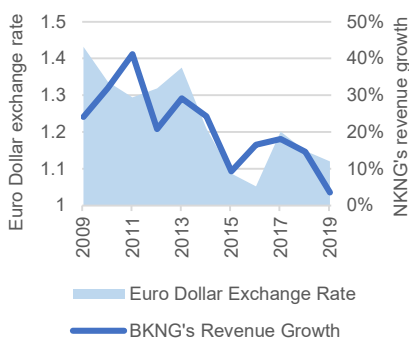
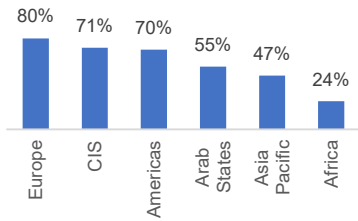


Figure 35: Global internet penetration rate by region. Source: Statista



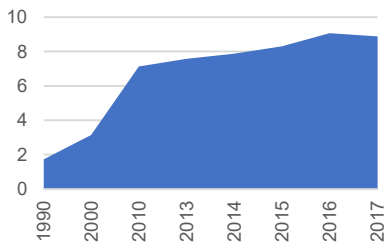
Stagnation

In the past, OTAs’ revenue growth was largely driven by consumers’ **move from the offline to the online** travel sector. **In developed economies where, today, internet penetration is high [11], this shift may be already complete.** In fact, BKNG has already experienced declining revenue growth in recent years. To tackle this problem, it is investing in different solutions (emerging economies, innovative products and expansion into new markets). However, **if these investments do not materialise**, the Group could face stagnating revenue growth and lose significant value, resulting in a share price of \$1,372, according to our estimates, a 36% drop from our base case scenario¹².

Regulation

Despite being a sign of strong travel demand, we believe **over-tourism is also a significant risk** to BKNG’s business, as among the most popularly discussed solutions for these problems is **government regulation**. The latter may consist of establishing **limits for tourist arrivals or regulating short term rental supply**, as was the case in Barcelona and New York [12]. This might become increasingly damaging for BKNG as the Group expands its alternative accommodations business. Particularly as the Group is shifting towards the Merchant Model, it is no longer able to defend its position as a mere facilitator of transactions between hosts and travellers, not carrying responsibility for collecting taxes or getting operating licenses [13]. Consequently, regulatory issues require the Group to **expend significant time and resources** and could end up **affecting the growth and size** of the alternative accommodations business.

Figure 36: Tourist arrivals in Barcelona (in millions); Source: Statista



Opportunities

Asia & strategic partnerships

The South and South-East Asia markets report the fastest growth for outbound travel, with forecasted growth of 5.8% and 5.1% per annum, respectively, until 2028, according to data from WTTC. In 2018, **the Travel & Tourism industry saw above-average growth in the Asia Pacific region**, with a 7% year-on-year increase in international tourist arrivals and tourism receipts. Moreover, according to Airbus, Asian middle class will grow by 37% from 2018 to 2028 and the manufacturer expects to deliver on average 816 new passenger aircraft per year to the region for the next 20 years. As inbound tourists need accommodation, these figures reflect a big opportunity for travel agencies to capture in the region.

Figure 37: International tourism arrivals (millions) and receipts (millions USD) in 2018 (% change); Source: UNWTO [28]



¹² Refer to the Chapter “Scenario Analysis” for more detailed information on this analysis

Figure 38: Forecast of new passenger aircraft to be delivered in the next 20 years by Airbus; Source: Airbus

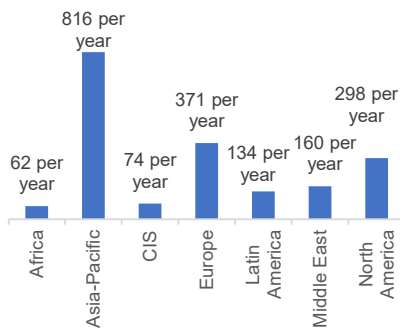
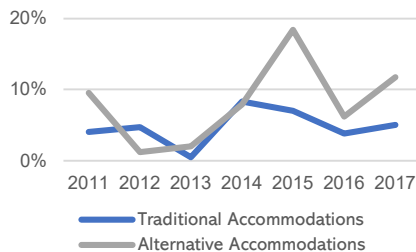


Figure 39: Accommodation Market Growth by segment; Source: Cleveland Research Company



Booking has been present in the Asian region through its acquisition of agoda since 2007 and, most recently, **the Group has entered into strategic partnerships with local companies to further deepen its roots in the market.** The first of these partnerships was made between Booking.com and Trip.com in 2014, where the Group entered into a commercial agreement to share access to the companies' combined hotel inventory. Similar agreements were made with Meituan-Dianping, Didi Chuxing and most recently, Grab, a ride-hailing app, operating mainly in Southeast Asia. While the partnerships with Trip.com and Meituan-Dianping contribute to room nights growth through shared inventory, the partnerships with Didi Chuxing and Grab contribute to BKNG's brand recognition through referrals from the Asian companies to BKNG's websites and apps.

The Connected Trip – personalization & cross-selling

The Connected Trip is the new buzz word among OTAs. The Connected Trip is similar to the concept of holiday packages and travel agents, as it **aims to connect all aspects of travel** from flight reservations, to transport from the airport, dinner reservations, accommodation and local activities. Major OTAs such as Booking and Expedia plan to use data collected from customers to personalize suggestions through Artificial Intelligence (AI) in real-time at each point of the trip. These suggestions would be the motor for cross-selling the brands' products to travellers.

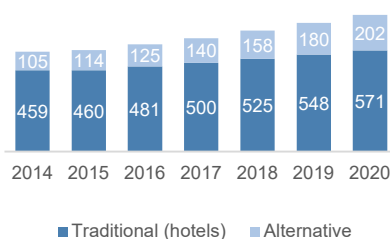
Should this opportunity materialise, we believe **BKNG would improve customer loyalty**, and therefore direct traffic to its channels, which in turn would result in lower marketing costs and **higher operating margins**. Additionally, it **maximizes revenue per customer** by selling them a multitude of products, either as a bundle when planning the trip, or spontaneously along the trip.

To understand the impact of a truly successful delivery of the Connected Trip, we analyse an upside scenario. **According to our estimates, this would yield a 17% increase on BKNG's stock price to \$2,502**, when compared to our base case scenario of \$2,140.

Alternative accommodations

In 2017, the **alternative accommodations market in Europe grew over twice as much as the market for traditional accommodations** [14]. Airbnb's estimated total revenues for 2018, of which 99% were derived from alternative accommodations, were \$4.4 billion, up 40% from the previous year [15] [16]. BKNG, in 2018, reported that 20% of its total revenues, or \$2.9 billion, came from alternative accommodations. **This places Airbnb as the market leader for the sector** but shows BKNG is catching up. **As we expect the market for alternative accommodations to continue growing in the next years**, we believe continuing

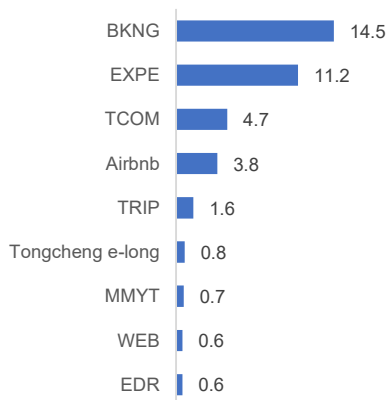
Figure 40: Total global accommodations by type; Source: Cleveland Research Company [29]



expansion into the market is an opportunity for Booking to derive further growth in the future.

Competitive landscape

Figure 41: Online Travel Agencies with the highest revenues (in billions of USD); Source: Statista



The Market for Online Travel Agencies around the world is fragmented, as most players are small domestic private players operating on niche markets. There are only a **selected few truly international players** operating on a global scale. As such, the market is experiencing a consolidation trend with the **largest OTAs increasingly acquiring smaller companies** to consolidate their leading positions, develop inhouse expertise and expand to other markets, as mentioned above.

When comparing leading Online Travel Agencies in 2018, **Booking Holdings held the first place for the company generating the most revenues and with the highest market capitalization**. The latter, at \$84 billion corresponds to almost 4x as much as that of the second and third largest players, Trip.com with \$20 billion and Expedia with \$16 billion, respectively. As Airbnb is still a private company, its market capitalization is uncertain, but studies place it at \$31 billion, which would make it the second-largest player in the market by market capitalization. Google Travel was not considered when analysing revenues nor market capitalization due to lack of reliable data.

