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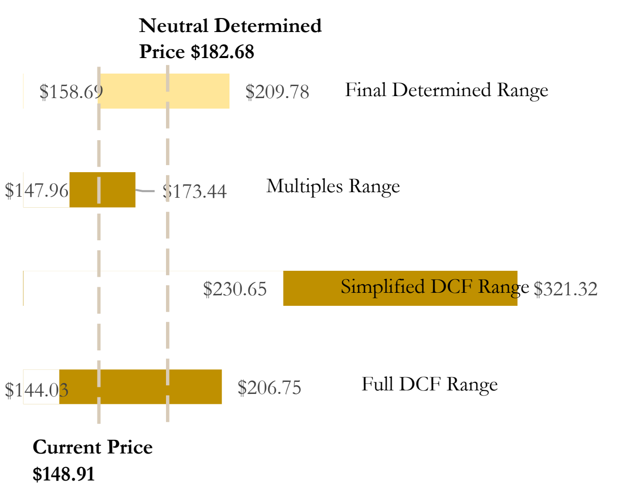
Units are in Millions of USD, except for per share items and percentages

Marriott International

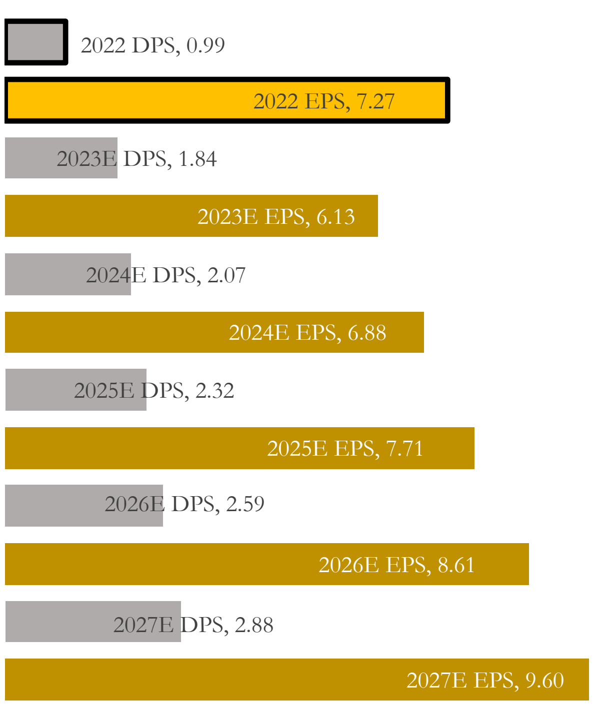
— a proactive and recovering giant

Recommendation	**BUY**
Valuation Date:	**Dec. 31, 2022**
Ticker:	**MAR**
Exchange:	**NASDAQ**
Industry:	**Hospitality**
Current Price:	**$148.91**
Target Price H:	**$209.78, 40.88% UP**
Target Price M:	**$182.68, 22.68% UP**
Target Price L:	**$158.69, 6.57% UP**
Shares Outstanding:	**308.12 Million**
Market Capitalization:	**47,129 Million**
EPS (2022/12/31):	**$7.27**

Valuation Summary (Football Chart)



Earnings and Dividend Per Share Forecast



BUSINESS DESCRIPTION

Marriott International, a leading global hospitality company, operates over 8,000 properties in 138 countries under 30 distinct brands. Founded in 1927 and headquartered in Bethesda, Maryland, Marriott caters to various traveler types, offering accommodations, event spaces, and a loyalty program, Marriott Bonvoy. Revenue primarily comes from room bookings, food and beverage sales, and franchise fees, while major expenses include property operations, marketing, and administrative costs. Tied to the global travel industry, Marriott has implemented cost-cutting measures and invested in technology to adapt to challenges. The company's diverse offerings and strong reputation maintain its leadership in the hospitality sector.

KEY DRIVERS

Revenue: Marriott's revenue is primarily derived from room bookings, food and beverage sales, and fees from franchised properties. The company also generates revenue from other sources such as meetings and events, loyalty program memberships, and vacation ownership sales.
Expenses: Marriott's largest costs are related to property operations, including labor, utilities, and property maintenance. The company also incurs significant costs related to sales and marketing, general and administrative expenses, and property taxes.
Overall, Marriott's business model is centered around providing high-quality accommodations and experiences to travelers around the world. The company's diverse portfolio of brands and offerings, combined with its strong reputation and loyalty program, have helped it remain a leader in the hospitality industry.

INDUSTRY OVERVIEW

The hospitality industry is a highly competitive market that operates in a dynamic environment, subject to a range of macroeconomic factors that can impact demand. Marriott International is a global hospitality company that operates and franchises hotels, resorts, and other lodging facilities, and competes with a broad range of players. In its annual report, Marriott highlights several trends that are shaping the hospitality industry, including the rise of alternative lodging options like home-sharing platforms. This trend has increased competition in the industry and prompted traditional hotel chains to invest in alternative lodging options of their own.

INVESTMENT SUMMARY

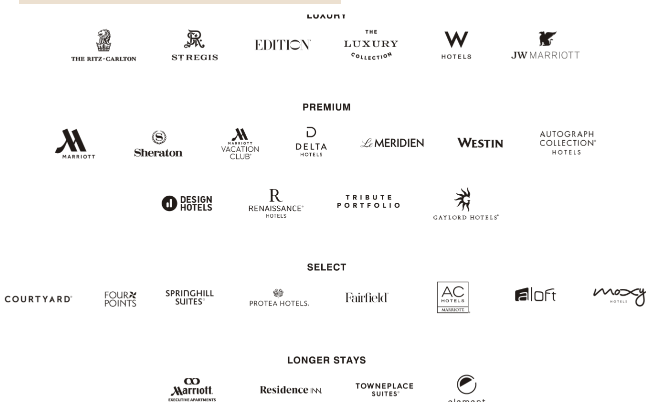
We issue a BUY recommendation for MAR with one-year neutral target price of 182.68 USD, presenting a 22.68% upside potential on the closing price of 148.91 USD on 12/31/2022, based on Full/Simplified DCF and Multiples valuation.
Simplified Rationales: Significant developments on recovering from COVID, guaranteeing future growth, attracts new customers, and retaining the existing customers:
Operating efficiency improvements; Mobile app/virtual key technology; Flexible booking policies &loyalty program improvements; Stable Financials supported by consistent growth & loyal customer base; Enhanced health and safety measures.

Source: SEC, Marriott Website, Capital IQ, Mergent Online

Group of Peer Firms

Company Name:	Stock Prices
Hilton Worldwide Holdings Inc. (NYSE:HLT)	126.34
Hyatt Hotels Corporation (NYSE:H)	90.47
Hilton Grand Vacations Inc. (NYSE:HGV)	38.53
Travel + Leisure Co. (NYSE:TNL)	36.38
Choice Hotels International, Inc. (NYSE:CHH)	112.64
Marriott Vacations Worldwide Corporation (NYSE:VAC)	134.66
Accor SA (ENXTPA:AC)	25.77
Wyndham Hotels & Resorts, Inc. (NYSE:WH)	71.33
Marriott International, Inc. (NasdaqGS:MAR)	**148.91**

MAR Brands Outlook



Peer Firm (industry) Comparison

The yellow shading meaning that metric' value is lower than MAR's value. 'Narrow mean' meaning the mean that excluded the outliers.

	P/E	EV/R	EV/Ebit	EV/Ebitda	P/R	EV/FCFF
MAR	20	3	16	16	2	18
High	28	11	30	182	9	29
Low	-2	2	-485	-25	1	-833
Mean	16	5	-37	26	4	-73
Median	17	4	13	13	2	15
Q1	13	2	11	10	1	5
Q3	20	6	18	15	5	21
IQR	7	3	7	4	3	16
Lower Bound	3	-3	0	4	-4	-20
Upper Bound	29	11	29	21	9	45
Narrow Mean	18	4	15	13	4	18

COMPETITIVE POSITIONING

Marriott faces some competition in the hospitality industry from a variety of players, including other hotel chains, independent hotels, and online travel agencies (OTAs). Additionally, MAR competes with home-sharing platforms like Airbnb, which have disrupted the traditional hotel market.

