

Marriott corporation cost of capital



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Executive Summary The case, Marriott Corporation: The Cost of Capital (Abridged), concentrates on making decisions based on capital asset pricing model (CAPM) and the weighted average cost of capital (WACC) to measure the opportunity cost for investments. Dan Cohrs, the Vice President of Finance of Marriott Corporation, had to deal with making recommendations for the hurdle rates at Marriott Corporation and its three divisions which are lodging, restaurant and contract services. In calculating rates, he had to face two major problems.

First, he has to decide if it's better to use one hurdle rate for all divisions or use multiple hurdle rates for each respective division. In addition to calculating hurdle rate, he had to choose the dataset best suited for each division – future, present and past numbers, or short term and long term rates. An example of this would be that the long term rate is used for calculating hurdle rate for Marriott Corporations and lodging, while short term rate is used for calculating hurdle rate for restaurant and contract services.

Although the company has a significant amount of data and information for other divisions, the second concern is that it has limited data and information for contract services. This made it difficult to calculate the weighted average cost of capital. In addition to that, there was limited information about Marriott's competitors. This information has to be used to determine the target leverage and with the lack of data, it has an impact on calculating for beta. For this case, we show how to estimate beta based on competitive companies and to use these betas to adjust for capital structure, ultimately calculating the WACC.

We also have to choose the appropriate market risk premium and risk free rate. Furthermore, choosing the suitable time period to estimate expected returns and the difference between the geometric and the arithmetic average, is a major part of this case because it will significantly affect estimating the WACC and the CAPM. Marriott Company Overview Marriott Corporation was started in 1927 as a root beer stand and by 1987 grew into a company earning \$223 million in profits. Marriott Corporation consists of three lines of business: lodging, contract services, and restaurants.

In 1987 lodging made up 41% of sales and 51% of profits, contract services made up 46% of sales and 33% of profits, and restaurants made up 13% of sales and 16% of profits. Marriott's financial strategy consists of four elements: manage instead of own hotel assets, promote projects that increase shareholder value, optimize the use of debt in the capital structure, and repurchase undervalued stock. Marriott's goal of managing hotels instead of owning made them one of the tenth largest commercial real estate developers in the United States.

After Marriott developed a property they would sell the hotel asset to limited partners but retain operating control of the hotel. Marriott's strategy allowed them to collect 3% in management fees and 20% of profits before depreciation and debt service. In 1987 Marriott managed roughly \$7 billion worth of syndicated hotels. The process of investing in projects that increase shareholder value involved finding the hurdle rate for a specific project to figure out its profitability. The hurdle rates were based on market interest rates, project risk, and evaluations of risk premiums.

Marriott's objective of optimizing its use of debt in the capital structure led them to employ an interest-coverage target as opposed to a target debt-to-equity ratio. In 1987 Marriott's capital structure consisted of 59% debt or \$2.5 billion. Marriott's method for analyzing stock was to calculate the warranted equity value then repurchase any stock that market value fell below that determined number. Marriott found the warranted equity value by discounting their equity cash flow by their equity cost of capital.

It was Marriott's policy to repurchase any stock that did not match their estimate of value instead of modifying the warranted value. Marriott also believed that the repurchase of stock was a more important way to use cash flow and debt capacity than owning hotels. Coverage-based financing policy was used on each of Marriott's lines of business. The fraction of debt was found on a floating-rate debt basis and was sensitive to the interest rate changes. Thus debt capacity would increase along with cash flows and interest rates.

Marriott's unsecured debt was A rated in 1988, and thus they could be expected to pay a spread above the current government bond rates. Each line of business had a different spread between the debt rate and the government bond rate due the varying differences in risk. Lodging was considered to have longer useful lives and thus Marriott would use long-term debt for their lodging cost of capital. Restaurant and contract services had shorter useful lives and therefore a shorter term debt was used to determine cost of debt.

Marriott's goal of only investing in projects that increased shareholder value meant that they must use the shareholders' measure of equity costs. Capital Asset Pricing Model or CAPM was used to determine cost of equity for Marriott's lines of business. Financial Strategy Marriott's growth objective is to be a premier growth company. The components of this financial strategy are (1) manage rather than own hotels; (2) invest in projects that increase shareholder value; (3) optimize the use of debt in the capital structure; and (4) repurchase undervalued stock.