Applying Porter’s Five Forces framework to the sector, we understand: **bargaining power of customers is extremely high** as travellers are becoming increasingly sensitive to prices, jumping between travel websites until they find the cheapest product to book; **bargaining power of suppliers is moderately low** as suppliers (hotels, property owners, car rentals, airline companies, etc.) are increasingly dependent on OTAs for customers; despite the fact that there are no licensing requirements to begin operations and capital requirements are relatively low, **barriers to entry are relatively high**, given the increasing scale of the market’s largest players; there is **high intensity of competitors**, as previously mentioned; and **high threat of substitutes**, as a new wave of players, such as Google and Airbnb, threatens to disrupt the travel industry.

Google Travel

As described in the Risks section of this report, Google Travel represents BKNG’s greatest competitor. However, lack of available data prohibits us from further analysing this competitor’s financials and overall business.

The Expedia Group (NASDAQ: EXPE)

The U.S. based travel group operates a large portfolio of brands, which it groups into four different segments: core OTAs, Trivago, Egencia and HomeAway. The

Figure 42: BKNG vs EXPE’s historical stock price in USD; Source: Bloomberg

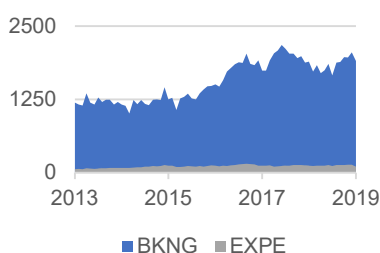


Figure 43: Domestic over total revenues per Group; Source: Company Reports

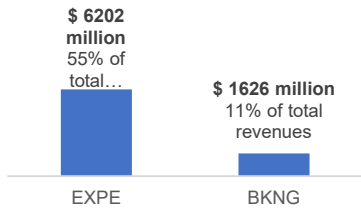


Figure 44: BKNG vs EXPE's margins, Source: Bloomberg, Company Reports

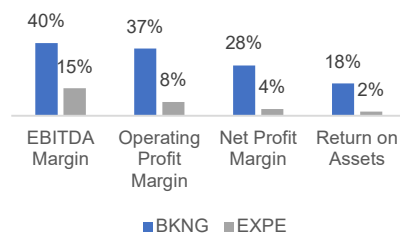


Figure 45: BKNG vs TCOM's historic stock price in USD; Source: Bloomberg

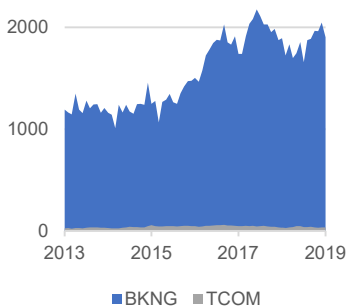
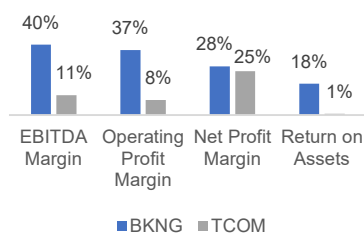


Figure 46: BKNG vs TCOM's margins; Source: Bloomberg, Company Reports



Group derives most of its revenues from the OTA segment, which includes its largest brand, Expedia. The Egencia segment, which comprehends Orbitz for Business in addition to the Egencia brand itself, is a global B2B solution offering corporate clients travel management services. This **segment positively differentiates Expedia's offer** from BKNG's, as the latter has yet to offer a service fully specialized in business travel.

Unlike Booking Holdings, the majority of **Expedia's revenues are domestic**. We believe this key difference between the two partially explains the major differences in profitability. While the accommodation market in Europe is mostly composed of boutique hotels, in the U.S. it is dominated by large hotel chains. The latter have more bargaining power in negotiations with OTAs than the former, which explains EXPE's lower commission fees, with a revenue margin of 11.3% in 2018, when compared to BKNG's 15.7%.

Another key difference between the two is their **brand recognition**. While BKNG's main source of revenues remains Booking.com, Expedia's revenue sources are more equally distributed between its brands, of which none benefits from the same recognition as Booking.com [17]. This results in greater dependence on paid sources of traffic rather than direct traffic when compared to BKNG and leads to greater performance advertising costs and lower profit margins.

The Trip.com Group Limited (NASDAQ: TCOM)

The Chinese OTA holds a majority stake in many companies under its name, most notably Trip.com Limited (100% ownership stake), Skyscanner (97% ownership stake), and Qunar Cayman Islands Limited (43% ownership stake). Following a 2018 deal, **Booking Holdings now holds an 8% stake in Trip.com**. Moreover, the two companies have combined resources, with Booking.com and Trip.com sharing hotel inventory and Trip.com referring their clients to Booking Holding's Open Table. Despite operating in the same industry and, in many cases, competing for the same client base, Trip.com's business model sets itself apart from Booking's and Expedia's, as its **main source of revenue stems from Transportation ticketing**, which corresponded to 42% of total revenues in 2018, down from 45% in 2017.

TCOM's key competitive advantages over BKNG rely on the fact that the former derives most of its revenues from China, where Google does not operate. This results in **lower advertising costs** (as a percentage of revenues) for Trip.com (around 19%) than those reported by Booking Holdings (31% for performance advertising alone). Nevertheless, BKNG is still a more profitable company, given

Trip.com's higher R&D and personnel expenses, as described in the chapter “Company overview”.

Airbnb, Inc.

The San Francisco based company offers apartments, houses and vacation rentals’ reservations. Airbnb is allegedly the **market leader for the alternative accommodations market**, benefitting from **higher brand recognition** than its competitors. This is its main competitive advantage over BKNG, as it threatens the Group’s ability to grow within the market. More recently, Airbnb has taken steps to expand its business and step up the competition with the likes of Booking Holdings and Expedia. In 2016, it expanded its offer with the launch of its Experiences business and in 2017 launched Aibiyng, the Chinese adjusted Airbnb brand. The company has also made some acquisitions in preparation for its IPO next year, namely Urbandoor (which offers business travellers extended stays) and HotelTonight (which offers last minute accommodation bookings). Both these acquisition deals were part of a broader strategy of the company to expand its offer beyond the market of alternative accommodations.

Figure 47: BKNG vs TRIP's stock price in USD; Source: Bloomberg

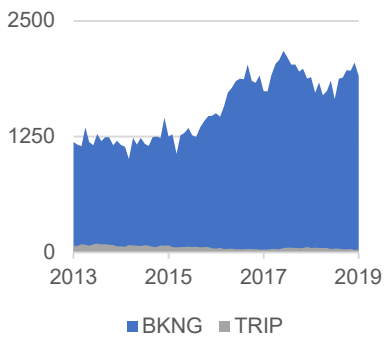


Figure 48: "Where did you look for inspiration when considering which destination to visit?"; Sources: TripBarometer 2017/18

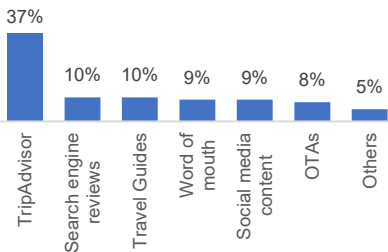
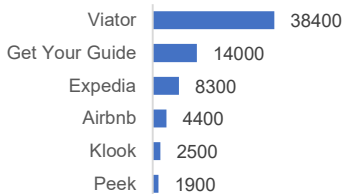


Figure 49: Total listings offered by brand to U.S. consumers across 100 of the most popular tourist destinations worldwide; Source: Skift Research



TripAdvisor, Inc. (NASDAQ: TRIP)

TripAdvisor, Inc., splits its operations into two main business segments: hotel and non-hotel. Through its hotel business, TRIP acts mostly as a booking supplier, redirecting customers to its partner websites (Expedia.com, Booking.com, etc.). Through its non-hotel segment, it offers experiences, restaurants and home rentals. The company operates a large portfolio of brands, the largest being TripAdvisor. TRIP’s main value proposition differs from that of BKNG and its other competitors, as the former focuses on **delivering travel reviews to customers in a stage prior to booking**. It helps them decide where to go and stay, where to eat and what to do. Moreover, TripAdvisor is better positioned to deliver the Tours & Activities (or Experiences) product, as its subsidiary Viator is the market leader in the U.S. in the segment [18]. This represents an important competitive advantage, as the Experiences segment is an essential part of the Connected Trip, BKNG is striving to deliver.