Porter's Five Forces	Extent
Threat of New Entrants	**Medium**
Supplier Power	**Low**
Buyer Power	**High**
Threat of Substitute	**Medium**
Competitive Rivalry	**High**

Five Forces Analysis:

1. New entrants face high barriers in the hospitality industry, but Airbnb has increased competition.
2. Marriott's suppliers have low bargaining power due to many alternative options.
3. Buyers have high bargaining power in the hospitality industry due to many options.
4. Alternative lodging options, such as Airbnb, slightly increase the threat of substitutes.
5. Intense competitive rivalry in the hospitality industry leads to price competition and differentiation.

Considerations:

Capacity & Pricing: Marriott's global presence and diverse portfolio of brands can help mitigate the impact of seasonality on production capacity levels. However, the company must balance competitive pricing with maintaining profitability, as the hospitality industry is highly price-sensitive.

Distribution: Marriott has a strong direct booking strategy, with a loyalty program that incentivizes customers to book directly. The company also partners with OTAs to reach customers who prefer to book through those channels. Marriott is investing in digital marketing to reach customers where they are, including social media and mobile apps.

Market Share Stability: Marriott is one of the largest hospitality companies in the world, with a strong brand reputation and customer loyalty. The company is investing in technology and innovation to stay ahead of competitors and maintain market share. Marriott is also expanding its portfolio of brands to appeal to a wider range of customers and capture market share in new segments.

Marriott stands out due to a focus on quality, customer service, and innovation. The company's loyalty program, Marriott Bonvoy, is a key differentiator, offering customers rewards and exclusive experiences. Marriott also invests heavily in technology, with initiatives such as mobile check-in and keyless entry. The company has also made a commitment to sustainability. These differentiate MAR from competitors and build customer loyalty.

FINANCIAL ANALYSIS

Peer Firm Analysis: We took companies such as Hilton, Hyatt, and Wyndham to compare Marriott's performance relative to them. Marriott's **EPS** is above the industry's average, meaning MAR has enough ability to make more money than most other companies in the industry for each share of stock. The **Enterprise value/Revenue** for MAR is in the bottom 25% of the industry. A lower EV/R is could show that the company is relatively undervalued. **EV/EBITDA** determines the entire value of a business with the amount of EBITDA it earns on an annual basis. This ratio show many times EBITDA they have to pay, were they to acquire the entire business. MAR's EV/EBITDA is among the average of the whole industry, meaning that based on EBITDA, MAR is not undervalued in the industry. Marriott is trading at 16.84 multiples of its EBITDA. The **EV/FCFF** is a determinant of The EV/FCF valuation multiple is a ratio comparing a company's enterprise value to its free cash flow to firm (FCFF). The greater the premium attached to a dollar of a company's unlevered free cash flow. For MAR, they have a moderate level of EV/FCF compared to other companies in the same industry, meaning investors are not that much willing to pay for each dollar of unlevered free cash flow.

Source: SEC, Marriott Website, Capital IQ, Mergent Online

Historical Performance

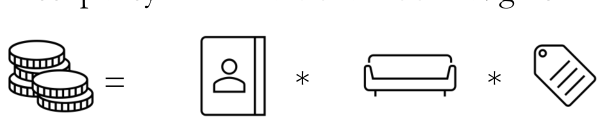
Ratios / Dates	2018	2019	2020	2021	2022
Valuation Ratios					
P/E ratio	19.69	39.92	-160.97	49.20	20.49
P/B ratio	16.87	72.28	99.95	38.24	85.05
Dividend Payout Ratio	0.28	0.48	-0.58	0.00	0.14
Profitablity Ratios					
Net profit margin	0.09	0.06	-0.03	0.08	0.11
ROE	0.86	1.81	-0.62	0.78	4.15
ROS	0.13	0.10	0.00	0.12	0.17
ROIC	0.19	0.13	0.00	0.13	0.24
Growth Rates					
EPS Growth Rate	40.10%	-29.75%	-121.42%	-509.85%	116.41%
Dividend Growth Rate	20.90%	18.60%	-73.97%	-100.00%	NA
Sales Growth Rate	4.40%	1.03%	-49.59%	31.09%	49.91%
EBIT Growth Rate	5.30%	-25.77%	-101.05%	-7719.05%	119.81%
Net Income Growth rate	30.70%	-33.25%	-120.97%	-511.61%	114.56%
Liquidity Ratios					
Current Ratio	0.42	0.47	0.49	0.57	0.45
Quick Ratio	0.38	0.39	0.46	0.53	0.42
Operating Efficiey Ratios					
Total Asset Turnover	0.88	0.86	0.42	0.55	0.82
Leverage Ratios					
Total Debt to Total Cap	0.81	1.02	1.04	0.97	1.04
LT Debt to Total Cap	0.74	0.86	0.85	0.81	0.88
Total Debt to Equity	4.20	16.82	26.18	7.95	19.54
Coverage Ratios					
Time Interest Earned (TIE)	7.90	5.06	-0.05	3.81	8.73
Debt Service Coverage	8.56	5.92	0.73	4.33	9.21

Future Expectation

Ratios / Dates	2023E	2024E	2025E	2026E	2027E
Valuation Ratios					
P/E ratio	29.82	TBD	TBD	TBD	TBD
P/B ratio	51.55	TBD	TBD	TBD	TBD
Dividend Payout Ratio	0.30	0.30	0.30	0.30	0.30
Profitablity Ratios					
Net profit margin	0.07	0.08	0.08	0.08	0.08
ROE	1.73	1.24	0.97	0.81	0.69
ROS	0.11	0.11	0.11	0.11	0.12
ROIC	0.20	0.23	0.26	0.30	0.35
Growth Rates					
EPS Growth Rate	-15.72%	12.34%	12.00%	11.70%	11.44%
Dividend Growth Rate	86.07%	12.34%	12.00%	11.70%	11.44%
Sales Growth Rate	24.83%	8.07%	8.10%	8.13%	8.16%
EBIT Growth Rate	-20.83%	10.57%	10.44%	10.32%	10.22%
Net Income Grwoth rate	-19.95%	12.34%	12.00%	11.70%	11.44%
Liquidity Ratios					
Current Ratio	0.48	0.60	0.72	0.84	0.95
Quick Ratio	0.44	0.56	0.68	0.80	0.91
Operating Efficiey Ratios					
Total Asset Turnover	0.98	0.97	0.98	0.99	0.99
Leverage Ratios					
Total Debt to Total Cap	0.97	0.93	0.88	0.83	0.78
LT Debt to Total Cap	0.90	0.86	0.81	0.76	0.70
Total Debt to Equity	10.04	6.43	4.54	3.39	2.63
Coverage Ratios					
Time Interest Earned (TIE)	6.95	7.69	8.49	9.37	10.33
Debt Service Coverage	7.82	8.56	9.36	10.24	11.20

Revenue Growth

Annual Revenue = ADR (average daily rate) * Occupancy * Annual Total Room Nights



The growth rate of total revenue would be the geometric average return of the 3 factors

	ADR	OCC	ROOMS
	2018-2022 CAGR	2018-2022 Fixed	Growth from Annual Report
Comparable Company-Operated Properties			
U.S. & Canada	5%	75%	5%
International	0%	71%	5%
Comparable Systemwide Properties			
U.S. & Canada	3%	74%	5%
International	0%	71%	5%

FINANCIAL ANALYSIS (Continued)

Firm's historical financial performance:

We examined key financial and operational metrics such as **revenue, net income, ROE, occupancy** and **ADR (Average Daily Rate)**. Marriott has shown steady revenue growth over the past years, with an increase from $12.9 billion in 2011 to $21.6 billion in 2019. However, the COVID-19 pandemic disrupted this trend in 2020, resulting in a decline in revenue to $10.6 billion. Similarly, net income rises from $610 million in 2011 to $1.2 billion in 2019 but becomes a net loss of $267 million in 2020 due to the pandemic. Marriott's ROE, a measure of profitability relative to shareholders' equity, has remained strong over the past decade, with an average about 25%. Regarding operational metrics, Marriott has maintained a high occupancy rate, averaging about 73% over the past decade, except for a sharp decline to 33% in 2020 due to the pandemic. ADR has also grown steadily over the past years. Overall, Marriott has been performing well financially and operationally, with continued revenue and net income growth, strong profitability and high operating metrics. However, the pandemic has left a significant impact on the company's financial performance, resulting in lower revenues and net income.

