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International Expansion and M&A Synergies Justify WH Valuation

Investment Summary

Our analysis indicated that Wyndham Hotels and Resorts (NYSE: WH) is undervalued, with an implied price per share 9**%** above its day close price (11/13). As this is within the +/-10% threshold, we report a **hold** recommendation.

Our equity valuation reflects two key findings for WH:

1. **M&A focused on cost synergies.** Management spends considerable time in earnings calls updating investors on $66M in cost synergies related to their recent La Quinta acquisition. We project SG&A costs to represent roughly 28% of 2019 revenues (*the percentage over Q4 2018-Q3 2019*), a decline from a 32.2% median over the past 3 years. *This decline in SG&A as a percent of revenues generates an incremental $1.34B in equity value in our model (26% of current market cap).*

2. **A strategic international push.** From Q1-Q3 2019, WH saw quarterly room count in Greater China grow by 8%, 9%, and 6% YOY, respectively. WH aims to increase its hotel count in Greater China by a third in the next 3-4 years. It has expanded even faster in Rest of Asia, with quarterly YOY growth at 25% in Q1 2019 and 22% in Q2 and again in Q3. We project that revenue from Greater China will more than double from 2018 to 2024 and Rest of Asia will roughly triple. *If the room count in Greater China, Rest of Asia, EMEA, and Latin America grow at the same pace as projected in the U.S., we would see a $1.16B decline in equity value in our model (23% of current market cap).*

Key Risks

1. **Strengthening hotel alternatives market.** WH's aim to make hotel travel possible for all people by targeting economy/midscale customers exposes it to risks from alternatives, which target similar customers. This could cause RevPAR to be materially less than the base case.

2. **Declining macroeconomic factors.** The probability of US recession by Treasury Spread is 29%. This will constrain growth for WH.

3. **Competition in International Markets.** WH is facing competition from established and newer hotels abroad, particularly OYO, which offers 500K rooms in China.

4. **Inflated Costs due to International Expansion.** WH achieved $66M in cost synergies via its La Quinta acquisition (20% of 2017 SG&A, the calendar year prior to acquisition). Poor M&A targets in WH's international expansion could materially impact free cash flow.

RECOMMENDATION: HOLD
(NYSE:WH)

Key Figures

Date: November 13, 2019
Current Market Equity Value ($m): 5,149
Day Close Price ($/share): $54.10
Shares Out. (mm): 95.2
Number of Options (mm): 1.0 (est. value at $10.46/option)
RSUs (mm) 1.0
Shares Sold Short (mm): 2.3
52 Week High/Low: 61.59/43.03
Estimated Company WACC: 7%

Equity Valuation (net of options value): $5,643
[probability weighted by baseline of $6,430M (60% probability), upside $7,994M (10%), and downside $3,319 (30%) scenarios]
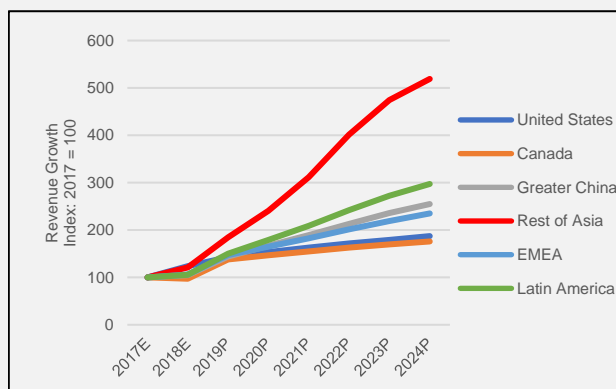Implied Price Per Share: $58.74

Implied Price per Share / Day Close Price = 109%

Baseline Case: Equity Valuation / Mkt Cap = 125%
Upside Case: Equity Valuation / Mkt Cap = 155%
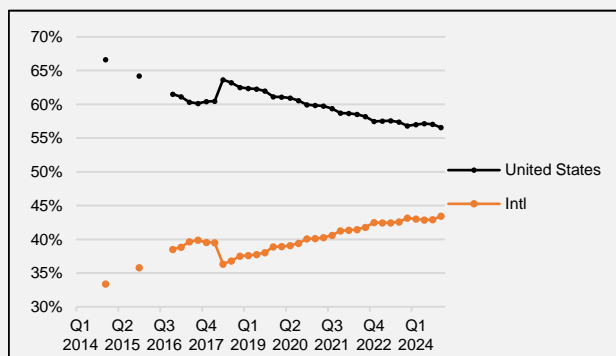**Downside Case: Equity Valuation / Mkt Cap = 64%**

Upside Case: Strong macroeconomic conditions from 2020-2024 and improved cost/revenue synergies from future M&A activity.

Downside Case: Weak macroeconomic conditions from 2020-2024 and burgeoning of hotel alternatives eating into RevPAR growth.

Royalty Revenue by Geography

WH Systemwide Room Composition by Region

Contents

1. INTRODUCTION

A. Investment Thesis

As noted on the first page, we built two key observations into our financial model.

1. M&A focused on cost synergies. See **Section B** for additional information

2. A strong international push in expansion efforts, especially in Asia

B. Recent M&A Activity

i. Spin-Off from Wyndham Worldwide Corporation

On June 2, 2018, Wyndham Worldwide completed its spin-off of Wyndham Destinations and created **Wyndham Hotels & Resorts (hereafter "WH")**, a new pure-play firm focusing on franchising and hotel management.[1] At quarter-end Q3 2019, WH had over 9.2k properties (only two of which it owns) and 822k rooms, making it the world's largest hotel franchisor.[2] Per the WH website, WH aims to "mak[e] hotel travel possible for all".

ii. M&A Activity

Per CEO Geoff Ballotti, **acquisition** has characterized WH's historical growth, with 18 of its 20 brands having been acquired. In the last 30 years, WH averaged one acquisition every 18 months.[3] WH targets established brands with growth potential, strategic fit, and the ability to be immediately accretive to earnings.

a. 2018 La Quinta Acquisition

WH completed its acquisition of the upper midscale brand **La Quinta** on May 31, 2018 for $1.95b in cash. To gauge the magnitude of the acquisition, WH had $2.162b in total assets as of Q1 2018.[4] In 2018, WH's net revenues increased by 46% compared to the prior year, but excluding the La Quinta acquisition, the figure drops to 6%.[5] In April 2019, WH completed its last major integration milestone with its migration of La Quinta's loyalty program and technology platform. By Q3 2019, WH had achieved run-rate synergies of $68m annually, as anticipated.[6] Ballotti expects Wyndham to pursue acquisitions similar to the La Quinta deal going forward.

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[1] Ting, Deanna. "Wyndham Hotels CEO on Life After Company Split: 'La Quinta Will Be Transformational'." Skift. June 3, 2018.
[2] Wyndham Hotels & Resorts, 3rd Quarter 2019 Results, p. 2.
[3] Ting, Deanna. "Wyndham Hotels CEO on Life After Company Split: 'La Quinta Will Be Transformational'." Skift. June 3, 2018.
[4] Capital IQ
[5] Wyndham Hotels & Resorts, FY 2018 Form 10K, p. 36. Because this figure comes from WH's own filings and not the standardized data from Capital IQ, revenue figures for this statistic do not match those in financial model
[6] Wyndham Hotels & Resorts, 3rd Quarter 2019 Results, p. 3.

