

# Marriott case notes essay



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orporation a. What business is Marriott in? Are the four components of Marriott's financial strategy consistent with its growth objective? b. How does Marriott use its estimate of its cost of capital? Does this make sense? c. What is the weighted average cost of capital for Marriott Corporation? • What risk-free rate and risk premium did you use to calculate the cost of equity? • How did you measure Marriott's cost of debt? 1. Are the four components of Marriott's financial strategy consistent with its growth objective? 2. How does Marriott use its estimate of the cost of capital? Does this make sense? 3.

Using the CAPM, estimate the weighted average cost of capital for a. Marriott Corporation b. The lodging division c. The restaurant division 4. Towards answering #3 a. What risk-free rate and risk premium did you use to calculate the cost of equity? Why did you choose these numbers? b.

How did you estimate the required rate of return on the debt of the company and on the divisions? Should the debt cost differ across divisions? Why? c. Did you use arithmetic or geometric averages to measure average rates of returns or premia? Why? d. How did you measure the beta of each division? Of the firm? e. Should you take taxes into account? How? 5. What is the cost of capital for Marriott's contract services division? How can you estimate its equity costs without publicly traded comparable companies? 6.

If Marriott used a single corporate hurdle rate for evaluating investment opportunities in each of its lines of business, what would happen to the company over time? 7. Gives students the opportunity to explore how a company uses the Capital Asset Pricing Model (CAPM) to compute the cost of capital for each of its divisions. The use of Weighted Average Cost of Capital

(WACC) formula and the mechanics of applying it are stressed. 8. • If students are familiar with the WACC formula, then the material can be covered in one class, but the teaching note also includes a two-day teaching plan. 9.

- If instructors wish to go into more mathematical detail, the unabridged version of the Marriott case (298101) uses equity betas estimated from daily instead of monthly data (which the abridged cases uses) and also covers geometric averaging of expected returns. 10. Case illustrates the impact of an error in setting a hurdle rate. 11. • Estimating the cost of capital for Marriott's lodging, restaurant and contract services divisions includes a situation where there is no comparable publicly traded firm.

Marriott cost of capital Objective: 1) Calculate the divisional and the company cost of capital and explain the calculation. 2) Evaluate Marriott's use of company cost-of-capital rate for the individual divisions. Cost of Capital for Lodging Division can be expressed as  $CC = W_e * C_e + W_d * C_d$ . For the weights of debt and equity ( $W_e$  and  $W_d$ ), the 1988 target-schedule rates of debt-to-assets and debt-to-equity were used as the only measures available in the case.

Cost of Equity ( $C_e$ ) was calculated based on the CAPM formula. 30-year T-bond was used as a long-term risk-free security to get the risk-free rate, since Marriott used the cost of long-term debt for its lodging cost-of-capital calculations. The market premium 8.47% was the arithmetic-average spread between the S 500 returns and the short-term US T-bills between 1926-1987.

This market premium is consistent with the current academic suggestions and it was used in all calculations of this exercise.

The leveraged Beta (BI) of the lodging division, needed for CAPM, was derived from the following equation:  $BI = B_u(1 + D/E)$ , where  $B_u$  is the unleveraged Beta.  $B_u$  was in turn derived from the weighted-average of the  $B_u$ 's of the lodging businesses given in the case. The weighted-average method rather than a simple arithmetic-average method was used to allow a more accurate  $B_u$  of the overall industry. Cost of Debt ( $C_d$ ) is defined as (risk-free rate)+the premium (Table A of the case). Once again, the 30 T-bond rate was used for the risk-free rate.

Cost of Capital for Lodging is 13.24%. The WA  $B_u$  of today's lodging industry is slightly higher than that in 1987, indicating a slight increase in the business risk associated with the industry. Cost of Capital for Restaurant Division was calculated in the same manner.

The 1-year T-bill was used as a usual shorter-term security to obtain the risk-free rate. The unleveraged Beta, used to obtain the leveraged Beta for the CAPM, was once again the weighed-average of the unleveraged B's of the restaurant industry representatives given in the case. However, the restaurants given for the calculation were mostly fast-food chains while Marriott operates rather middle-level restaurants. Today's WA  $B_u$  of the middle-class and upper-class restaurants appeared to be slightly higher indicating that the overall cost of capital for Marriott's restaurant division should be slightly higher. The cost of capital for the restaurant division is 14.85%.

Cost of Capital for Contracting Services Division was also calculated through the above methods. However, the unleveraged Beta could not be calculated in the same way as for the two other divisions due to the absence of the comparable businesses from which the unleveraged Betas ( $B_u$ ) could be obtained. Consequently, the  $B_u$  was back-factored from the relationship between the divisional  $B_u$ 's (or  $B_{uc}$  - contracting,  $B_{ul}$  - lodging, and  $B_{ur}$  - restaurants ) and the company  $B_u$  (or  $B_{um}$  - Marriott) expressed in the following formula: where  $W$ 's are the respective weight factors of each divisional  $B_u$ . The  $B_u$  is by definition a measure of risk associated with equity alone.

The company equity can be viewed as a portfolio in which the divisional equities are individual investments. The contribution of each investment's Beta to the portfolio Beta is based on the portion of that investment in the whole portfolio which in this case is the portion of a divisional equity in the company equity ( $E_d/E_c$ ). The cost of capital for the contract services is 14.29%. Marriott's WACC is 13.