VALUATION ANALYSIS —— KEY ASSUMPTIONS

1. REVENUE GROWTH

The main business segments of Marriott could be divided in 2 dimensions: Geographical & Operational. Geographical meaning Marriott has two main revenue generating regions: U.S. & Canada AND International. Operational meaning Marriott's properties are either operated by company itself or systemwide properties that do not operate directly by Marriott. And as referred in the exhibit 'Revenue Growth' on the left, we can get the total operating revenue generated by Marriott through the analysis of the 3 factors (ADR, OCC, ROOMS) and the 4 segments (U.S. & Canada AND International With either Company operated OR Systemwide.

ADR: From the data gathered, we can see that the CAGR ADR growth rate is about 5% and 3% in U.S. & Canada for Company operated and systemwide properties. 0% in international for Company operated and systemwide properties. The daily rate has already recovered to the Pre-Covid level. Therefore, we believe the ADR growth should be maintain relatively stable for the coming years. (CAGR growth formula: $\text{CAGR} = \left(\frac{V_{\text{final}}}{V_{\text{begin}}}\right)^{1/t} - 1$)

OCC: From the historical data, the Pre-Covid OCC has been stable for about 74%-75% and 71% for U.S. & Canada and International, respectively, therefore, we estimate that since Covid has come to an end, the OCC will also recover to the Pre-Covid level.

ROOMS: Based on the historical annual reports, the rooms growth rate has been stable for about 5% more than 5 years, therefore, the short-term future growth rate would be 5%.

2023 Growth: Combining the components' growth, we estimated the value would be 23.0% for U.S. & Canada, and 30.7% for International. (It is significantly large since 2023 would be the first year Marriott recovered from COVID)

2024-2027 Growth: Since OCC has recovered to Pre-Covid era and not expected to have any growth, the combined total revenue growth would be slowed down to 9.1%/4.7% for U.S. & Canada and International, respectively.

TERMINAL GROWTH:

It would be hard to predict the growth rates after 5 years with limited information, therefore, we estimated the terminal growth to be the sum of population growth and inflation rate since hospitality industry relies on the population growth significantly (more people, more bookings)

- POPULATION: U.S. & Canada - 0.42%; International - 0.76%
- INFLATION: World - 3.25%

Terminal growth: 3.77% (30% weight for international and 70% for U.S. & Canada based on Revenue)

Source: SEC, Marriott Website, Capital IQ, Mergent Online, U.S. Treasury Department, The World Bank, Damodaran, Yahoo Finance

Tax Rate Estimation

Years	2018	2019	2020	2021	2022	2023-2027E
U.S. statutory tax rate	21	21	21	21	21	21
U.S. state income taxes, net of U.S. federal tax benefit	2.5	1.6	3.8	2.7	2.8	2.40
Non-U.S. income	-1	-3.3	**12.5**	-0.5	-0.5	-1.33
Change in valuation allowance	2.6	3.4	**-20**	-0.7	0.4	1.43
Change in uncertain tax positions	1	1.9	**12.2**	**-12**	0.3	1.07
Change in U.S. tax rate	-1.7	0	0	0	0	-0.43
Permanent items	0	1.3	**9.4**	-0.5	-0.2	0.15
Tax on asset dispositions	-2.9	-0.7	0	-0.7	0	-1.08
Excess tax benefits related to equity awards	-1.8	-3.2	**6.4**	-2.8	-0.7	-2.13
U.S. tax on foreign earnings	0	0.1	-3	0.4	0.2	0.18
Other, net	-1	-1.7	0.6	-0.1	1	-0.45
Effective rate	18.7	20.4	42.9	6.8	24.3	**20.82**

WACC Conclusion

	Values	Weights		
Cost of Debt			Final Cost of Equity	11.70%
Net Interest	3.74%	10%	Final Cost of Debt	4.77%
YTM	4.99%	80%	Tax Rate	20.82%
Debt Yield	4.04%	10%	Equity	$47,129.60
Cost of Equity			Debt	$10,591.00
Gordon Growth	5.42%	15%	Equity Weight	82%
CAPM	13.81%	60%	Debt Weight	18%
Earnings Cap	4.11%	5%		
Risk Premium	12.01%	20%	**Determined WACC**	**10.25%**

COE Conclusion

Gordon Dividend Model (15%)	
Expected Dividend Per share	1.84
Present Stock Price (End of 2022)	148.91
Long-term Dividend Growth	4.19%
Cost of Equity	**5.42%**
CAPM (60%)	
Risk-Free Rate (T. Bill)	4.42%
Beta	1.58
Equity Risk Premium (FCFE)	5.94%
Cost of Equity	**13.81%**
Earnings Capitalization (5%)	
Expected EPS (2023)	6.13
Present Stock Price (End of 2022)	148.91
Cost of Equity	**4.11%**
Risk Premium (20%)	
Risk-Free Rate (T. Bill)	4.42%
Historical Average Return on Equity	8.77%
Historical Average Rf Return	1.18%
Cost of Equity	**12.01%**

VALUATION ANALYSIS —— KEY ASSUMPTIONS (Cont'd)

2. TAX RATE

According to the annual reports, the effective tax rate is broken up into many segments as shown in the Exhibit: Tax rate estimation on the left. Through this data, we estimated the final tax rate through the sum of each tax items, some years' data are excluded due to the abnormal and non-recurring Covid era. The final tax rate determined is 20.82%

3. WACC (Weighted Average Cost of Capital)

Cost of Debt:

Net Interest: This method calculates by looking at the net interest expense (interest expense minus interest income) and net debt.

YTM: Yield to Maturity (YTM) considers various factors such as coupon rates, maturity dates, and bond ratings. The implied cost of debt for this method is 4.99%.

Debt Yield method: This method involves calculating the effective interest rate for each bond based on their respective weights.

Cost of Equity:

Gordon Dividend growth: Through dividend data from the last 10 years, we compared the Quarterly Growth and Annual Growth for 5 and 10 years.

CAPM: Estimated Beta using methods of slope and Cov/Var and compared with Capital IQ beta value.

Earnings Capitalization: By historical and forecast data.

Risk Premium: Using 10 years T. Bill rate,10 years of historical average ROE and RF return.

Market Weight of Equity (82%); Book Weight of Debt (18%)

Key Weightings:

Cost of Debt: YTM (80% weight): Yield to Maturity (YTM) is a widely used method for estimating the cost of debt, as it considers both the interest payments and the bond's capital gains or losses. By assigning an 80% weight, the YTM method is given the most significance due to its comprehensive nature.

Cost of Equity: CAPM (60% weight): The Capital Asset Pricing Model (CAPM) is a popular and widely used method for estimating the cost of equity, incorporating risk factors like beta and equity risk premium. A 60% weight gives significant importance to this method, reflecting its widespread use and comprehensiveness. The **Risk Premium method** uses historical average returns to estimate the cost of equity. A 20% weight recognizes the importance of historical data in estimating future returns but balances it with other methods to avoid relying solely on past performance. Final Determined WACC is 10.25%

4. Other Important Assumptions

Depreciation, amortization, and other: Historical average % of PPE

Interest expense: Historical average % of Total Financing Debt

Interest income: Fixed 4% of Cash and Equivalents

Equity in earnings: Historical average % of Equity Method Investments

Land: 300m increase in 2023 as stated in Annual Report, then stable.

Buildings and leasehold improvements: Historical Average % of land

Furniture and equipment: Selected average of Buildings and Improvements

Accumulated depreciation: last year % of Fixed Assets

Indefinite-lived Intangible Brand Assets & Goodwill & Long-term debt: Fixed

Current portion of long-term debt: Historical average % of Long-term Debt

Deferred tax liabilities: Historical average % of Tax expense

Dividends: Historical average % of net income

Other factors are mostly historical or selected historical average of total revenue.

Source: SEC, Marriott Website, Capital IQ, Mergent Online

Sensitivity of Full Proforma

The Colored cell meaning prices higher than base case price.