Figure 1: La Quinta Acquisition Synergies

Amount ($ Millions)

- Public Company Expenses
- Technology, Sales, and Marketing Savings
- Operating Cost Savings
- Credit Card Revenue Benefits
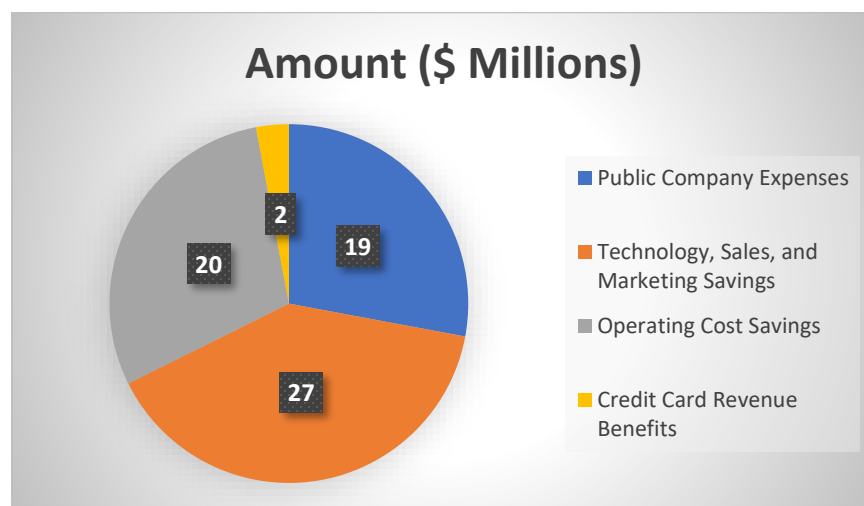
Source: Wyndham Hotels & Resorts Investor Presentation, October 2019, p. 46.

b. 2018 Knights Inn Divestiture

In 2018, WH sold Knights Inn (which had 362 North American Hotels) to Red Lion for $27m cash. Per WH CMO Barry Goldstein, WH's "'economy brands have fit in the mid to upper end of the economy segment... this was a play around fitting in that segment and not the lower end of it.'"[7]

Different scenarios regarding WH's future M&A strategy are built into our upside and downside cases. Management believes all synergies regarding the La Quinta acquisition have been achieved.[8]

2. FIRM-LEVEL ANALYSIS

A. Business Segments

WH operates two business segments: hotel franchising and hotel management. Its franchising segment "licenses [the WH] lodging brands and provides related services to third-party hotel owners and others," while management segment "provides hotel management services for full-service and limited-service hotels as well as two hotels that are owned by Wyndham".[9]

Figure 2: WH Business Segment Breakdown as of Year-End 2018

% of Systemwide Rooms	Business Segment	Geographies *% of System Rooms as of Q3 2019 (n=821.8k)*
8%	Hotel management	United States: 62%
92%	Hotel franchising	Greater China: 18% Rest of Asia: 3% Europe, Middle East, and Africa: 8% Canada: 5% Latin America: 3%

Source: Author calculations from room counts in Wyndham Hotels & Resorts, "System Size and RevPAR by Region and Chainscale," Q3 2019.

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[7] Eisen, David. "Wyndham sells Knights Inn brand to Red Lion ahead of spin-off." Hotel Management. April 4, 2018.
[8] Wyndham Hotels & Resorts Investor Presentation, October 2019, p. 46.
[9] Wyndham Hotels & Resorts, FY 2018 Form 10K, p. 35.

B. Asset Model

WH is asset-light, owning just two properties. We do not expect WH to increase its owned properties, which are currently intended to generate "cross-product interest by exposing [WH's] hotel guests to the vacation ownership product." *We believe this model is sustainable given franchisee retention rates of 94% each year (with franchise contract agreements typically lasting 10-20 years), and a clear focus on franchisee satisfaction.* Retention is aided by, e.g., "provid[ing]… hotel designs and prototypes to property owners and developers to help them boost the returns they generate from their investments," providing "fully integrated, turn-key property management, reservations and revenue management systems that have capabilities that were not previously affordable to hotels in the economy and midscale sectors," investing in e-commerce to "drive reservations to… franchisees," offering global customer services centers, and engaging in a "consultative" relationship with franchise."[10] *Our model thus excludes real estate risk and projects the owned property revenue will decline as a portion of total revenue.*

C. Financial Statement Overview and Projections

i. Revenue

Overview of Revenue Streams

WH has four revenue streams (stated below).[11] *We forecast each line item below based on a combination of historical data and company statements. Royalty revenues are forecasted by the geographic regions in Figure 2 above.*

1. *Royalties and franchise fees:* Principal revenue source for franchising properties. They comprise a percentage of the gross room revenues of each franchised hotel. They also include royalties from managed properties (accounting for 2% of total line items in 2018).[12] Franchise fees include the initial, non-refundable franchise fee, franchise renewal fees, transfer fees, and early termination fees.

2. *License and other revenues from former parent:* Revenue recognition for the use of trademarks (e.g., "Wyndham") and the Wyndham Rewards loyalty program.

3. *Marketing, reservation, and royalty revenues:* This primarily includes cost reimbursement revenues. As of Q3 2019, WH's central reservation system reached 58% globally and 71% domestically.[13] They also include the fee revenue from an annual franchisee conference. Such revenue is largely offset by marketing, reservation, and royalty expenses, though WH has seen expenses exceed revenues since 2016, but we expect these line items to converge at the terminal date.

4. *Hotel management:* For non-owned properties, includes base fees (% of revenue), incentives fees (% profitability), and service fees (from accounting, design, construction,

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[10] Wyndham Hotels & Reports, FY 2018 Form 10K, p. 6.
[11] We exclude the line item "cost reimbursement" from revenue since it is perfectly offset by "const reimbursement" expenses each year.
[12] Author calculation. Data from Wyndham Hotels & Reports, FY 2018 Form 10K, p. F-19.
[13] Wyndham Hotels & Resorts, Q3 2019 Earnings Call Transcript

purchasing services, technical assistance). For the two owned properties, revenues include gross room revenue and fees from amenities.

Procedure for Revenue Forecast

Step 1: Forecast Royalties[14]

Royalty revenue is a function of the rooms in WH's system, revenue per available room (or "RevPAR," the product of occupancy and average daily rates), and average royalty rates.

Formula 1: Royalty Revenue

$$Royalty\ Revenue = \#\ Rooms\ in\ System * RevPAR * Average\ Royalty\ Rate * 365\ Days\ Per\ Year$$

RevPAR and royalty rates vary significantly by the region in which the hotel operates. Since WH's future room composition by region will not simply mirror its historical geographic breakdown, we can't use average historical numbers to forecast royalty revenue. We therefore forecast the number of systemwide rooms, RevPAR, and average royalty rate *by region.*

Step 1A: Forecasting Systemwide Rooms

Instead of using the year-end room count figures generally provided in 10-Ks, we base our forecast on an *average* of quarterly room counts by region for accuracy. **Figure 3** breaks down revenue room count growth by region. **For quarterly systemwide room data, see Appendix 1.**

Figure 3: Room Count by Region (Quarterly Average)

