Marriott case essay

Executive Summary We found the weighted average cost of capital for Marriott as a whole to be 9. 68%. The divisions of Lodging, Contract Services and Restaurants had WACCs of 8. 14%, 13. 33%, and 9. 63% respectively.

The only variable between these divisions that remains consistent is the tax rate. Marriott has a target rate for each of the divisions' capital structures, which affects their debt and equity betas. Also, there are stark differences between the betas in the segments, as well as the different assumptions a financial analyst must use when calculating risk-free and market rates for fixed and floating debt issuances. In order to calculate the WACC, we first estimated the cost of debt using the specific guidelines and actual data given.

We then used the cost of debt to calculate debt betas. These results were used to estimate unlevered equity betas for the three separate Marriott divisions, after which we were able to compute the four different WACCs by relevering the betas using the target debt-equity ratios and achieving new equity return benchmark rates. We also calculated unlevered returns and used these to estimate WACC. This yielded the same results. Cost of DebtThe weighted average cost of capital (WACC) for Marriott and its divisions is calculated by using the relevant costs of debt and equity.

As shown in table 1, Marriott has a target leverage rate of 60%, with 60% of its debt denominated in floating-rate securities, and 40% denominated in fixed-rate securities. Because of the time perspectives of each division, 8. 95% (the 30-year T-bill return) was chosen as the risk-free rate for fixed-rate debt for Lodging, while 8. 72% (the 10-year T-Bill Return) was chosen as the

risk-free rate for fixed-rate debt for Restaurants and Contract Services. We chose a risk-free rate for the floating-rate debt of 5. 46%, which was the most recent short-term Treasury bill return.

We applied the debt-rate premium above government interest rates to all three divisions in calculating our cost of debt. Marriott as a whole had a simple average of 8. 85% for cost of debt. It is important to note that should we have used the weighted average for overall cost of debt, this would have been 8. 52%. Lodging, Contract Services and Restaurants came in at 8.

31%, 8. 82%, and 9. 71% respectively. Unlevering the BetasWhen looking at the data in table 1, it becomes evident that the Lodging division has a higher debt % in capital than the Restaurant and Contract Services divisions.

This number impacts the weighted averages of the divisions' costs of debt, so we move forward to unlever the betas of Marriott and its competitors to examine more closely which beta should be applied in our WACC calculations. We used the average spread of 8. 47% between the S&P500 and the short-term Treasury bill for our market return benchmark rate, and continue to use 5. 46% as our risk free rate. 4% was used as the tax rate as this was the highest corporate tax bracket at the time. By using the CAPM model, we plug in the equity betas for Marriott and its competitors to find their return on equity.

Using the above assumptions, we then calculate the percentage of debt over equity in order to understand how levered Marriott's competitors are. By using our costs of debt from table 1, we arrive at the debt betas which we use for our unlevered beta calculations. However, because of the difference

between the peers' operations, we first have to estimate which cost of debt that would be relevant for each of the peers. Therefore the firms from the case are grouped into lodging, restaurants and contract services, after which the costs of debt from the relevant Marriott division is applied to each firm. If a firm operates in more than one industry, we used a simple average of the relevant costs of debt in order to calculate the total cost of debt for the specific firm.

The grouping can be seen in table 3. The unlevered beta calculation takes out the tax-shield effect to achieve the beta of a firm, if it had no debt. The unlevered return is the return that a firm's shareholders would expect should it be free from debt. This holds true for Marriott and all of its peers.

Estimating Divisional Market Betas Having the unlevered betas for Marriott and all of its competitors is however not enough, as we need to estimate the relevant beta for each of the three divisions and Marriott as a whole. This is to be done by utilizing the unlevered betas just found. One of the first problems we encountered is whether to use the simple average or weighted average unlevered betas for each industry. For example, in our calculations, we found that McDonalds beta greatly influences the market beta because of the company magnitude in our weighted average calculation. McDonalds has a different market segment than Marriott's Restaurant division, so we felt that the level of influence was inappropriate for our beta calculation.

In our simple average calculation we found that Frisch's restaurants also influenced the data in that their beta with the market is significantly lower than most of the other restaurants in the data table. However, the simple

average calculation was used in the end, as we felt it to be the least-biased way of calculating beta. With only one competitor being represented, there seems to be a lack of data in the Contract Services area. We therefore decided to reverse out the unlevered beta of Contract Services due to having the knowledge of the other inputs in the calculation, i. e. the total assets of each division as well as the total Marriott beta and the Restaurant and Lodging betas.

Weighted Average Cost of Capital By taking the newly founded unlevered betas and combining them with the previous debt betas, we are able to create new relevered betas for each division in the company. This in turns achieves new equity returns for each of the divisions. These different equity returns plug directly into the calculation of weighted average cost of capital. We achieved WACCs of 8. 14%, 13. 33%, and 9.

63% for Lodging, Contract Services, and Restaurants respectively. Marriott’s corporate WACC equals 9. 68% and was calculated by 1) using separate numbers for the total firm, and 2) taking a weighted average of the divisional WACCs. These two methods only give us 0.

04% difference in the capital cost percentage, which ratifies the assumptions made in our calculations concerning the divisional betas, as a corporate WACC is equal to the weighted average of the divisional WACC numbers. Different Corporate & Divisional WACCs As already seen, a calculation of WACC necessitates knowing: 1) Tax rate 2) Expected return on debt 3) Debt-to-value ratio 4) Expected return on equity 5) Equity-to-value ratio Only the tax rate is the same for all Marriott divisions. The expected returns on debt

differ because of the long-term/shorter-term perspective and the differing fractions of debt at floating and debt at fixed. The debt-to-value ratios differ because of the different target leverage ratios. Expected returns on equity differ because of the different business risks (i. e.

betas), and the equity-to-value ratios differ as a natural consequence to the differences in the debt-to-value ratios. When evaluating investment opportunities in any of Marriott’s three divisions, it is imperative that one considers the idiosyncratic risk associated with each investment. Each division has a different capital structure, business exposure, and market risk. It is for these reasons that we have achieved the separate weighted average costs of capital.