Valuation

DCF approach

We followed a Discounted Cash Flows (DCF) Model to value Booking Holdings, as we believe this to be the method that better captures the value the firm will derive to its shareholders. Firstly, the DCF allows for **detailed assumptions** and

Figure 50: DCF results for base case scenario; Source: analyst estimates

Base Case Scenario	(mn)
PV Cumulative Sum of Unlevered FCF	\$ 25,453
PV Terminal Value Perpetuity Growth	\$ 60,447
Core Enterprise Value	\$ 85,900
Plus: Invested Capital Non Core	\$ 5,423
Total Enterprise Value	\$ 91,323
Less: Total Net Debt	\$ -6,127
Equity Value	\$ 85,197
Fully Dilluted Shares Outstanding	39.79

Figure 51: Valuation Summary; Source: analyst estimates

Scenario Weighted Share Price	\$ 2,102.97
Current Share Price	\$ 2,053
Transactions with Shareholders	\$ -4,247
Total Return	8%
Capital gains	2%
Shares repurchase	5%
Recommendation	HOLD

Figure 52: Cost of Debt; Source: analyst estimate, Moody's

Credit Rating	A3 / A-
YTM	2.45%
5Y Probability of Default	0.51%
5Y Recovery Rate	41.82%
Cost of Debt	2.24%

Figure 53: Cost of Equity; Source: analyst estimates, Bloomberg, NYU Stern

Risk free rate	1.94%
Raw Beta	1.23
Market Risk Premium	5.96%
Cost of Equity	9.25%

as such, it benefits from our intimate knowledge of the Group and of the Industry. Secondly, the Group's performance depends on the occurrence (or non-occurrence) of certain events and as such, the **scenario analysis** enabled by the DCF is yet another reason for choosing this method.

To value the company, we used a **forecasting period of 6 years** from 2021 to 2026 and applied a perpetuity growth rate to determine the **terminal value**. All future cash flows were discounted at a **weighted average cost of capital (WACC) of 8.61%**. The perpetuity growth rate was estimated based on long term GDP growth rate and inflation rate forecasts, yielding a value of **2.04%**, slightly higher than the long term GDP forecast of 2%.

As the Group's performance in the future is highly dependent on how the risks and opportunities identified evolve, we conducted five scenario analysis and weighted the resulting share price according to the **attributed probability of occurrence of the respective scenario**. We included a base case (most likely) scenario, two risk scenarios and two opportunity scenarios.

Our analysis resulted in a **share price of \$2,141**, yielding a total return of 9% with capital gains of 4% and share repurchases of 5%. Therefore, we issue a **HOLD recommendation** for BKNG's stock.

WACC calculation

To derive the Weighted Average Cost of Capital for the Group, we assumed its **Market Debt-to-Equity (D/E)** will remain stable during the forecasting period, as there is no evidence that the Group intends to make any major changes to its capital structure. At the time of valuation, BKNG's market capitalization was at ~\$87 billion and the estimated market value of Debt at ~\$9.5 million, resulting in a **market Debt-to-Equity value of 11%**.

To estimate the Group's **cost of debt**, 2.24%, we looked at its longest outstanding traded bond on Bloomberg. As it matures on March 2028, the bond had 7.25 years to maturity at the time of valuation. The Group's **credit rating is A3/A-** (as rated by Moody's and S&P, respectively), which gives it a **5 year probability of default of 0.51%** and a corresponding **recovery rate of 41.82%**. As the bond's **Yield to Maturity (YTM) stood at 2.45%**, we were able to derive a cost of debt using the following formula:

$$rD = YTM - Probability\ of\ Default * Recovery\ Rate$$

To estimate the cost of equity we applied the Capital Asset Pricing Model (CAPM), reaching a **cost of equity of 9.39%**. For the risk-free rate, we used the last rate of the U.S. Government 10Y Treasury Bond (USGG10YR), 1.94%, reflective of the

Figure 54: Betas, confidence intervals and attributed weights of comparable companies; Sources: Bloomberg, analyst estimates

	Raw Beta	Lower Interval	Upper Interval	Weight
BKNG	1.1	0.6	1.6	55%
EXPE	1.0	0.4	1.5	25%
TCOM	1.9	1.1	2.8	15%
Webjet	1.5	0.6	2.4	15%
eDreams	2.0	0.8	3.1	0%
Tongcheng	0.7	-0.8	2.2	0%

low interest rate environment currently experienced in the US Market. We based our Market Risk Premium of 5.96% on NYU Stern’s analyst estimates.

In order to compute the **raw beta** of the Group, we first performed a **regression analysis on Booking’s stock price against the S&P 500’s**, dating back to November 2014, as to get 60 data points. This regression resulted in a **beta of 1.08 with a confidence interval of [0.58,1.57]**. As the confidence interval is wide, we performed the same regression for a selected group of comparable companies based on the type of business they operate, the geography they operate in, their EV/Sales and EV/EBITDA multiple. From the selected Group of companies, we excluded the ones with the broadest confidence intervals (eDreams and Tongcheng). Afterwards, **to exclude the effects of different capital structures, we first unlevered each company’s beta**. Secondly, we attributed weights to each comparable company based on relevance and finally, computed the weighted average unlevered beta of the comparable companies and BKNG’s. Knowing the beta of Debt (through reverse engineering the CAPM formula for the cost of debt) and the market D/E of the Group, we were able to reach a **raw beta of 1.25**.

Having all the variables necessary and assuming a tax rate of 21% (U.S. corporate tax rate), we reached a WACC of 8.61%, through the formula:

$$[Eq. 1] WACC = \frac{E}{D+E} * rE + \frac{D}{D+E} * rD * (1 - T)$$

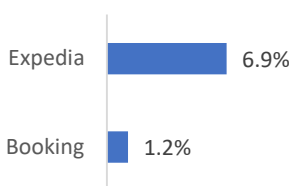
Multiples Analysis

To find suitable comparables, we analysed the company’s peers (Expedia, Trip.com, MakeMyTrip, Webjet, eDreams, Despegar, Tongcheng, Meituan and Trip Advisor). After a **selection based on geographical exposure, business model and relevance of the multiples**, we decided to **follow the analysis with Expedia and Trip.com**. Although EXPE’s main market is the US and TCOM’s operations reside mainly in China, these companies are the ones that best capture BKNG’s worldwide exposure (Trip.com owns the UK based Skyscanner and EXPE has investments in Asian companies). As explained above, **BKNG’s cost structure is different from EXPE and Trip.com**, with a much higher EBITDA margin, which favoured the use of EBITDA to Enterprise Value (EV) or price to earnings ratio (P/E). Nevertheless, the three **companies’ EBITDA to EV values are very different, which lead us to use only P/E**. Using Trailing Twelve Months values for earnings and the most recent market caps, we reached a weighted average **P/E of 27.09x** (Figure 56).

Figure 56: Comparables’ Price to Earnings ratio

	P/E
BKNG	20,0
EXPE	30,9
TCOM	35,4
Harmonic mean	27,1

Figure 55: Software’s amortization (as a percentage of revenues)



This value is considerably higher than Booking’s 19.97x and would **lead to a share price of \$3106.15**. Although it might be the case that Booking’s current price is

undervalued, we are more inclined to conclude **these companies are not appropriate comparables of BKNG**, given company-specific factors. On the first place, Expedia’s high P/E ratio may be related to the belief from its investors that the company is being mismanaged and that current earnings do not reflect the company’s potential. In fact, Expedia’s CEO has lately resigned after disagreements with the board regarding strategy decisions. On the second place, EXPE has high investments in R&D with higher PP&E than BKNG, namely capitalized software development. This leads to higher amortizations and lower earnings in the short term (Figure 55). Finally, Trip.com’s higher pricing may be related to its strong and established presence in the Chinese market, where future growth prospects are higher than average.