Total Rooms	2017	2018	2019P	2020P	2021P	2022P	2023P	2024P
United States	429,925	488,025	508,641	518,814	529,190	539,774	550,570	561,581
Annual Growth		13.5%	4.2%	2.0%	2.0%	2.0%	2.0%	2.0%
Canada	40,051	39,550	40,290	40,693	41,100	41,511	41,926	42,346
Annual Growth		-1.3%	1.9%	1.0%	1.0%	1.0%	1.0%	1.0%
Greater China	136,777	140,625	151,184	164,541	176,550	188,559	199,819	207,846
Annual Growth		2.8%	7.5%	8.8%	7.3%	6.8%	6.0%	4.0%
Rest of Asia	16,781	20,825	25,543	31,259	38,241	46,780	52,873	55,713
Annual Growth		24.1%	22.7%	22.4%	22.3%	22.3%	13.0%	5.4%
EMEA	64,647	65,550	67,063	69,410	71,839	74,354	76,645	78,569
Annual Growth		1.4%	2.3%	3.5%	3.5%	3.5%	3.1%	2.5%
Latin America	23,857	26,300	28,671	31,039	33,564	36,289	38,564	40,151
Annual Growth		10.2%	9.0%	8.3%	8.1%	8.1%	6.3%	4.1%
Total	712,039	780,875	821,392	855,757	890,486	927,268	960,396	986,206
		9.7%	5.2%	4.2%	4.1%	4.1%	3.6%	2.7%
Total International	*282,114*	*292,850*	*312,751*	*336,943*	*361,295*	*387,494*	409,826	424,625
		3.8%	6.8%	7.7%	7.2%	7.3%	5.8%	3.6%

Note: 2017 room counts rely on an estimated value for Q1 2017 value is estimated by taking the YOY growth from Q2 2017 to Q2 2018 and making Q1 2017 to Q1 2018 growth equivalent.

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[14] Excluding marketing, reservation, and royalty revenue (which is offset by a roughly equivalent expense), royalties comprised 53% of total revenue in 2018.

Region	2019 Growth Assumption	Growth Assumption 2020-2024
United States	Applied quarterly YOY room growth for last half-year to Q4 2018 to get Q4 2019. Q1-Q3 are actuals.	Consistent 2% annual growth reflects downward-adjusted 5-year CAGR average (Q4 2014 – Q4 2019P) of 2.5%. Downward adjustment reflects management's explicit strategy to "grow [its] footprint in new and existing international markets."[15]
Greater China	Applied quarterly YOY room growth for last half year to Q4 2018 to get Q4 2019. Q1-Q3 are actuals.	Management plans to open 500 hotels in China from Q2 2019 to year-end 2022.[16] By Q2 2019, WH had ~149,300 rooms in ~1,500 hotels in its Greater China network. Based on quarterly (YOY) room growth rates of 5%-9% from Q2 2018 to Q3 2019, we think increasing room count by one-third is infeasible by Q4 2022. Thus, we postpone the date from Q4 2022 to Q2 2023, and scale Greater China's room count up by one-third linearly during the period. Thereafter, we project quarterly growth (YOY) will slow by 10% each year to the terminal year.
Rest of Asia	Applied quarterly YOY room growth for last half year to Q4 2018 to get Q4 2019. Q1-Q3 are actuals.	Rest of Asia saw YOY quarterly growth from 22%-26% from Q2 2018 to Q3 2019. We use a 4-quarter moving average of YOY growth to project the region's YOY room count from Q4 2019 to Q4 2022. We then project quarterly growth (YOY) will slow by 20% each year to the terminal year.
EMEA	Applied quarterly YOY room growth for last half year to Q4 2018 to get Q4 2019. Q1-Q3 are actuals.	EMEA 5-year room count CAGR (Q4 2014 – Q4 2019P) is 3.7%. Given little management discussion of a specific focus in this region, we expect the trend to continue at 3.5% through 2022. Thereafter, we project quarterly growth (YOY) will slow by 5% each year to the terminal year.
Latin America	Applied quarterly YOY room growth for last half year to Q4 2018 to get Q4 2019. Q1-Q3 are actuals.	Latin America saw YOY quarterly growth of 8%-16% from Q2 2018 to Q3 2019. We take a four-quarter rolling average in quarterly YOY growth through Q2 2022. Thereafter, we project quarterly growth (YOY) will slow by 10% each year to the terminal year.

Step 1B: Estimate RevPAR

WH reports that from 2013 to 2018, real organic RevPAR growth is 4% in the U.S. and 1% abroad.[17] To forecast RevPAR, we use the IMF's regional inflation forecasts[18] and apply a "real growth" upward adjustment. Our 2019 projection uses actual data from Q1-Q3. We apply the past half-year quarterly YOY RevPAR growth rate for to Q4 2018 to project the Q4 2019 rate.

Management attributes weak 2019 RevPAR to (a) lower average daily rates, notably in the mid-scale segment, (b) concentration in hurricane-impacted markets, and (c) currency effects.[19]

Figure 4: RevPAR by Region

	2018E	2019P	2020P	2021P	2022P	2023P	2024P
United States	45.3	46.9	49.34	51.51	53.21	54.44	55.69
Annual Growth	11%	3%	5%	4%	3%	2%	2%
Canada	45.8	45.2	46.51	47.68	48.80	49.82	50.82
Annual Growth	29%	-1%	3%	3%	2%	2%	2%
Greater China	19.5	18.1	18.88	19.59	20.29	20.96	21.67
Annual Growth	31%	-7%	4%	4%	4%	3%	3%
Rest of Asia	40.8	37.0	38.62	40.08	41.51	42.88	44.34
Annual Growth	26%	-9%	4.3%	3.8%	3.6%	3.3%	3.4%
EMEA	52.0	51.2	54.19	56.90	59.55	62.11	64.78
Annual Growth	35%	-1%	5.8%	5.0%	4.7%	4.3%	4.3%
Latin America	35.3	33.7	36.26	38.44	40.49	42.40	44.22
Annual Growth	23%	-5%	7.7%	6.0%	5.4%	4.7%	4.3%

Forecasted _Real_ RevPAR Growth

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[15] Wyndham Hotels & Reports, FY 2018 Form 10K, p. 7.
[16] Jena Tesse Fox, "HM on location: Wyndham outlines international plans," *Hotel Management,* September 26, 2019, https://www.hotelmanagement.net/development/hm-location-wyndham-outlines-plans-for-global-growth.
[17] Wyndham Hotels & Resorts Investor Presentation, October 2019, p. 30.
[18] IMF, World Economic Outlook (October 2019), "Inflation rate, average consumer prices." https://www.imf.org/external/datamapper/PCPIPCH@WEO/OEMDC/.
[19] In Q2 2019, for example, WH claims that international RevPAR increased 3% relative to Q2 2018 after excluding currency effects (relative to a 4% *decline* when foreign currency translation). *See* Wyndham Hotels & Resorts, 10Q for Q2 2019, p. 27.

U.S.	3.0%	2.0%	1.0%	0.0%	0.0%
International	1.0%	0.5%	0.3%	0.0%	0.0%

Note: 2018 is an estimate given that WH does not report RevPAR by region on an annual basis (just on a quarterly basis). The estimate is a weighted average of quarterly RevPAR figures by room count in each region. While the WH 10-K has an actual figure, this ensures the methodology is consistent with our forecast. 2019 estimate uses actual data.