$ 174.2	1.75%	2.00%	2.25%	2.50%	2.75%	3.00%	3.25%	3.50%	3.75%	4.00%	4.25%
8.00%	177	185	193	202	211	222	234	247	262	279	298
8.25%	170	177	185	193	202	212	223	235	248	263	279
8.50%	164	171	178	185	194	203	212	223	235	249	263
8.75%	159	165	171	178	186	194	203	213	224	236	249
9.00%	153	159	165	172	179	186	195	204	213	224	236
9.25%	149	154	159	166	172	179	187	195	204	214	225
9.50%	144	149	154	160	166	172	179	187	195	205	214
9.75%	140	144	149	155	160	166	173	180	188	196	205
10.00%	136	140	145	150	155	161	167	173	180	188	196
10.25%	136	140	145	150	155	161	167	173	180	188	196
10.50%	128	132	136	141	145	150	156	161	167	**174**	181
10.75%	125	129	132	137	141	146	151	156	162	168	**174**
11.00%	122	125	129	133	137	141	146	151	156	162	168
11.25%	119	122	125	129	133	137	142	146	151	157	162
11.50%	116	119	122	126	129	133	138	142	147	152	157
11.75%	113	116	119	123	126	130	134	138	142	147	152
12.00%	110	113	116	119	123	126	130	134	138	143	147

Sensitivity of Simplified Proforma

The Colored cell meaning prices higher than base case price.

$ 274.2	1.75%	2.00%	2.25%	2.50%	2.75%	3.00%	3.25%	3.50%	3.75%	4.00%	4.25%
8.00%	278	289	301	314	328	344	361	380	401	425	453
8.25%	269	279	290	302	315	329	344	362	381	402	426
8.50%	260	269	280	290	302	315	330	345	362	382	403
8.75%	252	261	270	280	291	303	316	330	346	363	383
9.00%	244	252	261	271	281	292	304	317	331	347	364
9.25%	237	245	253	262	271	281	292	304	317	332	347
9.50%	231	238	245	254	262	272	282	293	305	318	332
9.75%	224	231	238	246	254	263	**272**	283	294	306	319
10.00%	219	225	232	239	246	255	263	**273**	283	294	306
10.25%	219	225	232	239	246	255	263	**273**	283	294	306
10.50%	208	214	219	226	233	240	247	256	265	**274**	284
10.75%	203	208	214	220	226	233	240	248	256	265	275
11.00%	198	203	209	214	220	227	234	241	248	257	266
11.25%	194	199	204	209	215	221	227	234	241	249	257
11.50%	190	194	199	204	210	215	221	228	234	242	249
11.75%	186	190	195	200	205	210	216	222	228	235	242
12.00%	182	186	191	195	200	205	210	216	222	229	235

Crystal Ball Simplified Model Sensitivity

Assumptions	Contribution To Variance	Rank Correlation
WACC	86.9%	-0.94
2024-2027 NA Growth	8.3%	0.29
2024-2027 INTL Growth	1.3%	0.12

KEY ASSUMPTIONS SCENARIO ANALYSIS

WACC

Optimistic Scenario - 8%: If the value of MAR is generally admitted by public, thus the Beta (volatility) of the MAR stock decreased for about 58% to 1, the WACC would be 8%

Pessimistic Scenario: 12%: Vice versa, the Beta (volatility) would rise about 58% to 2.4. the WACC would be 12%

Terminal Growth

Optimistic Scenario - 4.25%: If the terminal annual population growth of U.S. & Canada AND international rise to 0.8% and 1.4%, the implied terminal growth would be 4.25%

Pessimistic Scenario - 1.25%: If the terminal annual population growth of U.S. & Canada AND international decreased all 0%, and the global economy went down to recession, the inflation decreased to 1.25%, the terminal growth would also be 12.5%.

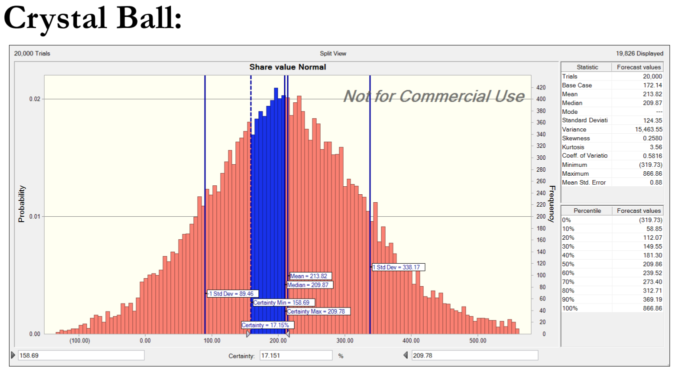
VALUATION ANALYSIS —— FULL PROFORMA DCF MODEL

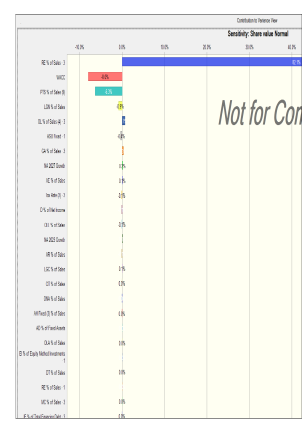
FCF Calculation:

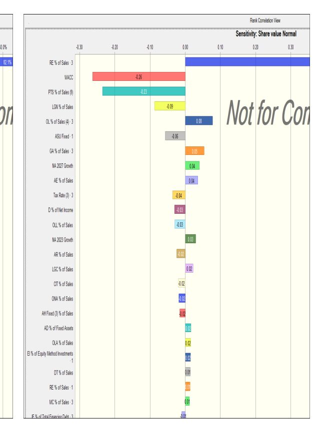
The full Proforma DCF valuation calculates the value of the company's equity as $56,506.23 by adding the enterprise value of $67,097.23 and initial cash and market securities of $507.00, then subtracting the firm's debt value of $11,098.00. The share value (base case) is calculated as $174.19.

Sensitivity: After averaging the prices higher than the base case scenario and the prices lower than the base case scenarios, we get the Optimistic and Pessimistic prices for this valuation: 206.75/144.03.

Crystal Ball:







From the Monte Carlo tests of 20,000 trials, we found we have about 72% certainty that the base case price for this valuation is higher than current stock price, the mean value is 213.82 and the median is 209.87. The most contributing variable is "RE % of Sales", which is Reimbursed expenses that took a significant amount of expenses. The second one is the WACC, and the third one is surprisingly to be the "PTS % of Sales", it is important due to a significant negative effect on the shareholder's equity. The ranking is similar for the correlation test results.

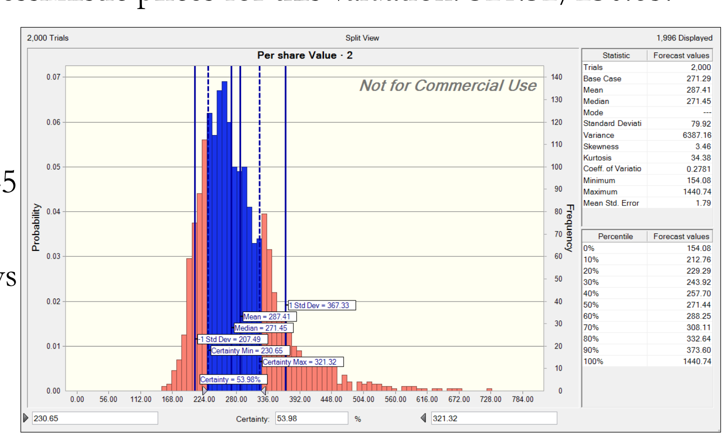
VALUATION ANALYSIS —— SIMPLIFIED PROFORMA DCF MODEL

FCF Calculation:

This method results in a per-share value of $274.25 based on the number of shares outstanding.

Sensitivity: Similarly, the Optimistic and Pessimistic prices for this valuation: 321.32/230.65.

Crystal Ball: After 2,000 trials, we found that we have nearly 100% certainty to say that the base case price is higher than the current price. Mean: 287.41, Median: 271.45 As expected, the most impacting factor is WACC and terminal growth for NA follows terminal growth for international is the lowest contributing factor.