Figure 57: Rental car days, estimated past prices (\$); Sources: analyst estimates; Avis and Hertz

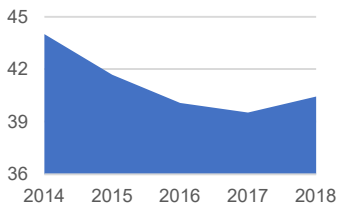


Figure 58: Airline tickets estimated past prices (\$); Sources: analyst estimates, U.S: Bureau of Transportation Statistics

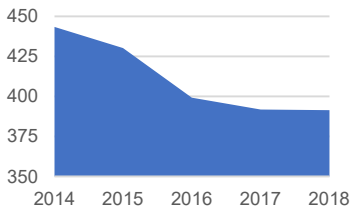


Figure 59: Room nights estimated past prices (\$); Sources: analyst estimates

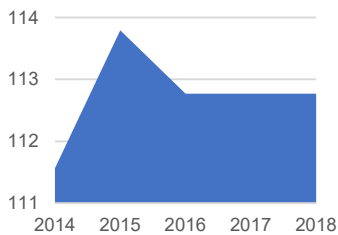
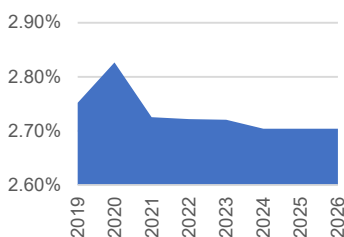


Figure 60: Forecasted global inflation weighted for BKNG’s operations; Source: analyst estimates; IMF



Revenue model

The following relations must be clear to understand our revenue model,:

$$[Eq. 2] \text{ Gross Bookings}_n = \text{Price}_n * \text{Quantity}_n$$

$$[Eq. 3] \text{ Agency \& Merchant Revenues} = \sum_{n=1}^3 \text{Gross Bookings}_n * \text{Avg fee}_n$$

$n = \text{room nights, rental car days, airline tickets}$

To be able to analyse and forecast the evolution of each driver independently, we estimated an average price for each product, while quantities sold are provided by the Group on a yearly basis [Eq.2]. Moreover, we estimated the average fees charged by the Group in the past, as to be able to isolate the forecast of room nights fee, which is one of most impactful factors on revenues [Eq.3].

The average price charged for **rental car days** was calculated based on the reports of rental car companies "Avis" and "Hertz", since we believe these companies are a good proxy of the car rentals market with a ~27% combined market share according to our estimates. The average price charged for **airline tickets** was based on the U.S. quarterly average airfares, provided by the Bureau of Transportation Statistics. Finally, to arrive at an estimate of the price charged **for room nights** in each year, considering the reported year-on-year **ADR change**, we used Excel’s tool “Solver” to minimize the difference between reported Gross bookings and estimated Gross bookings by changing room nights’ average price.

The Group’s **Advertising & Other revenues** are forecasted mostly based on forecasts for KAYAK, from where most advertising revenues derive.

We applied a forecasted inflation rate to each year’s total projected revenues and then applied a forecasted inflation rate weighted by the number of listings in each country where BKNG operates. This method of forecasting inflation was chosen

over applying a global inflation rate forecast, given concerns that the latter would result in high rates due to the effect of hyper-inflation countries (such as Venezuela or countries in North-African or the Middle-East), where Booking's business is either non-existent or insignificant.

To the exception of the average fee charged, all forecasts (Advertising & Other revenues, room nights', rental car days' and airline tickets' prices and quantities sold) were projected **based on the projection of year-on-year growth rates** rather than forecasting actual numbers.

Regression

Considering how sensitive BKNG's value is to accommodation ADRs, we developed **a model to test our results for average prices charged**. This analysis was based on a regression of estimated past prices and reported quantities sold on total reported Gross bookings, following [Eq.2], as follows:

$$[\text{Eq.4}] \text{Gross bookings} = \beta_1 * \text{Adjusted room nights} + \beta_2 * \text{Adjusted rental car days} + \beta_3 * \text{Adjusted airline tickets} + \alpha,$$

where: (1) reported quantities sold were adjusted for price variations from the first period considered in the regression (the first quarter of 2013) to each quarter of the sample period; (2) **βs are the output of the regression, interpreted as the prices** of a room night, a rental car day and an airline ticket, respectively, in the first period of the regression; and (3) α represents 4 dummy variables, which capture the seasonal effect of the 4 quarters. After obtaining the regression results, we updated the βs to each quarter, based on each variable's past quarterly price changes. We used quarterly values for the inputs with the purpose of increasing the size of the sample used.

Average quarterly prices for room nights, rental car days and airline tickets were estimated based on proxys, namely average global hotel daily rates, average prices charged by Hertz and Avis, and U.S. domestic average fares, respectively. Although these proxys are not perfect matches for room nights, rental car days and airline tickets' prices, we believe **these proxys' price variations are a close enough estimate of BKNG's products' price variation**.

The **only significant coefficient achieved was β1**, the average price of a room night in the first quarter of 2013, at a price of \$107.41 and a p-value of 7,4E-10. Updating this value to the third quarter of 2019, we achieved an **average price of \$108.12**. Despite a wide confidence interval for this value, \$88 to \$126, the final price is remarkably close to the previously mentioned price, \$ 108.37, supporting our room nights price estimation.

Figure 61: Regression coefficient β1;
Source: analyst estimates

p-value	7,4E-10
Lower bound	\$88.1
Upper bound	\$126.7

Coefficients β_2 and β_3 's did not yield statistically significant results through the regression model, with p-values of 0.36 and 0.62, respectively. We believe the main reasons behind this might have been: 1) the reported numbers of rental car days and airline tickets sold were rounded to the millions, making it difficult for the model to capture small variations; and 2) a very small share of total Gross bookings is related to other products, such as travel packages, experiences or cruises, which we did not include in the regression.

Scenario analysis

We present this analysis following a top down approach, first discussing at the outer level average fee's forecasts for merchant and agency Gross bookings as well as revenues for our advertising model. Next, we present our forecasts for the main drivers (the number of room nights, airline tickets and rental car days sold). Finally, we analyse the impact the different scenarios have on performance advertising, brand advertising and personnel costs. In our model, we assumed the products' forecasted prices (excluding fees) remain the same for every scenario and assumed total prices (including fees) only vary through changes in average fees. Moreover, average fees charged for rental car days and airline tickets were not forecasted, remaining constant throughout the analysis given their low impact on our final valuation.

Figure 62: Scenario summary table;
Source: analyst estimates

Scenario	Weight	Share Price	% Change
1. Base Case Scenario	65%	2141	
2. Google Travel	9%	1288	-40%
3. Stagnation of Room Nights Growth	7%	1372	-36%
4. Direct Channel	8%	2799	31%
5. Connected Trip	11%	2502	17%

Figure 63: Average room nights fee (% change); Source: analyst estimates

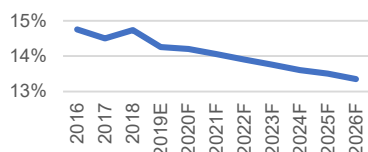


Figure 64: Advertising & Other Revenues (% change); Source: analyst estimates

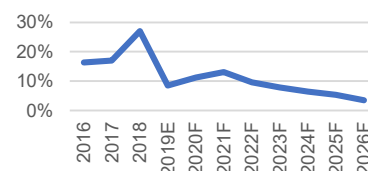


Figure 65: Room nights and Rental car days (% change); Source: analyst estimates

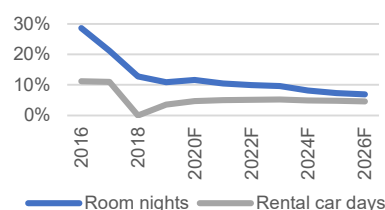
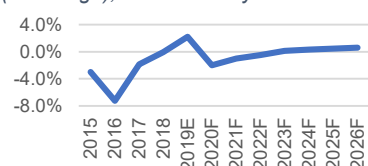


Figure 66: Airline tickets' prices (% change); Source: analyst estimates



Scenario 1: Base Case

Share Price: \$2141

In our base case scenario, we forecasted **average fee's growth** to slow down over time, following the current trend, due to pressure from metasearch engines (such as Google Travel), which tend to increase price competition in the industry. The same applies for **Advertising & Other revenues** as we expect Google Flights will continue to adversely affect traffic to KAYAK and OpenTable.