Step 1C: Estimate Royalty Rates

WH discloses average royalty rates annually world-wide. U.S. royalty rates exceed those for the total company. To estimate the royalty rate for international locations we use this formula:

Formula 2: Estimated Quarterly International Royalty Rate

$$Estimated\ Quarterly\ Intl\ Royalty\ Rate = \frac{Global\ Royalty\ Rate - (United\ Royalty\ Rate * \%\ Rooms\ in\ U.S.)}{\%\ of\ Rooms\ in\ Intl}$$

Figure 5: Historical Quarterly Royalty Rates by Region

Quarterly Historicals
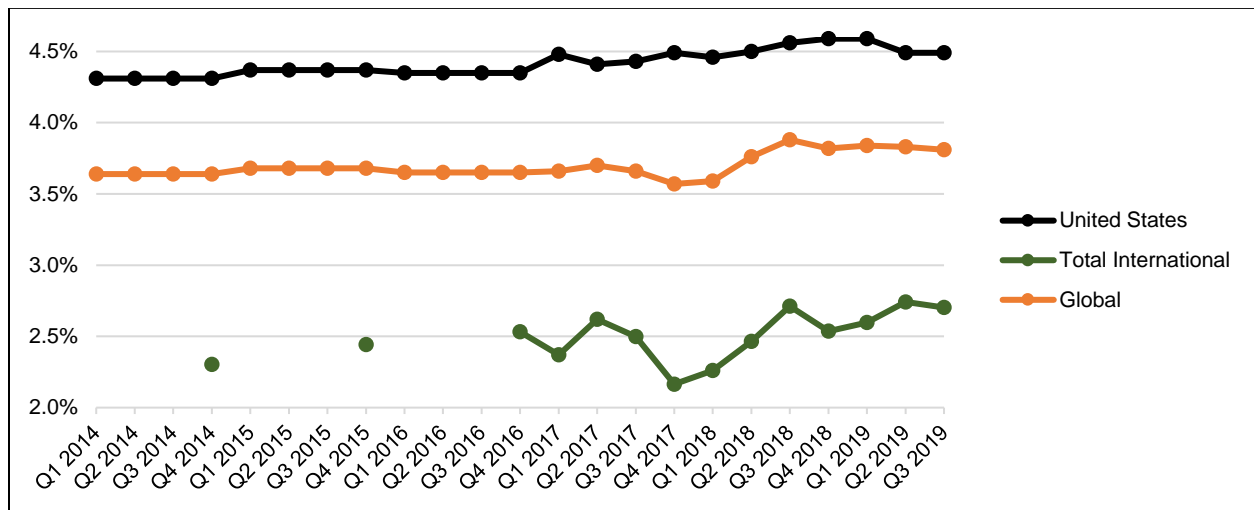
Note: Total International data are estimated by authors using Formula two. Missing room count data by region result is missing data points.
Source: Wyndham Hotels & Resorts, Quarterly Earnings Releases, Q2 2018 through Q3 2019.

Our 2019 projection is based on an average of quarterly royalty rates from Q1-Q3 actuals and a Q4 projection. We projected Q4 2019 royalty rates by seeing the YOY growth in the average royalty rate from the past half-year (i.e., Q2 2019 and Q3 2019 average versus Q2 2018 and Q3 2018 average) and applied this rate to Q4 2018 to arrive at a Q4 2019 projection. We then used a two-year rolling average to project annual rates through 2024.

Figure 6: Annual Royalty Rates by Region with Projections

Royalty Fees	2015	2016	2017	2018	2019P	2020P	2021P	2022P	2023P	2024P
United States	4.37%	4.35%	4.45%	4.53%	4.53%	4.53%	4.53%	4.53%	4.53%	4.53%
International	N/A	N/A	2.46%	2.53%	2.73%	2.79%	2.84%	2.89%	2.93%	2.94%
Total Company	3.68%	3.65%	3.66%	3.78%	3.85%	3.85%	3.85%	3.85%	3.85%	3.85%

Source: 2015-2018 data from Wyndham Hotels & Resorts, Form 10-K for 2018, p. 32. Quarterly data for 2018 and 2019 (for 2019P) from Quarterly Earnings releases.

Step 1D: Estimate Total Royalty Revenue

We estimate total royalty revenue using *Formula 1* **(p. 6),** based on the projections stated above. A back-testing of our royalty revenue estimate can be found in **Appendix 2.**

Step 2: Forecast Total Revenue and Other Line Items

We based our forecast of total revenue and other line items on historical data, with adjustments to account for changes in its hotel network from M&A activity (e.g., La Quinta acquisition) and strategic initiatives expressed by management (e.g., expansion of managed network).

Step 2A: Forecast Total Revenue

Total revenue has consistently been 33-34% of royalties/franchise fees (excluding initial franchise fees). We apply a 2% increase to the royalty revenue generated in Step 1 to account for additional franchise fees (e.g., renewal fees, transfer fees, and early termination fees), ***and then apply this percentage to project total revenue. That is, total revenue for each year is a function of royalties/franchise fees. That is:***

Formula 3:

$$Total\ Revenue = \frac{Royalties + Franchise\ Fees}{Rolling\ Five\ Year\ Average\ of\ Royalties + Franchise\ Fees\ as\ \%\ of\ Total\ Revenue}$$

Step 2B: Forecast Other Line Items

Figure 7 defines each assumption. **Figure 8** shows each revenue sub-item as a percentage of total revenue through 2024.

Figure 7: Revenue Assumptions (Excluding Royalties)

Line Item as Percent of Total Revenue	Assumption
Initial Franchising Fee	Will grow to 6% in 2019-20 and fall to 4% in 2024. 2019-2020 increase reflects all-time high in WH's development pipeline (190k total rooms in Q3 2019).[20]
License and Other Revenues from Former Parent	2019 percentage based on LTM (Q4 2018-Q3 2019). Thereafter, we use a five-year moving average.
Marketing, Reservation, and Loyalty	2019 percentage based on LTM (Q4 2018-Q3 2019). Thereafter, we use a five-year moving average.
Hotel Management (1) Managed Properties (2) Owned Properties	2019 percentage set equal to 2018 percentage. Historical average not used since La Quinta acquisition expanded WH's managed network by 279% from 116 hotels. Per management, "[h]otel management represents an attractive expansion opportunity to grow our asset light business and further penetrate the midscale and higher segments."[21] Management revenue is projected to increase, despite projected declines in the percentage of total revenue stemming from owned properties (given no expansion plans beyond the two properties).
Other Revenue	Did not forecast. Represents a plug after subtracting total revenue from other line items.

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[20] Development pipeline figures are reported in each *Quarterly Earnings Release.*
[21] Wyndham Hotels & Reports, FY 2018 Form 10K, p. 7.

Figure 8: Revenue Sub-Items as a Percentage of Total Revenue

	2015	2016	2017	2018	2019P	2020P	2021P	2022P	2023P	2024P
Royalties and Franchise Fees (Excl. Initial Fee)	33%	34%	34%	33%	33%	34%	34%	33%	33%	33%
United States (estimate/projection)			28%	27%	27%	26%	26%	26%	25%	25%
Canada (est./proj.)			1.3%	1.0%	1.2%	1.2%	1.2%	1.2%	1.1%	1.1%
Greater China (est./proj.)[22]			1.9%	1.6%	1.8%	2.0%	2.1%	2.2%	2.3%	2.4%
Rest of Asia (est./proj.)			0.5%	0.5%	0.6%	0.8%	0.9%	1.1%	1.2%	1.3%
EMEA (est./proj.)			2.3%	2.0%	2.3%	2.4%	2.5%	2.5%	2.6%	2.7%
Latin America(est./proj.)			0.6%	0.5%	0.7%	0.7%	0.8%	0.8%	0.9%	0.9%
Initial Franchising Fee	1.2%	1.9%	1.4%	1.6%	2.0%	2.0%	1.7%	1.7%	1.3%	1.3%
Initial Franchising Fee (% Royalty)	*4%*	*6%*	*4%*	*5%*	*6.0%*	*6%*	*5%*	*5%*	*4%*	*4%*
License and other revenues from former Parent	6%	7%	7%	9%	9%	8%	8%	8%	8%	8%
Marketing Reservation and Loyalty	40%	38%	37%	38%	39%	38%	38%	38%	38%	38%
Hotel Management	10%	11%	11%	10%	10%	10%	11%	11%	12%	12%
Hotel Management - owned prop		8.1%	7.7%	5.9%	5.2%	4.7%	4.4%	4.1%	3.9%	3.7%
Hotel Management - managed prop		2.6%	3.0%	3.8%	4.5%	5.9%	7.4%	8.9%	10.4%	11.8%
Other Revenue	10%	10%	10%	9%	7%	9%	8%	8%	7%	7%
Total	100%	100%	100%	100%						

ii. Costs

Figure 9 shows our cost assumptions employed in our model with rationale.