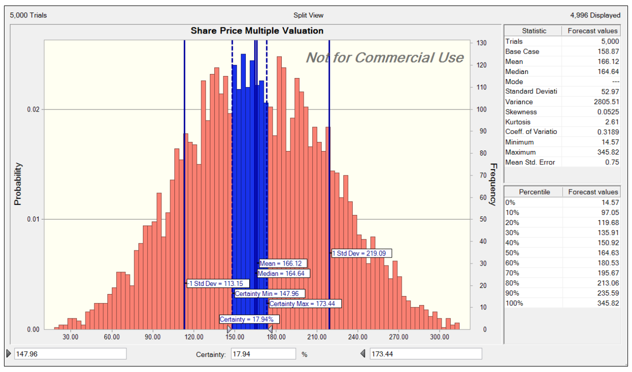


Multiples Valuation Model

Companies	Price/EPS	EV/Revenue	EV/EBIT	EV/EBITDA	Price/Revenue	EV/FCFF
Hilton Worldwide Holdings Inc.	27.71	11.35	18.93	18.66	9.15	26.1
Hyatt Hotels Corporation	21.69	3.81	29.86	14.77	2.96	20
Hilton Grand Vacations Inc.	12.93	2.22	10.60	8.24	1.25	13.1
Travel + Leisure Co.	8.50	2.30	11.87	10.29	0.83	1.9
Norwegian Cruise Line Holdings Ltd.	-2.26	3.84	-11.99	-25.08	1.06	-40
Las Vegas Sands Corp.	20.03	11.21	-484.95	182.10	8.94	-832.5
Choice Hotels International, Inc.	18.62	5.09	14.24	13.25	4.25	21.2
Marriott Vacations Worldwide Corporation	13.91	2.90	11.98	10.27	1.57	12.7
Accor SA	16.73	1.98	18.73	14.05	1.42	28.6
Wyndham Hotels & Resorts, Inc.	18.15	5.98	15.71	13.46	4.65	16.4
Marriott International, Inc.	**20.49**	**2.78**	**16.41**	**15.56**	**2.27**	**17.58**
High	27.71	11.35	29.86	182.10	9.15	28.60
Low	-2.26	1.98	-484.95	-25.08	0.83	-832.50
Mean	15.60	5.07	-36.50	26.00	3.61	-73.25
Median	17.44	3.82	13.11	13.36	2.27	14.75
Q1	13.17	2.45	10.92	10.28	1.30	4.60
Q3	19.68	5.75	17.98	14.59	4.55	20.90
IQR	6.50	3.30	7.06	4.31	3.26	16.30
Lower Bound	3.42	-2.50	0.33	3.81	-3.59	-19.85
Upper Bound	29.43	10.71	28.57	21.06	9.44	45.35
Mean Excluded Outliers	17.59	3.52	14.58	12.87	3.61	17.50

The Colored cells meaning the values are lower than MAR, the Boxed cells meaning the values selected for Multiples valuation.

Crystal Ball:



We found a certainty of 68% that the future price would be higher than current price, mean is 166.12, median is 164.12

	Contribution to Variance	Rank Correlation
Price/Revenue	51%	0.70
EV/Rev	23%	0.47
EV/EBIT	12%	0.34
Price/EPS	6%	0.24
EV/EBITDA	4%	0.20
EV/FCFF	1%	0.10
Weighting EV/Revenue	1%	0.10
Weighting Price/Revenue	0%	0.04
Weighting Price/EPS	0%	0.03

VALUATION ANALYSIS —— MULTIPLES VALUATION

As we can see from the table on the left, the yellow cells are taking a significant portion of the table, signaling that the investors are generally giving a high valuation multiple for Marriott due to its monopoly position in the market and the optimistic future growth, therefore, in this multiple valuation, we are also giving a relatively medium to high multiples for Marriott.

Rationales:

By using a combination of mean, median, and mean excluded outliers' values, we aim to minimize potential distortions caused by extreme values and gain a more accurate representation of the industry's valuation characteristics. Our selection considers the data provided in the industry summary statistics:

1. Price/Earnings (Price/EPS): We selected17.59 to eliminate the impact of potential outliers.
2. Enterprise Value/Revenue (EV/Revenue): We opted for the Median value of 3.82. Provides a more balanced assessment of the company's value relative to its revenue generation.
3. Enterprise Value/EBIT (EV/EBIT): Similar to Price/EPS, we chose 14.58 for this ratio to minimize the impact of extreme values on the valuation, which range from -484.95 to 29.86.
4. Enterprise Value/EBITDA (EV/EBITDA): We selected the Median value of 13.36 for this metric, as it serves as the midpoint of the industry data that ranges from -25.08 to 182.10. This choice ensures a balanced assessment of the company's value relative to its EBITDA.
5. Price/Revenue (Price/Revenue): We chose the Mean value of 3.61 for this ratio. While it may be subject to the impact of extreme values, this still provides a reasonable estimate of the company's valuation.
6. Enterprise Value/Free Cash Flow to the Firm (EV/FCFF): We opted for value of 17.50, as it minimizes the influence of extreme values on the valuation, which range from -832.50 to 28.60.

Weightings in Scenarios:

Base Case (20% 15% 20% 20% 15% 10%): We assume a stable and moderate growth environment. We assign higher weights to Price/EPS (17.59), EV/EBIT (14.58), and EV/EBITDA (13.36) at 20% each, as they are key indicators of profitability and cash flow generation, which are essential for evaluating Marriott's overall performance. We give 15% weight to both EV/Revenue (3.82) and Price/Revenue (3.61) as they represent the company's value relative to its revenue generation. Lastly, we assign a 10% weight to EV/FCFF (17.50), as it focuses on cash flow generation, which is an important factor but less critical compared to the other multiples in this scenario.

Pessimistic Case (30% 15% 20% 20% 5% 10%): We assume a more challenging environment with slower growth or potential setbacks. We increase the weight of Price/EPS (17.59) to 30%, as earnings stability becomes more crucial during uncertain times. The weights for EV/EBIT (14.58) and EV/EBITDA (13.36) remain at 20% each, reflecting their importance in assessing profitability and cash flow generation. We maintain a 15% weight for EV/Revenue (3.82) but reduce the weight of Price/Revenue (3.61) to 5%, as revenue might be more volatile in a challenging environment. Finally, we keep the weight of EV/FCFF (17.50) at 10%, as it remains a relevant measure of cash flow generation.

Optimistic Case (20% 20% 15% 15% 25% 5%): We assume a strong growth environment with favorable market conditions. We maintain a 20% weight for Price/EPS (17.59) but increase the weight of EV/Revenue (3.82) to 20%, reflecting the potential for revenue growth in a favorable market. We reduce the weights of EV/EBIT (14.58) and EV/EBITDA (13.36) to 15% each, as profitability and cash flow generation remain important but slightly less critical in a high-growth scenario. We assign a higher weight of 25% to Price/Revenue (3.61) to emphasize the company's ability to capitalize on growth opportunities. Lastly, we decrease the weight of EV/FCFF (17.50) to 5%, as other multiples become more prominent in a positive environment.

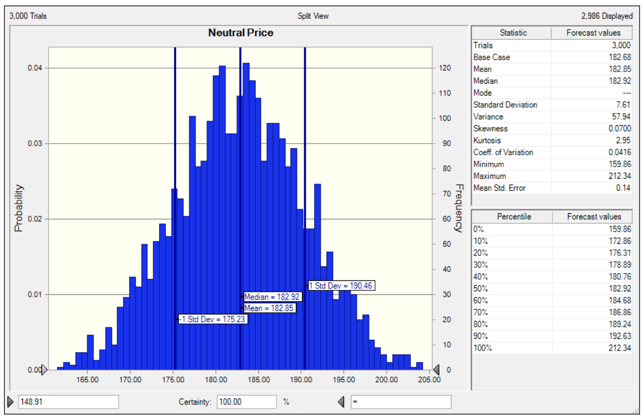
DELAWARE BLOCK

Yellow colored cells meaning it is higher than current price.