All components are consistent with Marriott's growth objective as outlined in the following sections. 1. Manage rather than own hotel assets: * Marriott sold its hotel assets to limited partners to reduce assets and thus, increase return on assets (ROA), thereby increasing potential profitability.

Management fees of 3% usually covered overhead cost of managing the hotel. * Marriott's 20% of profits before depreciation and debt service require it to stand aside until investors earned a pre-specified return. 2. Invest in projects that increase shareholder value: The discounted cash flow techniques used to evaluate potential investments allow the company to invest only in profitable projects therefore, maximizing the use of its cash flow to increase profits. * Cash flow forecasts incorporated standard companywide assumptions that instilled consistency across projects. 3. Optimize the use of debt in the capital structure: * Because firms with a lower percentage of debt have a higher value, Marriott used this strategy to increase its value and thereby increase profitability. Marriott focused on its ability to service its debt using an interest-coverage target instead of a target debt-to-equity ratio. 4. Repurchase undervalued stock: * Buying back

undervalued stock can increase Marriott's PE ratio when needed and can make its investors' holdings more valuable because share prices will increase (higher ROE) * Investors are also appeased and pressure to increase dividends is avoided, thereby enabling Marriott to increase earnings to invest in more profitable projects. Strategy enables confidence in future performance.

Used warranted value rather than market value. This enabled Marriott to avoid continually revising the hurdle rate to get warranted value to match market value * This use of cash flow puts money back into the company and is a better use of cash and debt capacity than acquisitions or real estate. Also enables more control over the company. Weighted Average Cost of Capital (WACC) Marriott used the Weighted Average Cost of Capital (WACC) method to measure the opportunity cost for investments. This was then used to determine the cost of capital for the corporation and for each division.

Because debt capacity, debt cost, and equity costs consistent with the amount of debt are all taken into consideration, this method is a good evaluation tool and is also consistent with Marriott's strategy to optimize its use of debt in capital structure. $WACC = (1-t) * r_D * D/V + r_E * E/V$ Where $t =$ Tax Rate, D is the market value of debt, E represents the market value of equity, r_D represents the cost of debt, and r_E represents the cost of equity, Elements of WACC Tax Rate: Using the information provided in Exhibit 1, the tax rate is calculated by taking the Income Tax (175.9) divided by Income Before Tax (398.9). Thus, $175.9 / 398.9 = 44\%$ Market Value of Debt and Equity: The market value of debt is provided as 60% (Table A). If $V = D+E$ and $V = 100\%$ and $D = 60\%$, $E = V - D$. Thus, $E = 100\% - 60\%$ resulting in a <https://assignbuster.com/marriott-corporation-cost-of-capital/>

cost of equity of 40%. Cost of Debt (rD): Cost of Debt is calculated by taking the Government Interest Rate + Premium above Government rate. Because restaurant and contract services assets have short useful lives, the government rate should reflect the short-term (one year) rate. Conversely, lodging assets have very long useful lives and the long-term (thirty year) government rate should be used.

Thus, because Marriott has both long-term and short-term debt, the ten (10) year rate represents the best average of the long and short term rates for Marriott Corporation. The premium above the government rate for Marriott and each of its divisions was provided in Table A. Marriott Corporation: $rD = 10 \text{ Year Rate} + \text{Corporate Premium} = (.0872) + (.013) = .1002$ Lodging: $rD = 30 \text{ yr rate} + \text{Lodging Premium} = .0895 + .110 = .1995$ Restaurants: $rD = \text{Short term rate} + \text{Restaurant Premium} = .0690 + .018 = .08730$ Contract Services: $rD = \text{Short term rate} + \text{Contract Premium} = .690 + .140 = .2090$ Cost of Equity (rE): Marriott used the Capital Asset Pricing Model (CAPM) to estimate the cost of equity. According to this model, $rE = R_f + B(\text{Risk Premium})$. As with the cost of debt, Marriott Corporation and each of its divisions must be calculated separately in order to provide the most accurate results. Elements of each are as follows: Risk-free rate (Rf): Returns from 1926 - 1987 provide the longest range of historic data. However, to maintain consistency with the cost of debt, each division was evaluated based on the length of useful life.