Figure 9: Revenue Growth and Cost Breakdown

	Historical				Forecasts						
	2015	2016	2017	2018	2019P	2020P	2021P	2022P	2023P	2024P	
Revenue Growth	-	-3.0%	1.8%	26.2%	17.6%	8.2%	7.9%	7.8%	5.4%	5.1%	*Based on revenue model*
COGS/Rev	41%	30%	31%	31%	30.5%	30.6%	30.6%	30.6%	30.6%	30.6%	*3-year moving avg*
COGS/Marketing, Res and Loyalty Res	102%	80%	84%	80%	85.0%	90.0%	95.0%	100.0%	100.0%	100.0%	*Increase from 85% to 100%, reflecting long-term offset from cost reimbursement*
SG&A/Rev	26%	32%	33%	31%	27.5%	27.5%	27.5%	27.5%	27.5%	27.5%	*LTM Average to reflect recent SG&A synergies from La Quinta*
Other Operating Expenses/(Income)	0%	0%	0%	0%	$0	$0	$0	$0	$0	$0	*0%*
D&A/Rev	7%	7%	7%	8%	7.5%	7.5%	7.6%	7.5%	7.5%	7.5%	*Three year moving average*
D&A / Capital Expenditure	1.31	1.74	1.63	1.36	1.30	1.24	1.18	1.12	1.06	1.00	*Scaling linearly to 1 by terminal period*
Capital Expenditure/Rev	5%	4%	5%	6%	5%	5%	5%	5%	5%	5%	*Three year moving average*
Total Assets	$1,959	$1,983	$2,137	$4,976	$5,731	$6,263	$6,718	$7,139	$7,566	$7,903	*Based on total asset/revenue projection*
Total Assets / Sales	90%	99%	110%	388%	3.88	3.88	3.88	3.88	3.88	3.88	*2018 value*
Total Asset Growth		1.2%	7.8%	132.8%	15%	9%	7%	6%	6%	4%	*Based on Total Assets projections above*
Net Working Capital / Assets	-3%	-2%	-1%	-4%	-4%	-4%	-4%	-4%	-4%	-4%	*2018 value*
Net Working Capital	($49)	($42)	($31)	($187)	($215.39)	($235)	($252)	($268)	($284)	($297)	*Used NWC/Assets percentage to derive NWC for each year*

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[22] Support is added to our methodology for estimating royalties/franchise fee by region when WH CEO Geoff Ballotti asserts that China is less than 5% of our royalty fee income today. *See* Wyndham Hotels & Resorts, Q3 2019 Earnings Call Transcript. Our 2018 estimation puts China at roughly 4.8% of royalties and franchise fees (excl. initial fee) revenue.

D. **Primary Risk Factors**

- **Growth of Hotel Alternatives.** Hotel alternatives continue to be attractive to price-sensitive and/or younger travelers, and may have a certain "stickiness" with demographic cohorts over time.[23] Increases in alternatives' cost-effectiveness and/or availability relative to hotels threatens WH, especially because WH targets a similar customer base (i.e., cost-sensitive travelers). WH is addressing this risk by enhancing its marketing spending, WH presence, and loyalty program. Wyndham Rewards has 77m members, and 40% of Wyndham guests are Wyndham Rewards members.[24] However, hotel alternatives like Airbnb diminishing the effectiveness of this mitigation strategy by continuing to grow and innovate (e.g., Airbnb now allows guests to earn Skymiles for their stays).[25]

- **GDP Growth, Consumer Sentiment, and Factors Impacting Global Travel.** Lower than forecasted GDP growth rates and/or consumer sentiment could impact WH's profitability. Global trade and political tensions could also impact WH's global expansion, especially given WH's targeting of the growing middle-class populations in emerging markets.

- **Competition in International Markets.** WH faces competition abroad from both established chains, such as Marriott and Hyatt, as well as newer ones, such as the Indian hotel franchisor OYO. OYO, in particular, is a threat because it, too, targets a similar customer base (i.e., one which is generally price-sensitive). Founded in 2018, OYO "entered China in 2017 and rapidly expanded its network to 10,000 hotels and more than 500,000 rooms in China by 2019."[26] OYO offers lower nightly rates than comparable hotels, and we think it is possible that OYO's presence in China is not only reducing demand but also implicitly decrease RevPAR.

- **Inflated Costs due to International Expansion.** WH achieved $66M in cost synergies via La Quinta (20% of 2017 SG&A, the calendar year prior to acquisition). Given WHs explicit strategy to fuel earnings growth inorganically—averaging one brand acquisition every 18 months over the past 30 years[27]—poor M&A targets in WH's international expansion could materially impact free cash flow.

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[23] Hotel Alternatives: US. Mintel Group Ltd. July 2019. This report indicates that 35% of internet users aged 18+ who have stayed at a hotel or other paid accommodations in the last 12 months reported "alternatives are cheaper than hotels" as a reson why they "would stay in alternative accommodations rather than a hotel." This percentage climbs to 43% for the younger age groups (18-24 and 25-34).
[24] Wyndham Hotels & Resorts Investor Presentation, July 2019. p. 19.
[25] Vora, Shivani. "Airbnb Enters the 'Luxe' Market." The New York Times. June 25, 2019.
[26] Grigorian, Greg. "Indian Hotel Operator OYO Faces Hurdles in China." Pandaily. December 2, 2019.
[27] http://www.hotelnewsnow.com/Articles/286136/Q1-Wyndham-nears-close-of-spinoff-La-Quinta-buy.

iii. CONSTRUCTING DCF MODEL TO VALUE WH

A. WACC

We used the WACC approach since net debt is not constant across time. The net debt as of Q4 2017 was $0.127B versus $2.1B as of Q3 2019.[28]

Using the CAPM model, WH's levered beta is 1.04 (since July 2017[29]). There is significant uncertainty around the levered beta, however, given the short-term horizon for total returns (WH debuted on the NYSE in May 2017). To verify this estimate's reliability, we look at a 6-month beta rolling average **Figure 10)** and a 95% confidence interval with robust standard errors **(Figure 11)**. 6-month rolling betas show a range of 0.90 to 1.11 and a 95% confidence interval shows 0.62 to 1.47.