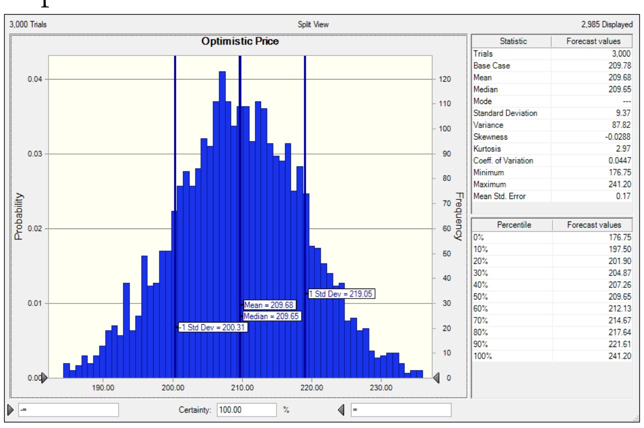
	Pessimistic	Optimistic	Neutral	Weight
Full Proforma DCF	144.03	206.75	174.19	**42.5%**
Simplified Proforma DCF	230.65	321.32	274.25	**15.0%**
Multiples	147.96	173.44	158.87	**42.5%**
Current Stock Price (12/31/2022)	148.91			
% UP/DOWN	6.57%	40.88%	22.68%	
Determined Valuation Range	**158.69**	**209.78**	**182.68**	

Crystal Ball Tests on Weights

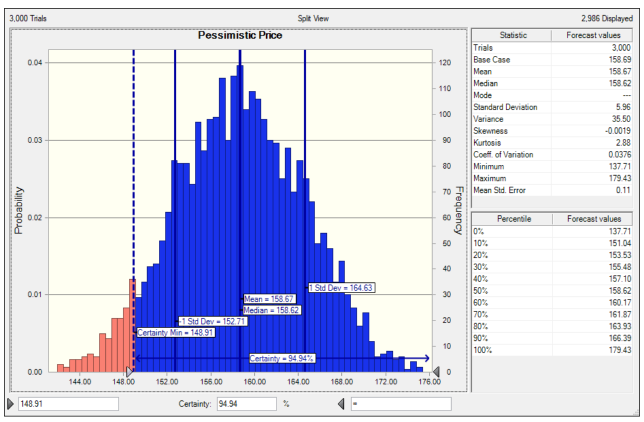
Neutral Case:



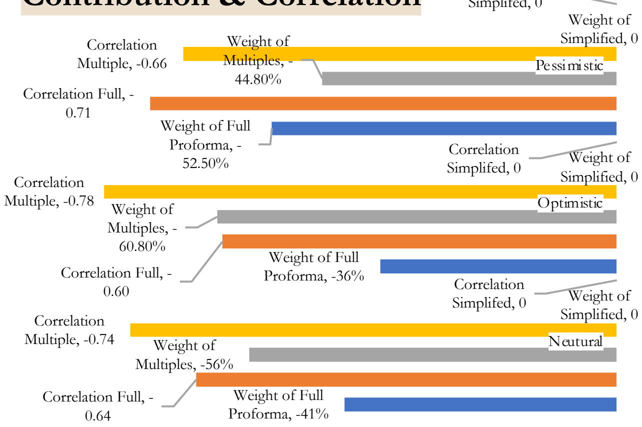
Optimistic Case:



Pessimistic Case:



Contribution & Correlation



VALUATION CONLUSION ANALYSIS

By assigning various weights (42.5%, 15%, 42.5%), we aim to create a balanced valuation that incorporates a variety of perspectives.

Full Proforma DCF (42.5% weight): This approach is a comprehensive and detailed method of valuation that takes into account a wide range of factors, including projected cash flows, growth rates, and discount rates. By assigning a relatively high weight of 42.5% to this method, we emphasize the importance of considering Marriott's future cash flows and the company's ability to generate value over the long term. We believe that a significant portion of the company's valuation should be driven by a thorough analysis of its future prospects.

Simplified Proforma DCF (15.0% weight): The Simplified Proforma DCF approach is a more streamlined version of the Full Proforma DCF method, focusing on key factors such WACC and growth rates, and being too optimistic. It may not capture the full range of details considered in the Full Proforma DCF method. Thus we assign a lower weight of 15.0% to this approach, reflecting its relative simplicity and the potential for the omission of relevant factors.

Multiples (42.5% weight): The Multiples approach offers a comparative perspective on Marriott's valuation, taking into account how the company is valued relative to its industry peers. This method considers various valuation multiples, such as Price/Earnings, EV/Revenue, and EV/EBITDA, to gauge the company's performance and value in comparison to other companies in the industry. By assigning a weight of 42.5% to this approach, we emphasize the importance of understanding Marriott's position within the market and its relative value compared to competitors. Combining the prices and weights together, we get the conclusion as the table on the left shows, supporting our **BUY** recommendation.

INVESTMENT RISKS

Primary Risks:

Competition: The hotel industry is highly competitive, and Marriott's competitors include other major hotel chains such as Hilton, Hyatt, and Accor. These competitors have their own loyal customer base and are expanding their reach globally, which could pose a challenge to Marriott's growth. Moreover, the rise of sharing economy platforms such as Airbnb, which offer affordable accommodations, poses a threat to traditional hotel chains. While Marriott has been successful in adapting to the changing market conditions by launching its own homes-haring platform, Homes & Villas by Marriott International, it still faces significant competition in this space.

Growth Restricted: The company's growth is dependent on several factors, including the economic of the markets in which it operates, regulatory restrictions, and the availability of finance condition. In addition, the COVID-19 pandemic has had a significant impact on the travel and hospitality industry, and it may take time for the industry to fully recover. The pandemic has also resulted in travel restrictions and reduced demand for hotel rooms, which could negatively impact Marriott's financial performance.

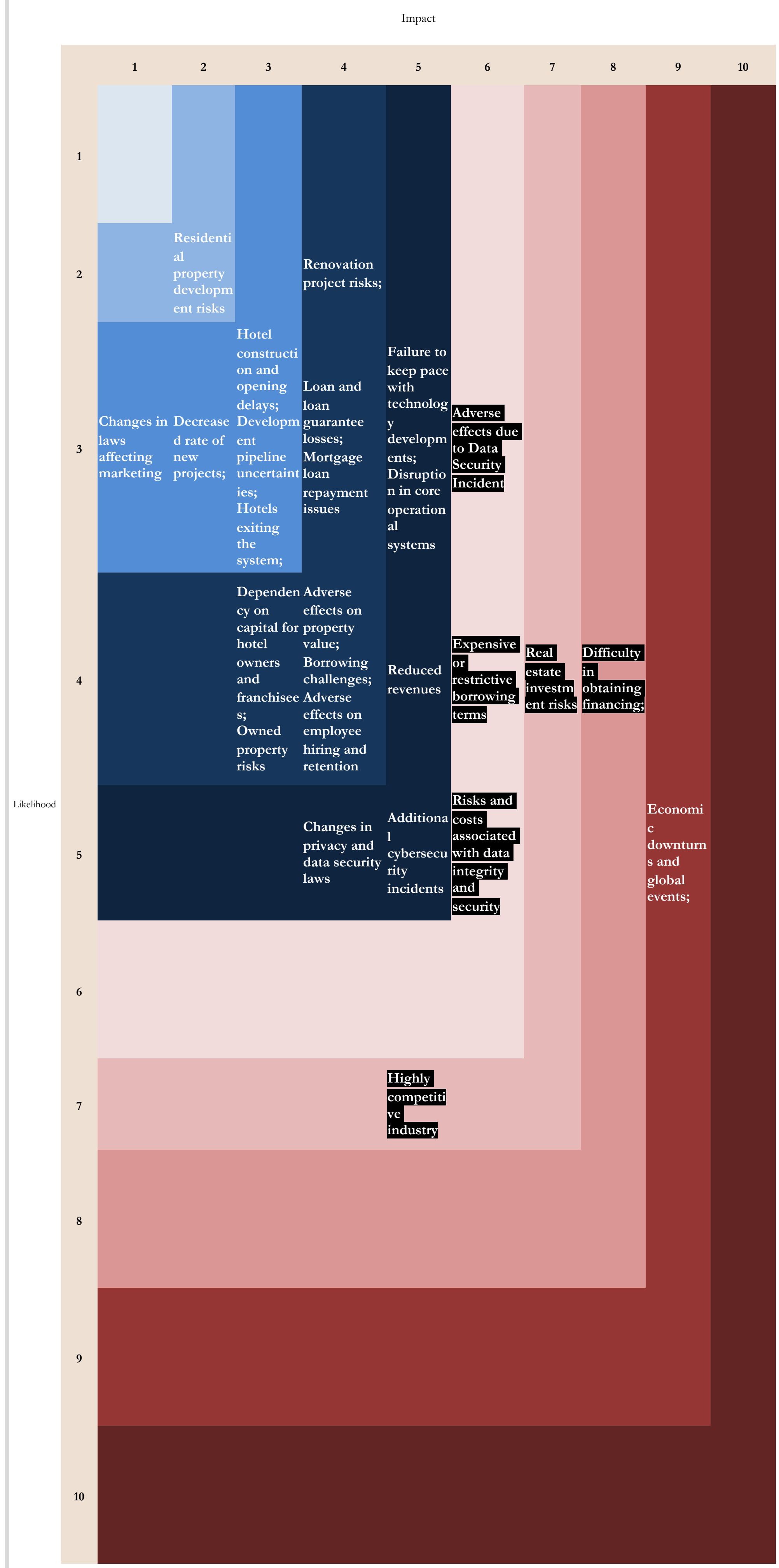
Habits Changed from COVID: The COVID-19 pandemic has also led to changes in consumer behavior and preferences. For instance, consumers may be more inclined to choose contactless services, such as mobile check-ins and keyless entry systems, over traditional methods. Marriott has already taken steps to address this trend, including launching a mobile app that allows guests to check-in and access their rooms using their smartphones. However, it is still unclear how long-lasting these changes in consumer behavior will be and whether they will have a lasting impact on the hospitality industry.