We believe the Group will be able to sustain moderate growth of **room nights sold**, driven by strategic partnerships in Asia and expansion into the alternative accommodations market. Although this growth will most likely slow down in the long run with increasing competition in the market, particularly given Google Travel's growing popularity. In 2020 we expect a slight increase in room nights growth (11.6%) due to two major events that will be occurring: the European Football cup, which will play out across the Group's strongest market, Europe (and in different cities), and the Olympic Games in Tokyo. Regarding **rental car days**, we expect them to grow at a moderately constant pace, strongly correlated with room nights growth, driven by efforts related to the Connected Trip, which proved significant already in the first three quarters of 2019 following the integration of Rentalcars.com with Booking.com. We believe the **number of airline tickets** will

Figure 67: Room nights and Rental car days's ADRs excluding fees (% change); Source: analyst estimates

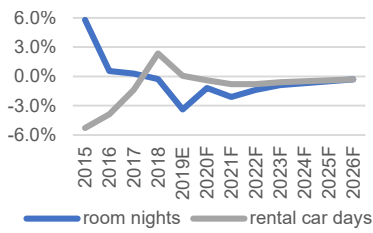


Figure 68: Airline tickets (% change) excluding fees; Source: analyst estimates

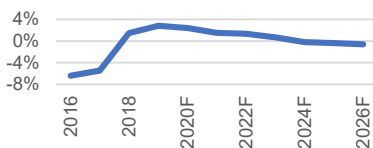


Figure 70: Performance marketing costs (as a % of revenues); Source: analysts estimates

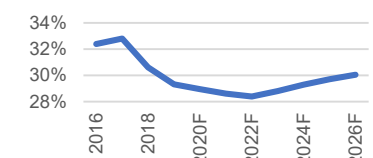


Figure 69: Average room nights fee Scenario 1 vs Scenario 2; Source: analysts estimates

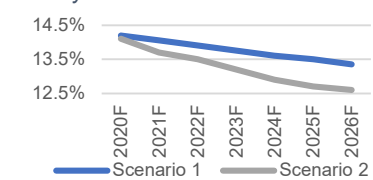


Figure 71: Advertising & Other Revenues (% change) Scenario 1 vs Scenario 2; Source: analyst estimates

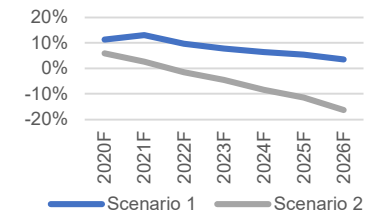
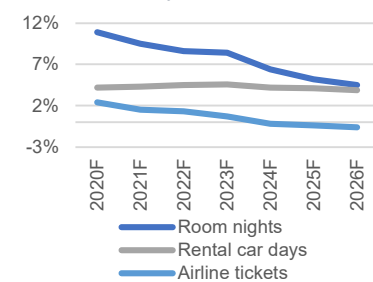


Figure 72: Room nights, rental car days and airline tickets (% change) Scenario 2; Source: analyst estimates



most likely decline over time (we consider negative growth from 2024 onwards), reflecting our belief that Google Flights' increasing popularity will steal significant market share from Booking's websites for airline tickets, namely Priceline.

We expect **average daily rates** (ADR) for room nights to decrease over time. In the short run ADRs are forecasted to decrease at a slightly more rapid pace, driven by the Group's expansion into Asia and the alternative accommodations market, which practice lower rates. In the long run, as expansion into these markets begin to decelerate, we expect ADRs to decrease at a slower pace. Average **prices charged for rental car days** will likely follow the same trend as room nights' ADRs due to growing presence in the Asian market. As for **airline tickets**, we forecasted average price changes to reflect correlation to forecasted changes in oil prices.

Regarding costs, in the short run we expect **performance marketing** to decrease as a percentage of revenues and **brand marketing** to increase accordingly, given our belief that the Group will most likely be able to strengthen its direct channel, becoming less dependent on paid marketing channels. Nevertheless, as we expect consumer preference for metasearch engines to grow, we forecasted a medium to long term decrease in BKNG's direct channel and a greater dependence on paid channels, leading to higher performance marketing costs. Finally, we expect **personnel costs** growth to decrease in the future as a consequence of economies of scale.

Scenario 2: Google Travel

Share Price: \$1,287

In this scenario we assumed Google Travel will become much more popular than in our base case scenario resulting in greater dependence of BKNG on paid channels, higher competition and loss of market share. Increasing competition, particularly price competition, would force Booking Holdings to decrease its **average room nights fee charged** in order to stay competitive. Additionally, should this scenario materialise, we expect KAYAK to lose significant traffic to Google Flights, which would adversely impact **Advertising & Other revenues**. We forecasted this item to start slowing down its growth in the short term and then decrease from 2022 onwards.

Under this scenario, loss of market share in the accommodations business would result in a significant slowdown of **room nights** growth. However, as Google does not have a strong presence in the Asian market, we believe BKNG would still be able to derive some growth in the number of room nights sold. While **rental car days** growth would follow the same trend as room nights, due to integration between the two brands, **airline tickets** would fall significantly for the same reason stated above for Advertising & Other Revenues' negative growth.

Figure 73: Performance marketing (as a % of revenues) Scenario 1 vs Scenario 2; Source: analyst estimates

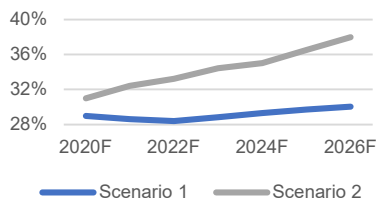


Figure 74: Room nights and rental car days (% change) Scenario 3; Source: analyst estimates

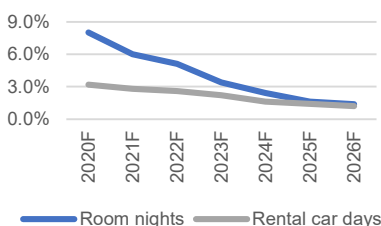


Figure 75: Average room nights fee Scenario 1 vs Scenario 4; Source: analyst estimates

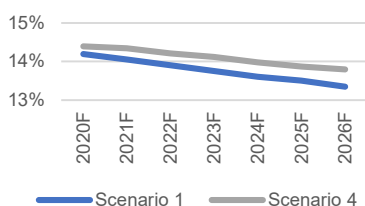


Figure 76: Advertising & Other Revenues (% change) Scenario 1 vs Scenario 4; Source: analyst estimates

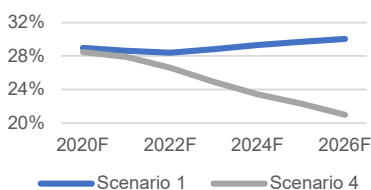
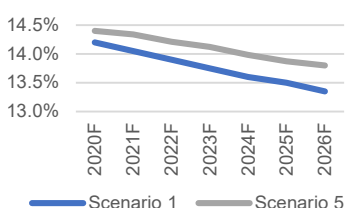


Figure 77: Room nights average fee Scenario 1 vs Scenario 5; Source: analyst estimates



Becoming highly dependent on Google Travel would result in an increase in **performance marketing costs** as a percentage of revenues. However, this would be a moderate increase as we believe performance marketing under Google Travel would become more efficient. In the current model, customers look for “hotel room” on Google Search and click on the first three or four websites to compare prices amongst websites. With Google Travel, customers would already be able to compare offers from different websites before clicking on a link, making the “pay per click” model more efficient. Finally, **personnel costs** would experience a slight slowdown, as we assumed Priceline and KAYAK would be forced to incur in cost containing strategies.

Scenario 3: Stagnation of Room Nights Growth

Share Price: \$1,287

In this scenario we analysed the Group’s value assuming (1) BKNG’s expansion into the Asian market is not successful, (2) it is not able to deliver the Connected Trip and (3) it is not able to derive the expected growth from the alternative accommodation’s market. The latter might happen either because this market becomes saturated, the Group is not able to effectively compete against Airbnb or due to local Government’s regulations. As such, the main implications would be on **room nights growth**, which would experience a significant decrease to levels close to 0. Once again, similar changes in **rental car days growth** would follow. **Personnel costs**, although not as significant, would also decrease driven by lack of business growth.

Scenario 4: Direct Channel

Share Price: \$2,797

In this scenario, we play out Glenn Fogel’s vision of the Group, where BKNG is able to enhance its direct channel substantially, mainly due to the success of brand marketing campaigns. There are three main implications of this scenario. The first is gaining flexibility to increase **average fees charged**, given that the Group is not dependent on Google Travel and therefore price competition becomes less impactful. The second is a decrease in **performance marketing costs** as a percentage of revenues. Lastly, the third consequence of this scenario is a slight increase in **brand marketing costs** as a percentage of revenues. As the Group becomes more dependent on the direct channel for traffic to its websites, we expect it to increase brand marketing spending in order to retain its customer base.