Given the significant uncertainty regarding the WACC, we round up to 7% to fit more in line with our industry analysis (WACC=7.25% for Marriott, Hilton, Extended Stay America, Hyatt, and Marriott Vacations). **We also conduct a sensitivity analysis with varying levels of WACC (*see* Figure 17).**

Figure 10: 6-Month Rolling Beta of WH
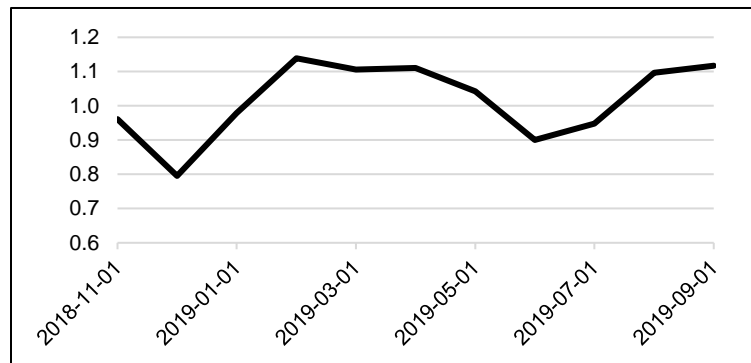
Figure 11: 95% Confidence Interval for Beta

```
. reg WH_Rf mktrf, r

Linear regression                              Number of obs   =          16
                                               F(1, 14)        =       41.36
                                               Prob > F        =      0.0000
                                               R-squared       =      0.6667
                                               Root MSE        =      3.8275

                         Robust
   WH_Rf      Coef.    Std. Err.      t     P>|t|     [95% Conf. Interval]

   mktrf    1.044168   .1623591     6.43    0.000     .695942    1.392393
   _cons   -1.222456   .9469278    -1.29    0.218    -3.253414    .8085024
```

The full WACC calculation is displayed in **Figure 12.**

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[28] Data from Capital IQ, accessed October 21, 2019.
[29] WH began trading in May 2018, but the earliest monthly data available on COMPUTSTAT is July 2017.

Figure 12: WACC Calculation

Capital Structure	
Debt to Total Capitalization	28%
Equity to Total Capitalization	72%

Cost of Debt			Cost of Equity	
Cost of Debt	3.13%		Risk Free Rate	1.88%
ETR (2018)	27.4%		Market Risk Premium	5.96%
After Tax Cost of Debt	2.27%		Levered beta	1.04
			Cost of Equity	8.10%

WACC	**6.44 -- ROUND UP=7%**

Note: The Rf and market risk premium (Rm – Rf) is data are from Kenneth R. French's data library. French notes, "Rm-Rf, the excess return on the market, value-weight return of all CRSP firms incorporated in the US and listed on the NYSE, AMEX, or NASDAQ that have a CRSP share code of 10 or 11 at the beginning of month t, good shares and price data at the beginning of t, and good return data for t minus the one-month Treasury bill rate (from *Ibbotson Associates*) See.https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html. Total returns are from Compustat Daily Updates – Security Monthly, accessed November 13, 2019.

B. Determining Terminal Growth Rate

Recent OECD research projects the long-term *real* GDP growth rate will settle at 2%.[30] The IMF (April 2019) estimates that by 2024, global inflation (average consumer prices) will slow to 3.4% (versus an average of 5.6% since 1994).[31] We assume inflation will slow to the current long-run inflation projections of the IMF's group of "Major Advanced Economies,"[32] which is 2%. This suggests a long-term global nominal GDP growth rate of 4%. Given the competitiveness of the hotels industry and rising threat from hotel alternatives, *we adjust our perpetuity growth rate to 2% to roughly match long-term inflation*.

C. Mid-Year Adjustment

WH revenues are not heavily skewed towards fourth quarter, so we apply a mid-year adjustment to implicitly assuming all cash flows are received at year-end. *We therefore discount at June 30 of each year back to November 13, 2019.*

D. Base Case and Upside/Downside Scenarios

WH forecasts are shown in **Figure 13.** Revenue and cost forecast assumptions are outlined in Section 2C. The assumptions underlying these forecasts are outlined in **Figure 9.**

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[30] Yvan Guillemette and David Turner, "The Long View: Scenarios for the World Economy to 2060," OECD, July 2018.
[31] IMF, World Economic Outlook, April 2019, Data Mapper, https://www.imf.org/external/datamapper/PCPIPCH@WEO/WEOWORLD.
[32] The G7: Canada, France, Germany, Italy, Japan, United Kingdom, United States

Figure 13: Base Case

Assumptions

Target Price Date	11/13/2019
Report Date	11/13/2019
Mid-Year Adj. for FCF 2020-2024	TRUE
Cash Flows in Nominal or Real terms	NOMINAL
Effective Tax Rate	27.4%	=2018 Effective Tax Rate
Future 2019 FCF (% of Total 2019 FCF)	13.33%	=Faction of year remaining
WACC	7%
Terminal Growth Rate	2%

=XNPV using WACC, FCF for XNPV Values, and Forecasts Dates from 11/13/2019 to 6/30/2024 in Green

Enterprise Value	$8,756	
Less: Net Debt	$2,047	=Fair value of net debt as of Q3 2019
Less: Preferred Equity	$0	
Less: Total Minority Interest	$0	
Less: Deferred Tax Liability	$273	=$383 deferred tax liabilities as of Q3 2019 assumed to be paid in five years
Equity Value	$6,436	
Current Market Capitalization ($mm)	$5,149	=Market Cap as of 11/13/2019
Equity Value / Mkt Cap	**125%**	

	Historical				Forecasts					
Mid-Year Adjustment For DCF	-	-	-		12/31/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24
Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Total Revenue	$1,029	$998	$1,016	$1,282	$1,507	$1,640	$1,762	$1,886	$2,006	$2,103
Royalties and Franchise Fees (Exl. Initial Fee)	$335	$335	$350	$421	$503	$547	$590	$632	$668	$703
United States (estimates/projections)	N/A	N/A	$282	$349	$402	$432	$460	$484	$505	$527
Canada (est./proj.)	N/A	N/A	$13	$13	$19	$20	$21	$22	$23	$24
Greater China (est./proj.)	N/A	N/A	$19	$20	$28	$32	$37	$41	$46	$49
Rest of Asia (est./proj.)	N/A	N/A	$5	$6	$10	$13	$16	$21	$25	$27
Europe, Middle East and Africa (est./proj.)	N/A	N/A	$24	$25	$35	$39	$43	$48	$52	$56
Latin America (est./proj.)	N/A	N/A	$7	$7	$10	$12	$14	$16	$18	$19
Initial Franchising Fee	$12	$19	$14	$20	$30	$33	$30	$32	$27	$28
License and other revenues from former Parent	$64	$64	$75	$111	$137	$124	$138	$153	$165	$172
Marketing Reservation and Royalty Rev	$409	$375	$371	$491	$584	$626	$667	$715	$767	$803
Hotel Management	$105	$107	$108	$124	$146	$167	$188	$211	$234	$256
Hotel Management - Owned prop	$0	$81	$78	$75	$78	$77	$77	$77	$77	$77
Hotel Management - Managed prop	$0	$26	$30	$49	$68	$90	$111	$133	$157	$179
Other Revenue	$104	$97	$98	$115	$108	$143	$149	$144	$145	$142
COGS	$418	$299	$312	$394	$497	$564	$634	$715	$767	$803
SG&A	$267	$321	$332	$393	$414	$450	$484	$518	$551	$577
Other Operating Expenses/(Income)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
D&A	$67	$73	$75	$99	$94	$102	$107	$105	$107	$107
EBIT	$277	$305	$297	$396	$503	$525	$537	$548	$582	$616
EBIT(1-t)	$166	$183	$281	$287	$365	$381	$390	$398	$422	$447
Plus: D&A	$67	$73	$75	$99	$94	$102	$107	$105	$107	$107
Less: Capital Expenditure	$51	$42	$46	$73	$73	$82	$91	$94	$102	$107
Less: Change in Net Working Capital		$7	$11	($156)	($33)	($19)	($18)	($18)	($18)	($14)
FCF	-	$207	$299	$469	$419	$420	$424	$427	$445	$461
Terminal Value										$9,408
FCF for XNPV					$56	$420	$424	$427	$445	$9,869

Note: Royalties and Franchise Fee estimations are not available by region in 2015 and 2016 due to lack of data regarding RevPAR data in Greater China and Rest of Asia.