Therefore, the short-term US Treasury Bill Return of 3.54% from this range was used for the Restaurant and Contract Services divisions while, the long-term US Government Bond Return from the same date range (4.58%) were

used for Marriott Corporation and the Lodging division. Risk premium: Furthering the differentiation of long-term and short-term data, the spread between S&P Index and Long-term US Government Bonds 1926-1987 (7.43%) was used for Marriott and its lodging division while, the spread between the S&P 500 Composite Returns and Short-term US Treasury Bills (8.7%) was used for the restaurant and contract services division. As with the risk-free rate, these figures were used because each provides historic values over the longest period of time to produce the most accurate results. Beta: Levered Equity Beta for Marriott Corporation is provided in Exhibit 3. However, Beta for each division must also be calculated by using competitor levered equity beta information and the formula $BL = BU / (1 - \text{Target Leverage})$. Target leverage for each division was calculated by taking the average unlevered beta divided by the average levered beta.

Lodging: Competitor average unlevered beta (0.42) / Competitor average levered beta (1.09) = 0.61 target leverage. Thus, Lodging Beta = 1.09

Restaurants: Competitor average unlevered beta (0.96) / Competitor average levered beta (1.08) = 0.11 target leverage. Thus, Restaurant Beta = 1.08
 Contract Services: With no competitor information available, contract services beta must be calculated using beta for Marriott Corporation, lodging and the restaurant division and the weight of each division's identifiable assets to Marriott Corporation.

So, if Marriott Corporation Beta = Lodging beta x Lodging weight + Restaurant beta x Restaurant weight + Contract Services beta x Contract Services weight, then Contract Services Beta = (Marriott beta - Lodging beta x Lodging weight - Restaurant beta x Restaurant weight) / Contract Services

weight, thus CS Beta = $(1.00 - (0.61 \times 0.42) - (0.12 \times 0.96)) / 0.27 = 1.04$

With each element of cost of equity available, we can now calculate this cost

for Marriott and each division as follows: $r_E = R_f + B(\text{Risk Premium})$. Marriott

Corporation: $r_E = .0458 + 1.11(.0743) = 12.83\%$ Lodging: $r_E = .0458 + 1.$

$09(.0743) = 12.68\%$ Restaurants: $r_E = .354 + 1.08(.0847) = 12.70\%$

Contract Services: $r_E = .0354 + 1.04(.0847) = 12.33\%$ WACC: Considering

above data, WACC for Marriott and each division is found as follows: Again,

$WACC = (1-t) * r_D * D/V + r_E * E/V$ Marriott Corporation: $WACC = (1-.44) * .$

$1002 * .4 + .1283 * .6 = 9.94\%$ Lodging: $WACC = (1-.44) * .1005 * .5 + .$

$1268 * .5 = 9.15\%$ Restaurants: $WACC = (1-.44) * .0870 * .4 + .1270 * .6$

$= 9.57\%$ Contract Services: $WACC = (1-.44) * .0830 * .25 + .1233 * .75 =$

10.14% As the WACC shows, Marriott should use individual hurdle rates to

evaluate investment opportunities in each of its lines of business.

Using a single hurdle rate would yield extremely different results based on

each division. Therefore, Marriott should only value investments at or above

the hurdle rate (WACC) for each division. Recommendations/Conclusion

Marriott Corporation has put a great deal of effort in promoting Shareholder

Equity. Due to their model of managing rather than owning hotels they have

managed to increase their Shareholder Equity and see growth in their

organization. Weighted Average Cost of Capital has allowed the organization

to select projects that are most likely to be successful.

In addition, to selecting profitable investments, Marriott Corporation has

done a lot to show shareholders that they are a priority. By ensuring that

stock values are maintained and that dividends are consistently paid out

they maintain confidence in the company. Marriott needs to maintain this

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confidence moving forward. To help maintain this confidence it is the recommendation that the three divisions of Marriott be treated as separate entities when making financial decisions. The hurdle rates significantly determine which projects are taken on and that can hurt more fluid areas such as restaurant and contract divisions.