Scenario 5: Connected Trip

Share Price: \$2,500

In the last scenario, we play out how a fully delivery of the Connected Trip within the next years would affect the company’s valuation. We believe the success of the Connected Trip would increase brand loyalty, mobile payments and as a result, traffic from the direct channel. Moreover, we would expect an increase in cross-

Figure 78: Advertising & Other Revenues (% change) Scenario 1 vs Scenario 5

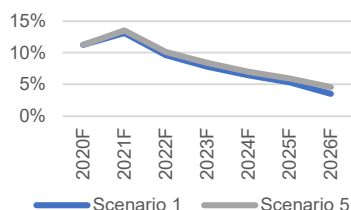


Figure 79: Room nights, rental car days and airline tickets (% change) Scenario 5; Source: analyst estimates

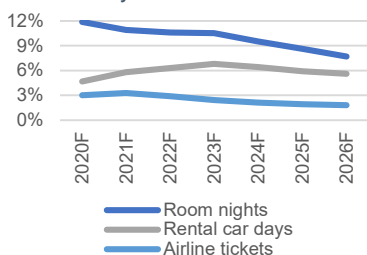
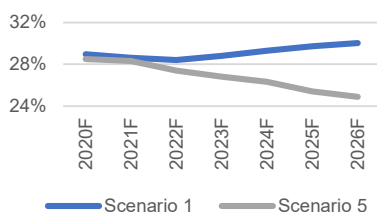


Figure 80: Performance marketing costs (as a % of revenues) Scenario 1 vs Scenario; Sources: analyst estimates



selling and in the number of packages purchased as a result of greater interconnectivity between the Group’s brands.

As packages are often sold at a discount, we expect this scenario to result in a decrease of the **average fee charged** (assuming, for simplicity purposes, that the Group can only influence prices through the fee charged). On the other hand, we expect **Advertising & Other revenues** growth to accelerate due to an increase in traffic to KAYAK’s websites, resulting from cross-selling of products as well as greater brand recognition.

We believe the Connected Trip would accelerate growth in all three main drivers for the same reasons stated above, namely cross-selling of products, greater brand recognition and enhanced brand loyalty.

Regarding costs, we believe the Group would become less dependent on **performance advertising** for traffic to its websites and apps, given a strengthening of the direct channel. Furthermore, cross-selling would make performance advertising more efficient as more products would be sold per customer and hence, per dollar spent in performance advertising. To counterbalance this, we expect **brand marketing** to increase due to the need for promotion of the Connected Trip as well as greater dependence on the direct channel. Finally, we expect **personnel costs** to slightly increase, given the greater complexity of systems and software that would arise from implementing the Connected Trip.

Sensitivity Analysis

We performed a sensitivity analysis to better understand how sensitive our valuation of the Group is to a selection of indicators, namely WACC, terminal growth rate, number of room nights’ growth and ADR’s growth.

Table 5: Sensitivity Analysis; Source: Analysts estimates

		WACC					
		-20%	-10%	8.6%	+10%	+20%	
Terminal Value Growth Rate	-20%	1.6%	2,186	2,104	2,027	1,955	1,889
	-10%	1.8%	2,252	2,164	2,082	2,006	1,935
	2.0%	2,323	2,228	2,141	2,061	1,986	
	+10%	2.2%	2,400	2,298	2,205	2,119	2,039
	+20%	2.4%	2,484	2,374	2,274	2,182	2,097
				6.9%	7.8%	8.6%	9.5%

Table 4: Sensitivity analysis; Source: Analysts estimates

		Implicit ADR's CAGR					
		-20%	-10%	-1.1%	+10%	+20%	
Implicit Room nights CAGR	-20%	7.4%	1,860	1,841	1,822	1,803	1,784
	-10%	8.4%	2,018	1,998	1,978	1,958	1,938
		9.3%	2,184	2,163	2,141	2,120	2,099
	+10%	10.2%	2,358	2,336	2,313	2,290	2,268
	+20%	11.1%	2,541	2,517	2,493	2,469	2,446
				-0.9%	-1.0%	-1.1%	-1.2%

Analysing Table 5, we conclude that share price is more sensitive to WACC than to the terminal value’s growth rate (TVGR). For equal percentage changes (-20% and 20%), the average price difference between upper and lower TVGRs is \$250, while WACC’s corresponding average difference is \$340. This is not surprising, as WACC affects the whole valuation period, while the TVGR only affects the terminal

value (after 2026). Furthermore, the analysis tells us our recommendation is robust for these estimates, as WACC would have to increase by 20% and TVGR would have to decrease by 10% for our “Hold” recommendation to be downgraded.

Regarding Table 4, we can see that our model is much more sensitive to Room nights CAGR than to ADR’s CAGR, which strengthens our thesis that Booking’s future performance is highly dependent on the ability to derive room nights growth. Looking outside the table we estimate that, keeping ADR’s growth at 0%, BKNG would still need to derive a 7.7% room nights growth for us to keep our “Hold” recommendation. We believe the company can only attain these levels of growth by continuing its move into lower ADR’s markets like the alternative accommodations and Asia.

Additionally, it is interesting to note that, according to our forecasting assumptions, the share price on December 31st, 2019 implied a room nights’ CAGR of 9%. This showcases investors’ high expectations for this driver’s future growth.

Conclusion

As our sensitivity analysis shows, Booking Holdings’ future performance is **highly dependent on its ability to derive room nights growth**. In fact, current share price reflects high investors’ expectations regarding this driver’s growth. We identified key opportunities for the company that, if successfully seized, will ensure the necessary growth to meet these expectations.

While we expect expansion in the **Asian** and in the alternative **accommodations market** will bring BKNG new sources of room nights growth, delivering the **Connected Trip** will help the Group increase customer loyalty and brand recognition, strengthening its competitive stake in the market.

Nevertheless, we also identify headwinds ahead threatening Booking’s performance. We expect **Google’s overwhelming impact** in the Travel market to lead to higher **dependence on advertising** and **fiercer competition in the OTAs’ market**, affecting BKNG’s margins and growth.

All in all, given the uncertainties concerning the Group’s ability to successfully capture its opportunities and the threats we identified, we issue a “HOLD” recommendation.

Appendix

Financial Statements

in millions of USD	2016	2017	2018	2019E	2020F	2021F	2022F	2023F	2024F	2025F	2026F
Agency Rev.	7,982	9,714	10,480	10,059	10,982	11,733	12,547	13,428	14,204	15,002	15,735
Merchant Rev.	2,048	2,133	2,987	3,833	4,562	4,874	5,212	5,578	5,900	6,231	6,536
Advertising & Other Rev.	713	834	1,060	1,150	1,279	1,446	1,585	1,709	1,818	1,914	1,981
Total Revenues	10,743	12,681	14,527	15,041	16,895	18,051	19,303	20,658	21,852	23,079	24,208
Marketing Expenses	-142	-189	-233	-275	-277	-296	-317	-339	-359	-379	-397
Other SG&A	-2,781	-3,184	-3,804	-4,344	-4,646	-5,015	-5,401	-5,778	-6,112	-6,437	-6,755
EBITDA	7,405	9,066	10,490	10,422	11,972	12,739	13,584	14,541	15,381	16,263	17,056
D&A	-309	-363	-426	-533	-610	-683	-759	-817	-875	-937	-1,000
Lease adjustment	33	40	39	51	56	61	65	70	74	77	81
EBIT (adj. for leases)	7,129	8,743	10,103	9,940	11,417	12,117	12,890	13,794	14,580	15,404	16,137
Operating cash taxes	-987	-2,121	-952	-914	-1,081	-1,141	-1,210	-1,288	-1,352	-1,424	-1,488
NOPLAT	6,143	7,968	9,104	9,026	10,336	10,975	11,680	12,506	13,228	13,980	14,648
Net Income	5,384	6,506	8,721	9,242	10,287	10,752	11,389	12,142	12,793	13,487	14,046