Financials: Any disruption in these factors, such as a decline in occupancy rates due to the pandemic or an economic downturn, could negatively impact Marriott's financial performance. Moreover, the company has a significant amount of debt, which could impact its ability to invest in future growth opportunities or respond to changing market conditions.

RISKS LISTS

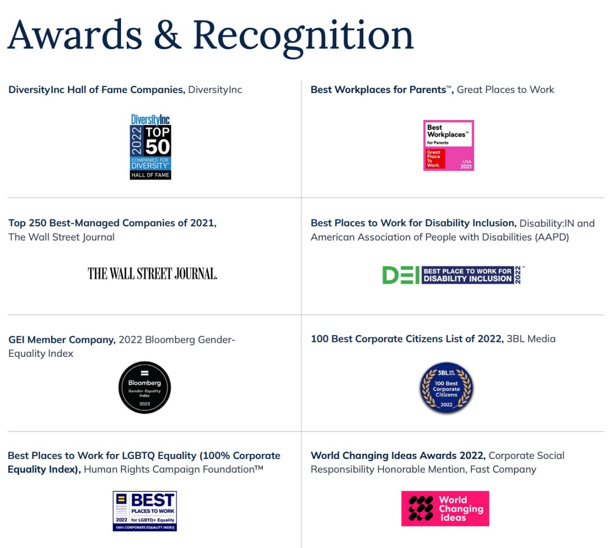
Highly competitive industry: Marriott faces competition from major hotel chains, regional chains, independent hotels, and home-sharing services.
Economic downturns and global events: Economic conditions, pandemics, natural disasters, geopolitical conflicts, and other events can negatively impact Marriott's business, financial results, and growth.
Reduced revenues: Various factors can reduce revenues at Marriott's hotels, impacting their ability to meet expenses and pay amounts owed.
Adverse effects on property value: Global events and economic downturns can affect the value of Marriott's owned and leased properties or investments.
Difficulty in obtaining financing: Economic conditions can make it harder for hotel owners and franchisees to obtain financing on favorable terms.
Hotel construction and opening delays: Economic downturns can cause delays in hotel construction and opening.
Decreased rate of new projects: Adverse economic conditions may slow down the rate at which new projects enter Marriott's pipeline.
Hotels exiting the system: Various factors can cause hotels to exit Marriott's system.
Borrowing challenges: Marriott may face challenges in borrowing or raising cash to preserve financial flexibility, repay maturing debt, and manage debt maturities.
Expensive or restrictive borrowing terms: Economic conditions can cause the terms of Marriott's borrowing to be more expensive or restrictive.
Adverse effects on employee hiring and retention: Global events and economic downturns can negatively impact associate hiring and retention.
Failure to keep pace with technology developments: which could impair operations or competitive position.
Risks and costs associated with protecting the integrity and security of Company, associate, and guest data.
Adverse effects on business due to the Data Security Incident and other information security incidents.
Changes in privacy and data security laws: could increase operating costs and exposure to payment obligations and litigation.
Changes in laws could adversely affect the ability to market products effectively.
Dependency on capital for hotel owners and franchisees: Owners and franchisees may face difficulty accessing capital for new investments and improvements, which can impact Marriott's growth.
Real estate investment risks: Factors such as site availability, financing, local approvals, market conditions, and construction costs can affect Marriott's growth through management or franchise agreements.
Renovation project risks: Marriott may face challenges related to project cost, completion, and resale when acquiring and renovating hotel properties.
Owned property risks: Owned and leased properties are subject to risks related to real estate investments, such as difficulty in selling properties, income fluctuations, and local market conditions.
Residential property development risks: Participation in residential property development associated with Marriott's lodging brands can expose the company to additional risks, impacting profits and brand equity.
Development pipeline uncertainties: Hotels in Marriott's development pipeline may face cancellation or delays in opening, affecting the company's growth prospects.
Loan and loan guarantee losses: Marriott may suffer losses when hotel owners or franchisees default on loans or fail to reimburse the company for loan guarantees.
Mortgage loan repayment issues: If hotel owners cannot repay or refinance mortgage loans, Marriott's revenues and profits could decrease, harming the business.
Disruption in core operational systems: Any disruption in Marriott's reservation, loyalty program, or other core operational systems could adversely affect the company's performance and results.

RISKS IMPACT AND LIKLIHOOD



Source: SEC, Marriott Website, Capital IQ, Mergent Online

ESG Awards


Awards & Recognition

DiversityInc Hall of Fame Companies, DiversityInc

Best Workplaces for Parents™, Great Places to Work

Top 250 Best-Managed Companies of 2021, The Wall Street Journal

Best Places to Work for Disability Inclusion, Disability:IN and American Association of People with Disabilities (AAPD)

GEI Member Company, 2022 Bloomberg Gender-Equality Index

100 Best Corporate Citizens List of 2022, 3BL Media

Best Places to Work for LGBTQ Equality (100% Corporate Equality Index), Human Rights Campaign Foundation™

World Changing Ideas Awards 2022, Corporate Social Responsibility Honorable Mention, Fast Company

ESG 2021 and 2022 Performance

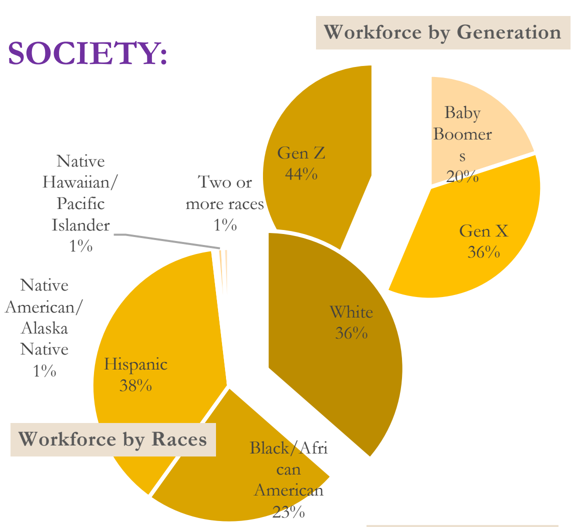
ENVIRONMENTAL:

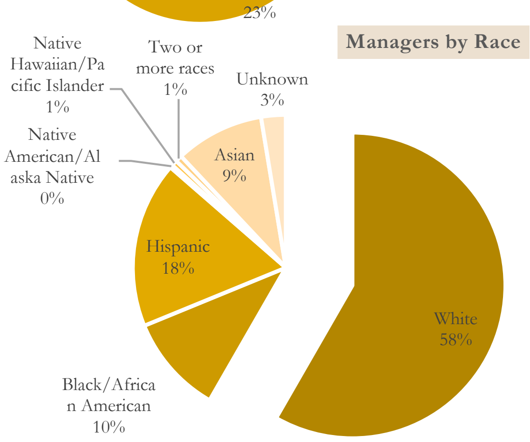
Carbon Intensity Reduction 25.60%

Energy Intensity Reduction 17.20%

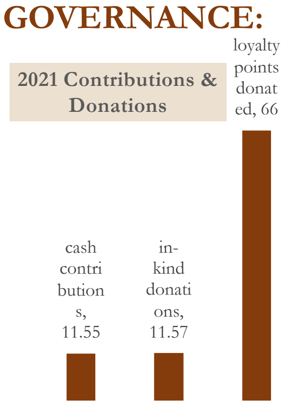
Water Intensity Rise 4.70%

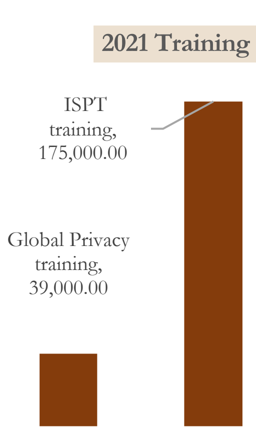
SOCIETY:





GOVERNANCE:





ENVIRONMENTAL, SOCIAL AND GOVERANCE

ENVIRONMENTAL

Marriott International Inc. shaped its operation to achieve environmental sustainability in the period between 2018 and 2022. The company followed its environmental sustainability goals set in previous years, notably the year 2016. By the year 2022, Marriott Inc. had reduced its carbon intensity by 25% from the year 2016 baseline Serve 360. (2022). The company did not achieve its water intensity reduction that was to be reduced from the year 2016 baseline of 15% Serve 360. (2022).

On the contrary the water intensity increased by 4.5% by the year 2022 and this showed that the company needs to adjust its water intensity reduction strategies. Similarly, Marriot Inc. failed to achieve its waste-to-landfill and food wastage reduction. The set reduction targets of 45% waste-to-landfill and 50% food waste reduction set in the year 2016 had not been achieved by 2016 Serve 360. (2022).

SOCIAL:

The impact of Marriot Inc.'s operational strategy for the period between 2018 and 2022 has been positive to a large extent despite not achieving some of its corporate social responsibility targets set in the year 2016. For example, besides targeting 15 million volunteer hours in 2016, the company had only achieved 6.3 million volunteer hours by the end of 2021 Serve 360. (2022). Half of the volunteer hours set in 2016 were meant to serve the children and the youth. However, only 33.3% of the cumulative volunteer hours had been used to serve children and the youth by the end of 2021 Serve 360. (2022). Marriot Inc. is on track in some of its societal improvement targets including representation of people of color in the USA and in the elevation of tourism in enhancing cultural understanding. The company achieved a 21.4% representation of people of color in executive positions Serve 360. (2022).This was close to the 25% target set in 2016. Marriot Inc. has invested a total of $150,000 in partnerships that promote the understanding of tourism and culture Serve 360. (2022).

GOVERNANCE:

Marriot Inc. corporate governance consists of institutional shareholders as well as insiders. The two groups own the entire company stake with the institutional shareholders holding 59.75% and the insiders owning 127.72% (WallStreetZen, 2023). John W. Marriott is the largest individual shareholder with a stake of 23.96 percent (WallStreetZen, 2023). The fact that the company is owned by insiders boosts the responsibility and focus on the insiders to push for performance and growth of the company. John W. Marriot Lii, the largest shareholder, is also at the center of the company's corporate governance. This boosts the performance of the board and the management of the company and businesses under Marriot Inc. Another indicator of good corporate governance in the company is the fact that the institutional shareholders have no direct influence on the operations and performance of the company. The Insiders have total control, and this can easily influence company growth.

MANAGING RISKS AND OPPORTUNITIES RELATED TO ESG

Marriott manages risks and opportunities related to ESG (Environmental, Social, and Governance) through various processes. The company continuously evaluates its environmental performance and communicates its commitments and progress in the annual Serve 360 Environmental, Social, and Governance Report. Marriott also evaluates future opportunities to meet the needs of its stakeholders. In September 2021, Marriott committed to setting a science-based target via the Science Based Targets initiative (SBTi), and set a goal to reach net-zero emissions by 2050 at the latest. Additionally, Marriott has sustainability and social impact goals for 2025 that it plans to continue implementing programs to advance towards their achievement despite being affected by the COVID-19 pandemic.

Source: SEC, Marriott Website, Capital IQ, Mergent Online

IDEAS TO IMPROVE THE INVESTMENT OPPORTUNITY

Achievable and Achieved Risks Mitigation Strategies:

Differentiation: Focus on distinguishing and driving preference for Marriott's lodging products and services, including loyalty programs, direct booking channels, and technology platforms.

Financial flexibility: Maintain a strong balance sheet and financial flexibility to navigate economic downturns and other adverse conditions.

Diversification: Diversify the portfolio of hotel properties and brands to reduce exposure to specific market risks.

Proactive risk management: Continuously monitor global events and economic conditions and develop plans to address potential risks.

Strategic partnerships: Establish and maintain strategic partnerships, such as co-branded credit cards, to enhance customer loyalty and generate additional revenue streams.

Talent management: Invest in employee development and retention initiatives to maintain a skilled workforce capable of managing various challenges.

Support financing options: Collaborate with hotel owners and franchisees to identify and support financing options that enable investments in property development and improvements.

Careful selection of projects: Choose real estate development projects strategically, considering factors such as location, market conditions, and potential growth.

Effective project management: Implement effective project management practices to minimize risks related to renovation activities, such as cost overruns and construction delays.

Diversification of property portfolio: Diversify the property portfolio to reduce exposure to risks associated with real estate investments.

Stringent due diligence for residential projects: Perform thorough due diligence before participating in residential property development projects to minimize risks and protect brand equity.

Monitor development pipeline: Closely monitor the development pipeline to identify and address potential risks that may affect the opening of new hotels.

Risk assessment for loans and guarantees: Conduct thorough risk assessments before providing loans or loan guarantees to minimize potential losses.

Collaborate with hotel owners: Work with hotel owners to address mortgage loan repayment issues and prevent negative consequences for Marriott's business.

Invest in technology and system resilience: Invest in maintaining, upgrading, and ensuring the resilience of core operational systems, such as reservation and loyalty program systems, to prevent disruptions and protect business performance.

Regularly refine, update, and replace technologies and systems to stay competitive and prevent obsolescence.

Ensure compliance with global laws, governmental regulations, and payment card industry requirements to protect personal data.

Address lawsuits, claims, and investigations related to the Data Security Incident and implement enhanced security measures to safeguard systems and data.

Continue implementing additional security measures to maintain the confidentiality, security, or availability of data.

Comply with changes in applicable data security and privacy laws and regulations, and contractual obligations to avoid increased costs and restricted business operations.

Adapt marketing strategies to comply with legal restrictions and maintain effectiveness in attracting new guests and customers.

CONCLUSION & RECOMMENDATION

Based on our analysis and estimation in this report, we have studies the business nature, market and industry, set up reasonable valuation models with appropriate assumptions, conducted tests with sufficient large trial amounts, analyzed the risks that hard to quantify, finally found our that Marriott's current stock price is highly undervalued, and the risks & volatility lies in this stock is considered controllable.

THIS STOCK CURRENTLY WORTH A BUY RECOMMENDATION

Other References & Citations:

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2. WallStreetZen. (2023, May 2). Who owns Marriott International? WallStreetZen. Retrieved May 3, 2023, from https://www.wallstreetzen.com/stocks/us/nasdaq/mar/ownership#:~:text=Marriott%20International%20Stock%20Ownership%20FAQ,John%20W.
3. Marriott International Publishes Latest Report on Environmental, Social, and Governance Progress | Marriott News Center..
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5. The major risks facing Marriott International amid the incessant global pandemic – CPP-LUXURY..
6. Marriott Q3 Earnings: Recovery Underway, Long Term Growth Drivers, Execution Risks Remain | Seeking Alpha..

Marriott INTERNATIONAL

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