Historically Marriott has treated restaurant and contract divisions as short term investments and hotels as long term investments; thus influencing the capital investment outcomes. Each of the three Marriott divisions carries a different amount of risk and thus require a different hurdle rate. In Solution-4 of the Appendices it shows that the recommended values for each division are significantly different for each division. The needs and debt values for each area are different because of the way they operate. * Lodging: Target Debt Value Ratio: . 50 and WACC: 9. 94% * Restaurants: Target Debt Value Ratio: . 0 and WACC: 9. 15% * Contract Services: Target Debt Value Ratio: . 25 and WACC: 10. 41% These hurdle rates will allow the company to maintain their competitive nature and continue the growth that their shareholders have come to expect. Appendices Solution-1| Marriott | Beta Calculation for Lodging| | Market Value (Actual)| Unlevered Asset Beta| Target Leverage| | Hotels| Leverage| Levered Equity Beta| | Target Leverage| Levered Equity Beta| | Hilton Hotels| 0. 14| 0. 76| 0. 65| 0. 61| 1. 69| | Holiday Corp. | 0. 79| 1. 35| 0. 28| 0. 61| 0. 73| | LaQuinta Motor Inns| 0. 69| 0. 9| 0. 28| 0. 61| 0. 71| | Ramada Inns| 0. 65| 1. 36| 0. 48| 0. 61| 1. 23| | Average unlevered asset beta:| | 1. 09| 0. 42| 0. 61| | | Levered Equity Beta (using target leverage) for industry| | | | | 1. 09| | | | | | | 1| Market value leverage = (book value of debt) divided by (book value of debt +

market value of equity)| 1| Unlevered Asset Beta = Levered Equity Beta * (1 - Market Value Leverage)| 3| Asset beta = equity beta x (1 - market value leverage)| 4| Levered equity beta for industry = average unlevered asset beta / (1 - target leverage for industry)|

Solution-2| Marriott| Beta Calculation for Restaurant| | | Market Value (Actual)| Unlevered Asset Beta| Target Leverage| | Restaurants| Leverage| Levered Equity Beta| | Target Leverage| Levered Equity Beta| | Church's Fried Chicken| 4%| 1.45| 1.39| 0.11| 1.571| | Collins Foods| 10%| 1.45| 1.31| 0.11| 1.472| | Frisch's| 6%| 0.57| 0.54| 0.11| 0.605| | Luby's| 1%| 0.76| 0.75| 0.11| 0.849| | Wendy's| 21%| 1.32| 1.04| 0.11| 1.177| | McDonald's| 23%| 0.94| 0.72| 0.11| 0.817| | Average unlevered asset beta:| | 1.08| 0.96| 0.1| | | Levered Equity Beta (using target leverage) for industry| | | | | 1.08| | | | | 1| Market value leverage = (book value of debt) divided by (book value of debt + market value of equity)| 1| Unlevered Asset Beta = Levered Equity Beta * (1 - Market Value Leverage)| 3| Asset beta = equity beta x (1 - market value leverage)| 4| Levered equity beta for industry = average unlevered asset beta / (1 - target leverage for industry)| Solution-3| Marriott| Beta for Contract Services| | weights| betas| Beta for Corporate| 1.00| 0.65|

Beta for Lodging| 0.61| 0.42| Beta for Restaurants| 0.12| 0.96| Beta for CS| 0.27| 1.04| | | | Solution-4| Marriott Corpn. | WACC Calculation for Marriott and its Business Segments| | Unlevered Asset Beta| Target Debt/ Value Ratio| Levered Equity Beta| Cost of Equity| Cost of Debt| WACC| Marriott Corpn. | 0.65| 0.40| 1.11| 12.83%| 10.02%| 9.94%| Lodging| 0.42| 0.50| 1.09| 12.

68%| 10.05%| 9.15%| Restaurants| 0.96| 0.40| 1.08| 12.70%| 8.70%| 9.57%| Contract Services| 1.04| 0.25| 1.04| 12.33%| 8.30%| 10.41%