in millions of USD	2016	2017	2018	2019E	2020F	2021F	2022F	2023F	2024F	2025F	2026F
Net PP&E	347	480	656	771	841	904	877	857	857	860	853
Net Intangible Assets	1994	2177	2125	2146	2173	2207	2246	2292	2343	2399	2461
Working Capital	283	239	258	-220	235	253	273	299	322	343	362
Goodwill	2397	2738	2910	2885	3187	3326	3464	3603	3741	3880	4018
Others	-347	-1071	-915	-787	-417	-191	36	265	489	712	938
Core Invested Capital	4674	4563	5033	4795	6019	6498	6897	7315	7752	8194	8633
Long term investments	9591	10873	8408	4319	5069	7581	10423	12395	14859	17540	20334
Short term investments	2219	4860	3660	973	1352	3069	5019	6404	8304	10155	12588
Others	1105	1383	1695	2710	3058	3267	3494	3739	3955	4177	4382
Non-Core Inv. Capital	10922	14544	10641	4352	5423	9585	14303	17580	21874	26333	31494
Debt	7642	10134	9223	8960	9037	10959	13025	15055	16737	19705	22771
Excess Cash	1866	2288	2333	4434	2910	1726	1129	1740	1058	1598	1620
Net Financial Assets	-5776	-7846	-6889	-4526	-6127	-9233	11896	13315	15678	18106	21151
Equity	9820	11261	8785	4621	5316	6850	9304	11581	13947	16421	18976

in millions of USD	2016	2017	2018	2019E	2020F	2021F	2022F	2023F	2024F	2025F	2026F
NOPLAT	2894	2457	4429	4346	5063	5369	5685	5987	6255	6558	6827
Depreciation and Amortization	377	444	537	643	730	813	900	967	1033	1103	1174
Operational Cash Flow	3270	2901	4966	4989	5793	6182	6585	6953	7289	7661	8001
Investment Cash Flow	594	-333	-1007	-404	-1954	-1293	-1298	-1386	-1470	-1545	-1614
Core Free Cash Flow	3864	2568	3959	4584	3839	4890	5287	5568	5819	6116	6387
Operational Cash Flow	-982	448	-500	554	115	124	133	143	154	165	178
Investment Cash Flow	-2517	-3622	3903	6289	-1071	-4161	-4718	-3277	-4294	-4460	-5161
Non-Core Free Cash Flow	-3499	-3174	3403	6843	-956	-4037	-4585	-3134	-4140	-4294	-4983
Total Free Cash Flow	365	-606	7361	11427	2883	852	701	2434	1679	1822	1404

References

- [1] BusinessWire, “Mergers & Acquisitions in Travel and Tourism - Thematic Research,” 2019.
- [2] M. Shahzad, “Moody’s upgrades Booking Holdings to A3 with stable outlook,” *S&P Global*, 27 March 2019.
- [3] M. G. D. W. Tim Koller, *Valuation: Measuring and Managing the Value of Companies*, 6th ed., Hoboken, New Jersey: JohnWiley & Sons, Inc., 1990.
- [4] UNWTO, “International Tourism Highlights,” 2019.
- [5] D. P. a. A. Sheivachman, “Tours and Experiences: The Next Great Untapped Market in Online Travel,” *Skift*, 2018.
- [6] PhocusWire, “Don’t be a dinosaur - activities evolve to avoid extinction,” 27 February 2017.
- [7] Statista, “Total unit shipments of personal computers (PCs) worldwide from 2006 to 2018,” 2019.
- [8] Bloomberg Intelligence, “Online travel M&A in focus in OTA market,” *Bloomberg*, 2016.
- [9] dealroom.co, “Online Travel: a Deep Dive,” 2016.
- [10] K. May, “Online travel agency giants spent \$10.6B on marketing in 2018 (but look closer),” *PhocusWire*, 14 March 2019.
- [11] Statista, “Global internet penetration rate 2009-2018, by region,” 2018.
- [12] McKinsey & Company, “Coping with Success: Managing Overcrowding in Tourism Destinations,” 2017.
- [13] Skift, “Booking Holdings’ Push Into Homesharing Feels Like a Return to Its Roots,” 03 September 2019.
- [14] S. Borko, “Alternative Accommodations Are Growing Nearly Twice as Fast as Hotels in Europe,” *Skift*, 12 September 2019.
- [15] J. L. Lee, “Airbnb says second-quarter revenue topped \$1 billion,” *Reuters*, 2019.
- [16] Reuters, “Airbnb records 30% growth rate in first-quarter on booking strength: source,” 2019.
- [17] Nasdaq, “Why Booking Holdings is a better investment than Expedia,” *Nasdaq*, 2019.
- [18] S. B. a. R. Stone, “Tours and Activities Race for Dominance in 6 Charts,” *Skift*, 2018.

- [19] B. Sapra, “US Travel Industry to Chinese Tourists: What Trade War?,” *The Diplomat*, 29 October 2019.
- [20] J. Wein, “Google Travel Is Worth \$100 Billion — Even More Than Priceline,” *Skift*, 18 September 2017.
- [21] D. Schaal, “Booking Holdings’ Push Into Homesharing Feels Like a Return to Its Roots,” *Skift*, 3 September 2019.
- [22] A. Sheivachman, “What Does Online Travel Really Mean by a ‘Connected Trip’?,” *Skift*, 3 December 2009.
- [23] A. Sheivachman, “What Does Online Travel Really Mean by a ‘Connected Trip’?,” *Skift*, 3 December 2019.
- [24] “Priceline Invests \$450 Million in Chinese E-Commerce Giant Meituan-Dianping,” *Skift*, 19 October 2017.
- [25] S. Fleming, J. Brunsdon and C. Giles, “Brussels steps up pressure on US over global digital tax deal,” *Financial Times*, 5 December 2019.
- [26] eMarketer, “Mobile Drives Growth of Online Travel Bookings,” 2017.
- [27] Statista, “Global mobile payment usage penetration 2018, by region,” 2019.
- [28] UNWTO, “International Tourism Highlights,” 2019.
- [29] Cleveland Research Company, “Breaking down the global accommodations and vacation rental market,” 2019.

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Hold	Expected total return (including expected capital gains and expected dividend yield) between 0% and 10% over a 12-month period.
Sell	Expected negative total return (including expected capital gains and expected dividend yield) over a 12-month period.

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THE OPPORTUNITY BEHIND ALTERNATIVE ACCOMMODATIONS

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A Project carried out on the Master in (Economics/Finance/Management) Program, under the supervision of:

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Abstract

Booking Holdings' performance depends on its ability to derive room nights growth in the future. One of the key opportunities identified for Booking to grasp this growth is further expansion within the market of alternative accommodations. In this report, I assess the size of the opportunity, arriving at an estimation of Booking's alternative accommodations room nights growth. To do so, I first study the market for alternative accommodations and its main players, analyzing the drivers propelling it, as well as the challenges it faces. Secondly, I focus on the impacts expansion into this market would have on Booking's revenue sources.

Keywords: Booking, Room, Accommodation, Rental

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The Opportunity behind Alternative Accommodations

Alternative Accommodations Overview

Alternative accommodations refer to **any accommodation available outside the traditional market channels** (hotels). They can be segmented into (1) **traditional vacation rentals**, which are **secondary residences** often associated with **beach or ski residences**; and (2) **home sharing**, which are often the **primary residence** of property owners¹. While the former typically attract older demographics for a **longer duration** (~ a week), the latter are typically **cheaper**, located in **urban centres**, rented for **shorter periods of time** and preferred by younger travellers².

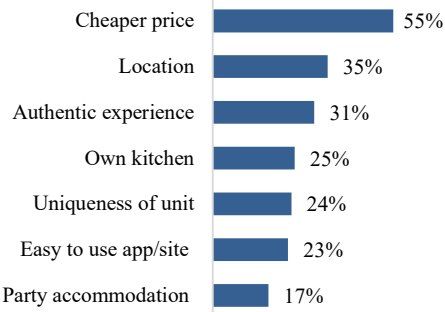
Home sharing is the fastest growing segment of the **alternative accommodations market**. Its listings grew as much as 31% year-on-year (YoY) in 2018 alone, compared to a figure of 3% for traditional vacation rentals. However, **listing's growth for home sharing is slowing down**, since just 3 years before, in 2015, YoY growth was at 125%. Nevertheless, this slowdown does not seem to be a sign of distress in the market, but rather a reflex of early signs of maturity³.

Drivers

Demand in the alternative accommodations market was largely prompt by the Travel & Tourism industry growth, coupled with increasing popularity of short-term rentals. While

a rising tourism industry boosts demand for vacation rentals in locations such as beaches and ski resorts, home sharing offers a practical solution for urban centres, where housing supply is limited, location is key and prices are often high. In fact, price is often quoted as the main reason for choosing alternative

Figure 1: Survey question "What are the most important factors that led you to use Airbnb?"; Source: Morgan Stanley



¹ Cleveland Research Company, "Breaking Down the Global Accommodations and Vacation Rental Market," 2019.
² Y. Finance, "New Phocuswright Data Shows One in Three U.S. Rentals Now in Urban Destinations," 19 January 2017.
³ In 2018, Morgan Stanley stated awareness of Airbnb to be at 80% of online users in the U.K., U.S., Germany and France.

accommodations over hotels⁴.