73%. It is the weighted average of the cost of company debt and the cost of company equity - which is mathematically the same as the weighted-average of the divisional costs of capital weighted based on net identifiable assets. Marriott's WACC can be used to discount the multi-divisional projects that are impossible to evaluate by discounting their divisional components separately. However, the divisional WACC should be used for divisional projects. If the company WACC is used to discount divisional projects, both Restaurant and Contracting divisions may accept projects with returns below their WACC, thus resulting in losses; while the lodging division will use a

higher-than-divisional WACC rate to discount its projects thus rejecting profitable projects and hampering its growth. — Marriott needs to calculate hurdle rates which will be used in its investment project selection.

The company chooses to use cost of capital as its hurdle rate. Since the company has three business divisions and the cost of capital in each division varies and differs from that of Marriott as a whole, each division needs to have its own hurdle rate. The reason behind this practice is the company's strategy which focuses on growth. Using a single hurdle rate for the whole company would be too low for some divisions and too high for others. When hurdle rate is too high, fewer projects would be considered profitable and present value of project inflows would be reduced. As a result, Marriott's growth would be reduced too.

On the other hand, if the hurdle rate is too low, projects that are not profitable will be selected. Consequently, the company's growth would be hurt as well. Hence, the calculation of costs of capital for use as hurdle rates is essential for managing the company's growth. The cost of capital is computed using Weighted Average Cost of Capital (WACC) technique which is the weighted average of cost of equity and cost of debt of the firm or division. The cost of debt is the current borrowing rate at the time of the analysis (1988).

The costs of floating rate debt and fixed rate debt are determined for each division as well as for Marriott as a whole. The cost of equity is calculated using the Capital Asset Pricing Model (CAPM). This model takes risk-free rate, beta, and risk premium for each division as for Marriott as a whole. Betas for

lodging and restaurants divisions can be calculated from comparable companies. However, information about comparable companies for contract services division is not available. Its beta is derived from the assumption that the overall company's beta is a weighted average of divisional betas.

The analysis shows that each division does have different cost of capital....

In 1987, Marriott was focused on its cost of capital. The corporation was split into three divisions. The divisions were lodging, restaurants, and contract services. Marriott was also interested in focusing on four main points of business.

They decided to focus on managing instead of owning hotel assets, invest in projects that increased shareholder value, optimize the use of debt in the capital structure and repurchase undervalued shares. They measured these new strategies and how they would affect the company with the weighted average cost of capital (WACC). Our group decided the most important question was, what is the most efficient calculation and usage of WACC for Marriot? We began by selecting an appropriate risk-free rate and a market risk premium. The risk-free rate we selected is 3.48%.

In selecting the risk-free rate, we used the geometric average return of short-term treasury bills from 1926 to 1987 because this average accounts for time as opposed to the arithmetic average. We used the range from 1926 to 1987, because the returns in the shorter time period ranges were much more volatile and did not predict the upcoming years as well. We selected our market risk premium using the geometric average return from 1926 to 1987 as well. After analyzing the spread between the S 500 composite

returns and returns on short-term treasury bills, we chose 6.42% as our market risk premium.

After finding the appropriate risk-free rates and risk premiums, we began finding the Betas for each division of Marriott (Exhibit 1). We began by selecting an appropriate proxy firm for each of Marriott's three divisions. Lodging was the first division we analyzed. La Quinta Motor Inns seem to be the best pure-play. La Quinta's operations consisted of strictly lodging. It owns, operates, and licences motor inns which matches well with Marriott's operations in the lodging division.

In order to calculate the betas of this division, we had to find the cost of... Marriott Corporation is determining the weighted average cost of capital (WACC) to use as the hurdle rates for future projects and compensation. In determining this, there is both a portfolio rate (which includes all divisions) and rates for each individual division.

These divisions are split into different categories rather than using only a single rate for Marriott because the levels of risk vary from division to division. Although there is a determinable risk rate for Marriott as a whole, Marriott should use the separate divisional rates when determining possible future projects and employee compensation. In evaluating Marriott and the market, the WACC for all four is as follows: Marriott 8.1% Lodging 7.

02% Contract Services 8.21% Restaurant 9.10% Findings and Analysis  
WACC Summary WACC (the hurdle rate or required rate) is extremely important for business operations and future projects. Poor decisions will be made if the wrong WACC is determined. The cost of capital depends mainly

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on the use of the funds, and not the source. This is due to the different risks that are involved in different lines of business.

Because this is true, the cost of capital for each division must be determined independently from the other divisions. Therefore, it would be incorrect to use a single cost of capital for Marriott's various divisions as each has its own risk factors. Thus, there should be and are three distinct hurdle rates for the individual divisions. Since there is no pure way of determining the correct hurdle rate, because we cannot observe it in the market, we must determine the rate by comparing our line of business to companies in the same line of business (those that have the most similar risk classes).

QUESTION 2 ? Should it use a single hurdle rate for the firm as a whole?

Marriott Corp's business is comprised of three different divisions: lodging, restaurants and contract services.

All three have associated different risk levels when compared with Marriott Corp's as a whole, related not only to the different operational requirements but also capital requirements. This means that for each division there is a single different Beta, meaning also different costs of equity. As...