Figure 14: Upside Scenario - Rosy macroeconomic conditions 2020-2024 and improved cost/revenue synergies from future M&A activity

Royalty Revenue Growth 2020-2024	1.02	of baseline
SG&A/Rev	0.98	of baseline

Assumptions

Target Price Date	11/13/2019	
Report Date	11/13/2019	
Mid-Year Adj. for FCF 2020-2024	TRUE	
Cash Flows in Nominal or Real terms	NOMINAL	
Effective Tax Rate	27.4%	=2018 Effective Tax Rate
Future 2019 FCF (% of Total 2019 FCF)	13.33%	=Faction of year remaining
WACC	7%	
Terminal Growth Rate	2%	
		=XNPV using WACC, FCF for XNPV Values, and Forecasts Dates from
Enterprise Value	$10,314	11/13/2019 to 6/30/2024 in Green
Less: Net Debt	$2,047	=Fair value of net debt as of Q3 2019
Less: Preferred Equity	$0	
Less: Total Minority Interest	$0	
Less: Deferred Tax Liability	$273	=$383 deferred tax liabilities as of Q3 2019 assumed to be paid in five years
Equity Value	$7,994	
Current Market Capitalization ($mm)	$5,149	=Market Cap as of 11/13/2019
Equity Value / Mkt Cap	**155%**	

	Historical				Forecasts					
Mid-Year Adjustment For DCF	-	-	-		12/31/2019	6/30/2020	6/30/2021	6/30/2022	6/30/2023	6/30/2024
Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Total Revenue	$1,029	$998	$1,016	$1,282	$1,507	$1,746	$1,885	$2,031	$2,140	$2,248
Royalties and Franchise Fees (Exl. Initial Fee)	$335	$335	$350	$421	$503	$586	$632	$677	$716	$752
COGS	$418	$299	$312	$394	$497	$560	$633	$719	$763	$802
SG&A	$267	$321	$332	$393	$414	$470	$507	$547	$576	$605
Other Operating Expenses/(Income)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
D&A	$67	$73	$75	$99	$94	$108	$115	$113	$114	$114
EBIT	$277	$305	$297	$396	$503	$608	$630	$652	$686	$728
EBIT(1-t)	$166	$183	$281	$287	$365	$441	$457	$473	$498	$528
Plus: D&A	$67	$73	$75	$99	$94	$108	$115	$113	$114	$114
Less: Capital Expenditure	$51	$42	$46	$73	$73	$88	$97	$101	$108	$114
Less: Change in Net Working Capital		$7	$11	($156)	($33)	($35)	($20)	($21)	($16)	($16)
FCF	-	$207	$299	$469	$419	$497	$495	$506	$520	$544
Terminal Value										$11,098
FCF for XNPV					$56	$497	$495	$506	$520	$11,642

Figure 15: Downside Scenario - Weak macroeconomic conditions 2020-2024 and burgeoning of hotel alternatives eating into RevPAR growth

Revenue Growth 2020-2024 — Royalty growth declines, as a percent of baseline values, by 2 p.p. per year. Reaches 90% of baseline in 2024
SG&A/Rev — Median of 2015-2017 (pre-acquisition) (32.2%)

Assumptions

Target Price Date	11/13/2019	
Report Date	11/13/2019	
Mid-Year Adj. for FCF 2020-2024	TRUE	
Cash Flows in Nominal or Real terms	NOMINAL	
Effective Tax Rate	27.4%	=2018 Effective Tax Rate
Future 2019 FCF (% of Total 2019 FCF)	13.33%	=Faction of year remaining
WACC	7%	
Terminal Growth Rate	2%	
		=XNPV using WACC, FCF for XNPV Values, and Forecasts Dates from 11/13/2019 to 6/30/2024 in Green
Enterprise Value	$5,639	
Less: Net Debt	$2,047	=Fair value of net debt as of Q3 2019
Less: Preferred Equity	$0	
Less: Total Minority Interest	$0	
Less: Deferred Tax Liability	$273	=$383 deferred tax liabilities as of A3 2019 assumed to be paid in five years
Equity Value	$3,319	
Current Market Capitalization ($mm)	$5,149	=Market Cap as of 11/13/2019
Equity Value / Mkt Cap	**64%**	

	Historical				Forecasts					
Mid-Year Adjustment For DCF	-	-	-		12/31/2019	6/30/2020	6/30/2021	6/30/2022	6/30/2023	6/30/2024
Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Total Revenue	$1,029	$998	$1,016	$1,282	$1,507	$1,598	$1,689	$1,783	$1,838	$1,889
Royalties and Franchise Fees (Exl. Initial Fee)	$335	$335	$350	$421	$503	$536	$567	$594	$615	$632
COGS	$418	$299	$312	$394	$497	$560	$633	$719	$763	$802
SG&A	$267	$321	$332	$393	$414	$514	$543	$573	$591	$608
Other Operating Expenses/(Income)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
D&A	$67	$73	$75	$99	$94	$99	$103	$99	$98	$96
EBIT	$277	$305	$297	$396	$503	$425	$410	$391	$385	$384
EBIT(1-t)	$166	$183	$281	$287	$365	$308	$298	$284	$280	$279
Plus: D&A	$67	$73	$75	$99	$94	$99	$103	$99	$98	$96
Less: Capital Expenditure	$51	$42	$46	$73	$73	$80	$87	$89	$93	$96
Less: Change in Net Working Capital		$7	$11	($156)	($33)	($13)	($13)	($14)	($8)	($7)
FCF	-	$207	$299	$469	$419	$340	$326	$308	$293	$286
Terminal Value										$5,840
FCF for XNPV					$56	$340	$326	$308	$293	$6,126

iv. VALUATION

Our final valuation is a probability-weighted equity value of our baseline, upside and downside scenarios.

Figure 16: Final Valuation (values in USD millions unless otherwise noted)

	Assigned Probability	Equity Valuation
Baseline	60%	$6,430
Upside	10%	$7,994
Downside	30%	$3,319
Final Valuation (Probability Weighted)	5,653	
Value of Equity Options		
Current Market Cap (11/13)	5,149	
Common Shares Outstanding	95.167 million shares	
Restricted Stock Units	0.9 million RSUs	
Options (estimated value at $10.46/option using Black-Scholes)	1.0 million options	
Implied Price Per Share	$58.74	
(DCF Equity Value – Value of Options) / (Common Shares + RSUs)		
Day Close Price (11/13)	$54.10	
Implied Price per Share / Day Close Price	109%	
Recommendation	HOLD	

Note: Downside probability equals the October 2019 probability of a U.S. recession 12 months ahead based on the treasury spread. *See* https://www.newyorkfed.org/medialibrary/media/research/capital_markets/Prob_Rec.pdf. See page 17 of 2019 Q3 10Q for more information on Black-Scholes option-pricing assumptions.

v. Sensitivity Analysis

The figure below presents our implied equity value as a percentage of current market capitalization (November 13, 2019) for the base case.

Legend:

>110%	Buy
90-110%	Hold
<90%	Sell

Figure 17: WACC and Terminal Growth – BASELINE CASE ASSUMPTIONS

		TERMINAL GROWTH RATE				
		2.00%	2.25%	2.50%	2.75%	3.00%
WACC	6.0%	166%	178%	192%	208%	227%
	6.5%	143%	153%	163%	175%	188%
	7.0%	125%	132%	140%	150%	160%
	7.5%	110%	116%	122%	130%	138%
	8.0%	97%	102%	108%	113%	120%
	8.5%	87%	91%	95%	100%	105%
	9.0%	78%	81%	85%	89%	93%

The figure below present our implied price per share as a percentage of the current stock price (November 13, 2019) for our probability weighted valuation.