Regulation Risks

A potential threat to the market's growth is **Government regulation** of home sharing. This has already taken place in some cities, where residents argue the spread of short term rentals, which is often associated with "over tourism", leads to rising housing prices. Regulations in the market may come **as limits to the number of nights** each property may be rented, **restrictions to the number of properties available** for home sharing, or even as a **complete ban on home sharing** solutions⁵. Imposing fines for hosts in Berlin and Santa Monica led to a decline of 49% and 37% in listings, respectively, while limiting the number of days a host could rent an apartment to 90, led only to a 5% decline in listings in San Francisco⁶. In Barcelona, limiting licensing for all tourist accommodations actually increased the number of Airbnb listings.

Government regulation is a complex issue as it adversely affects many stakeholders (companies operating in the retail and/or travel industry, local businesses, etc.). As such, and given what has been done so far, I do not believe these regulations will have a significant impact on the market for alternative accommodations in the near future.

Competitive Landscape

As of 2018, there were 115,000 vacation rental companies⁷. While **60% were European, 20% were from the U.S. and the remaining were scattered** throughout the world, showcasing the global market is quite fragmented.

The three top players in the market are Airbnb, Booking.com and Expedia's Vrbo family of brands (including HomeAway). Together they hold 53% of the market, according to my analysis. In addition to benefiting from higher brand recognition than its peers⁸, Airbnb has

⁴ Morgan Stanley, "Global Insight: Who Will Airbnb Hurt More - Hotels or OTAs?," 2015.

⁵ McKinsey & Company, "Coping With Success: Managing Overcrowding in Tourism Destinations," 2017.

⁶ S. Shatford, "Airbnb Regulation: How is Legislation Impacting the Growth of Short-Term Rentals?," 2017.

⁷ iPropertyManagement, "Vacation Rental Industry Statistics," 2019.

⁸ SharesPost, "2018 Alternative Accommodations Consumer Survey," 2018.

recently announced a **9 year partnership with the Olympic Games**, starting in 2020. The deal covers the next winter and summer games in some of the top markets globally for private accommodation rentals. It is expected to generate both a wave of new Airbnb hosts, as well as an influx of new clients for the company, strengthening the brand's competitive position as market leader.

BKNG is still significantly behind Airbnb in the market for alternative accommodations, particularly in terms of brand recognition. Nevertheless, it holds some smaller competitive advantages. Firstly, it has a **larger consumer base** than Airbnb, which benefits hosts by enhancing their reach. Secondly, it provides **better customer experience**, since unlike Airbnb, **all properties listed are instantly bookable**, *ie* do not require approval from the host before booking.

Impact on Costs

The alternative accommodations business adds significant complexity to the Group. Other than offering **fewer rooms per property**, expansion of this business line is likely to lead to **shrinking operating margins**. As most property owners are non-professional homeowners, not able to offer the payment options increasingly demanded by travellers⁹, the Group is pushing forward its merchant business.

This model brings **incremental costs** such as personnel, payment processing fees and fraud. Additionally, as the Group shifts towards the Merchant Model, it is no longer able to defend its position as a mere facilitator of transactions between hosts and travellers, not carrying responsibility for collecting taxes or getting operating licenses¹⁰. Consequently, **regulatory issues**, which differ from the market regulations discussed above, **might require the Group to expend significant time and resources** and could eventually end up affecting the growth and size of the alternative accommodations business.

⁹ Statista, "Preferred online retail payment methods worldwide 2017," 2017

¹⁰ Skift, "Booking Holdings' Push Into Homesharing Feels Like a Return to Its Roots," 03 September 2019.

Impact on Revenues

As previously mentioned, BKNG recently stated 20% of its total revenues in 2018 accounted for alternative accommodations. Assuming the **remaining 80% will grow at the year-on-year growth rates forecasted in our group report**, I isolated and forecasted the Group's alternative accommodations business. To do so, I assumed (1) average fees charged for room nights within the category will be the same as those forecasted in our group report; (2) in each year of the forecasting period, prices charged for the alternative accommodations business were 5% less than those forecasted in our Revenue Model for BKNG. Applying the following formulas, I reached an estimate of **184 room nights sold in the category in 2018**:

[Eq.1] $\text{Gross Bookings} = \text{Revenues} / \text{Average fee}$

[Eq.2] $\text{Room nights} = \text{Gross Bookings} / \text{Price}$

According to Cleveland Research Company, Total Global alternative accommodations Gross Bookings were close to \$115,000 million in 2018. Assuming an

Figure 2: Market statistics; Source: analyst estimates, Cleveland Research Company

2018	Airbnb	EXPE	BKNG
Revenue	3640	1171	2905
Average fee	12%	10%	15%
Gross bookings	30333	11449	19726
Market Share	25%	8%	20%
Total Market			
Gross Bookings	115000		
Revenues	14672		

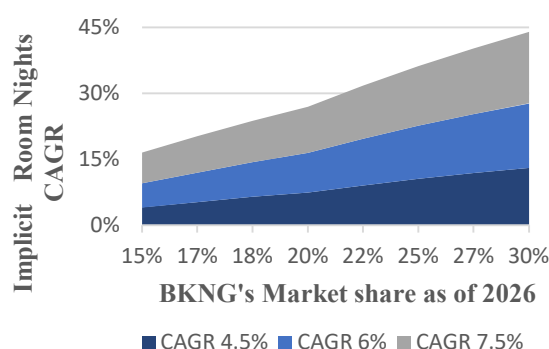
average market fee of 13%, I estimated a **total of \$14,672 million revenues for the market**.

These estimates enabled me to estimate Airbnb, EXPE and BKNG's market shares [Figure 2].

To forecast future room nights growth from 2018 to 2026, I applied three CAGRs (Compounded Annual Growth Rates) to the market's total revenues (3.5%, 5% and 6.5%). Each resulted in a different value for the market's total revenues in 2026. To each of the 3 values, I

applied a set of forecasted market shares for BKNG in 2026 (ranging from 15% to 30%) to reach an estimate of the Group's alternative accommodation revenues in 2026, a model similar to a sensitivity analysis. Afterwards, I used Excel's Solver, to find the implicit CAGR

Figure 3: Room Nights CAGR implied by BKNG's market share in 2026



of the Group's alternative accommodations room nights from 2018 to 2026 [Figure 3].

As analysts forecast the global accommodations market to grow at a CAGR of 4.5%¹¹, the market CAGR for alternative accommodation should stand higher than that. A **conservative estimate would place it at 6%**. Moreover, I believe the Group's **market share will most likely stand at 25%** in 2026. These estimates lead to **room nights CAGR of 12.1%**, resulting in a CAGR of 7.1% for BKNG's total revenues.

Conclusion

As the three **main drivers of alternative accommodations** (Travel & Tourism industry growth, popularity of short term rentals and demand for cheap alternatives) **prevail**, and Government Regulation seems to pose only a moderate to low threat to the industry as a whole, I believe **the market is far from reaching a saturation point**. Furthermore, the fact that it is highly segmented leaves **room for growth through acquisitions**, as BKNG and EXPE have done in the past in the traditional accommodations market.

Regarding the threat of competition, while EXPE does not pose a significant threat to BKNG's global alternative accommodations business, **Airbnb's position as market leader is difficult to challenge**. Nevertheless, steady competitive advantages and an investment in brand marketing, should allow BKNG to grow its market share, and closely follow Airbnb, as second largest player. An industry CAGR of 6% from 2018 to 2026 and a market share of 25% in 2026, would enable BKNG to grow its alternative accommodation room nights at a 12.1% CAGR, larger than its forecast overall room nights growth of 9.3%, according to our group report.

In conclusion, as the market for alternative accommodations is expected to grow faster than that of traditional accommodations and BKNG is expected to gain market share within the market, this business segment represents indeed an opportunity, although modest, for Booking Holdings to derive room nights growth and ultimately revenue growth in the future.

¹¹ Allied Market Research, "Travel Accommodation Market to Reach \$893 Bn, Globally, by 2026 at 4.50% CAGR", 18 November, 2019