Figure 18: Final Equity Value Probabilities

		Baseline Probability			
Downside Probability		50%	60%	70%	80%
	20%	121%	118%	115%	112%
	25%	116%	113%	110%	107%
	30%	112%	109%	106%	-
	35%	107%	104%	-	-

vi. APPENDIX 1: Quarterly Systemwide Room Count[33]

2014-2017

	Q1 2014	Q2 2014	Q3 2014	Q4 2014	Q1 2015	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017
United States				440,175				435,312				429,020	427,800	425,800	426,000	440,100
YOY Growth								-1%				-1%				3%
Greater China				96,474				112,788				134,739		136,600	136,300	138,900
YOY Growth								17%				19%				3%
Rest of Asia				13,156				13,940				13,326		15,900	16,900	18,900
YOY Growth								6%				-4%				42%
EMEA				55,206				57,222				57,786		63,500	64,700	66,200
YOY Growth								4%				1%				15%
Canada				39,743				40,269				40,032		39,700	40,300	39,800
YOY Growth								1%				-1%				-1%
Latin America				16,072				18,511				22,704		24,200	24,300	24,300
YOY Growth								15%				23%				7%
Total International				220,651				242,730				268,587		279,900	282,500	288,100
YOY Growth								10%				11%				7%
Global	655,300		660,826					678,042				697,607	699,800	705,700	708,500	728,201
YOY Growth								3%				3%				4%
United States				66.6%				64.2%				61.5%	61.1%	60.3%	60.1%	60.4%
Intl				33.4%				35.8%				38.5%	0.0%	39.7%	39.9%	39.6%

[33] Source: Data are from WH's "System Size and RevPAR by Region and Chainscale" quarterly updates, 10Ks, and 10Qs.

2018-2020

	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020
United States	437,200	504,300	504,500	506,100	506,600	508,300	509,200	510,465	516,732	518,466	519,384	520,674
YOY Growth	*2%*	*18%*	*18%*	*15%*	*16%*	*1%*	*1%*	*1%*	*2.0%*	*2.0%*	*2.0%*	*2.0%*
Greater China	136,300	137,600	142,400	146,200	147,000	149,300	151,400	157,036	160,038	163,040	166,042	169,045
YOY Growth		*1%*	*4%*	*5%*	*8%*	*9%*	*6%*	*7%*	*9%*	*9%*	*10%*	*8%*
Rest of Asia	19,500	20,100	20,700	23,000	24,300	24,500	25,300	28,073	29,815	29,943	30,941	34,338
YOY Growth		*26%*	*22%*	*22%*	*25%*	*22%*	*22%*	*22%*	*23%*	*22%*	*22%*	*22%*
EMEA	65,400	64,700	65,200	66,900	66,300	66,500	66,800	68,651	68,621	68,828	69,138	71,054
YOY Growth		*2%*	*1%*	*1%*	*1%*	*3%*	*2%*	*3%*	*3.5%*	*3.5%*	*3.5%*	*3.5%*
Canada	40,100	39,400	39,100	39,600	39,900	39,900	40,700	40,661	40,299	40,299	41,107	41,068
YOY Growth		*-1%*	*-3%*	*-1%*	*0%*	*1%*	*4%*	*3%*	*1%*	*1%*	*1%*	*1%*
Latin America	24,500	26,200	26,400	28,100	28,000	28,100	28,400	30,183	30,557	30,304	30,669	32,627
YOY Growth		*8%*	*9%*	*16%*	*14%*	*7%*	*8%*	*7%*	*9%*	*8%*	*8%*	*8%*
Total International	285,800	288,000	293,800	303,800	305,500	308,300	312,600	324,605	329,329	332,414	337,898	348,131
YOY Growth		*3%*	*4%*	*5%*	*7%*	*7%*	*6%*	*7%*	*8%*	*8%*	*8%*	*7%*
Global	723,000	792,300	798,300	809,900	812,100	816,600	821,800	835,070	846,061	850,880	857,282	868,805
YOY Growth		*12%*	*13%*	*11%*	*12%*	*3.1%*	*2.9%*	*3.1%*	*4.2%*	*4.2%*	*4.3%*	*4.0%*
United States	60.5%	63.7%	63.2%	62.5%	62.4%	62.2%	62.0%	61.1%	61.1%	60.9%	60.6%	59.9%
Intl	39.5%	36.3%	36.8%	37.5%	37.6%	37.8%	38.0%	38.9%	38.9%	39.1%	39.4%	40.1%

2021-2024

	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	Q4 2024
United States	527,067	528,835	529,772	531,087	537,608	539,412	540,367	541,709	548,360	550,200	551,174	552,543	559,327	561,204	562,198	563,594
YOY Growth	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Greater China	172,047	175,049	178,051	181,053	184,056	187,058	190,060	193,062	196,064	199,067	201,041	203,102	205,240	207,451	208,663	210,031
YOY Growth	8%	7%	7%	7%	7%	7%	7%	7%	7%	6%	6%	5%	5%	4%	4%	3%
Rest of Asia	36,488	36,621	37,849	42,006	44,638	44,796	46,300	51,386	52,612	51,198	51,594	56,086	56,462	54,195	54,010	58,187
YOY Growth	22%	22%	22%	22%	22%	22%	22%	22%	18%	14%	11%	9%	7%	6%	5%	4%
EMEA	71,022	71,236	71,558	73,541	73,508	73,730	74,062	76,115	75,952	76,059	76,285	78,285	78,009	78,016	78,149	80,103
YOY Growth	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3%	3%	3%	3%	3%	3%	2%	2%
Canada	40,702	40,702	41,518	41,479	41,109	41,109	41,933	41,894	41,520	41,520	42,353	42,313	41,935	41,935	42,776	42,736
YOY Growth	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Latin America	33,083	32,743	33,154	35,278	35,774	35,396	35,845	38,143	38,388	37,724	37,967	40,175	40,229	39,352	39,441	41,580
YOY Growth	8%	8%	8%	8%	8%	8%	8%	8%	7%	7%	6%	5%	5%	4%	4%	3%
Total International	353,342	356,352	362,130	373,358	379,085	382,089	388,200	400,600	404,537	405,568	409,239	419,960	421,876	420,950	423,039	432,636
YOY Growth	7%	7%	7%	7%	7%	7%	7%	7%	7%	6%	5%	5%	4%	4%	3%	3%
Global	880,408	885,187	891,901	904,445	916,693	921,501	928,568	942,309	952,897	955,768	960,414	972,504	981,203	982,154	985,237	996,230
YOY Growth	4.1%	4.0%	4.0%	4.1%	4.1%	4.1%	4.1%	4.2%	3.9%	3.7%	3.4%	3.2%	3.0%	2.8%	2.6%	2.4%
United States	59.9%	59.7%	59.4%	58.7%	58.6%	58.5%	58.2%	57.5%	57.5%	57.6%	57.4%	56.8%	57.0%	57.1%	57.1%	56.6%
Intl	40.1%	40.3%	40.6%	41.3%	41.4%	41.5%	41.8%	42.5%	42.5%	42.4%	42.6%	43.2%	43.0%	42.9%	42.9%	43.4%

vii. APPENDIX 2: Back-Testing Royalty Revenue Forecast

The results from back-testing our method to estimate royalties and franchise fees (excluding the initial franchise fee) are displayed in **Figure 19**.

Figure 19: Royalty Revenue Back-Test

Year	2017	2018
BACKTEST	358	465
DIFFERENTIAL	+2%	+10%
Royalties and Franchise Fees (Exl. Initial Fee)	350	421

viii. DISCLAIMER

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