Hbs marriott case

Business, Company

Marriott Corporation has three divisions – lodging, contract services and restaurants – with dissimilar operations. The company uses three separate hurdle rates for the three divisions to value the proposed projects. It is believed that this strategy is more appropriate that using a single firm-wide discount rate because the operations of the three divisions differ drastically. However, the company has to ensure that the company uses an appropriate discount rate for each division.

Therefore, we calculate the appropriate cost of capital for Marriott as well as for each of the three divisions. A detailed analysis is presented about the appropriate calculation inputs for each of the three divisions and various assumptions, made while performing the calculations, are justified. 1) Are the four components of Marriott's financial strategy consistent with its growth objective? The first component of the strategy is to manage rather than own the hotel properties.

This objective mitigates the investment needed to launch new hotels, as the general partner is not required to make significant investments. Although it may be argued that such a strategy could decrease the profit margins, the growth prospects are certainly easily achievable because of less limitation on the resources required. The second objective is an important characteristic of modern corporatefinance. It believed that focusing on maximizing shareholder value should be the underlying aim of every corporation, leading to stable growth and healthy profits.

With regard to the third objective, Miller and Modigliani claimed that the use of debt, in the presence of corporate taxes, could increase the value of a

company through the value added by debt tax shield. In modern finance, it is commonly believed that debt can increase the value of a corporation. However, a company should be careful about high debt levels because of the distress costs associated with high debt. As stated by Marriott, a corporation should aim to optimize its debt at the most beneficial level. The repurchase of undervalued shares might not always be consistent with the growth objective.

The repurchase program could make sense if the shares are believed to be highly undervalued and the company does not have more attractive investment opportunities to utilize its cash. However, the strategy could also hinder growth if the company is foregoing highly profitable investment opportunities in order to take advantage of slight under pricing in its shares. How does Marriott use its estimate of its cost of capital? Does this make sense? Marriot evaluates its investment opportunities using the discounted cash flow approach, which requires an estimate of the cost of capital.

Technically, the cost of capital for each investment should be commensurate with the amount of risk inherent within the investment. Thereby, if a company has ten different prospective investments, it could have ten different cost of capital estimates for the investments. However, it is impractical for companies to estimate a separate cost of capital for each investment opportunity. Usually, a company operates in a uniform line of business and has investment opportunities with similar risks.

Therefore, it is normal for companies to use a single firm-wide cost of capital. However, companies with multiple divisions often use separate cost of

capitals for the divisions because each division has separate operations and risks. Marriott Corporation has three separate divisions and employs three separate hurdle rates – one for each division. This treatment is consistent with theory as long as the hurdle rates adequately compensates for the risk inherent in each division’s investment and risk does not vary significantly across investments within a division.) What is the weighted average cost of capital for Marriott Corporation as a whole? What risk-free rate and risk premium do you use to calculate the cost of equity? How do you measure Marriott's cost of debt? There is no agreed-upon measure of riskfree rate that investors could use. In fact, the available riskfree interest rate could be argued to change with changes in business cycles and economic policies. In the US, the rate offered by US Treasury securities is often deemed riskfree because of the negligible default risk.

However, there is a disagreement regarding the maturity of the treasury security that should be used as a proxy for riskfree rate. Since Marriott is seeking to optimize its debt at a long-term stable level, it is believed that the maturity of the company’s debt will be long. Therefore, the 10-year Treasury bond seems to be an appropriate measure of riskfree rate. The cost of debt is calculated by adding the specified risk premium to the selected riskfree rate. The cost of equity can be calculated using the Capital Asset Pricing Model (CAPM).

The market risk premium is an important constituent of the CAPM. The market risk premium estimates the premium for the excess risk taken by market participants. Investors can earn a certain degree of return – the

riskfree rate – without taking any risk. Therefore, the riskfree rate should be subtracted from the market return to calculate the market risk premium – the extra return that investors earn by taking risk. We already have an estimate of the riskfree rate that can be used for Marriott. Therefore, the market risk premium can be calculated by estimating the appropriate market return.

The proxy for market return is usually a national stock index such as the S&P500 for US companies. In contrast to the Treasury bond market, where the yields provide an estimate of the future returns on the security, there is no consensus estimate on the future expected return on the stock market. Therefore, historical averages of stock returns are typically used to estimate the future expected return on the market. We use biggest available period – 1926 to 1987 – to estimate the average historical market risk premium.

The information about riskfree rate and the market risk premium can be combined with equity beta of Marriott (provided in thecase study) to calculate to cost of equity of the company. Once we have the respective costs of debt and equity, the weighted average cost of capital (WACC) is simply their average – weighted using the target proportion of debt provided in the case study. The calculations in the attached spreadsheet show that the WACC for Marriott is 10. 39%. What type of investments would you value using Marriott's cost of capital?

The cost of capital estimates the riskiness of an average investment within the company. If an investment under consideration by Marriott has more risk than the average investment risk, the cost of capital would understate the

risk and overstate the value of investment. On the other hand, if an investment has less risk than the average investment risk, the cost of capital would overstate the risk and understate the value of investment. Therefore, the cost of capital is only appropriate for valuing investments, which closely resemble the typical investments carried out by Marriot Corporation.

If an investment has a different amount of risk than the typical investment in Marriott, the company should strive to calculate the cost of capital that is consistent with the investment in question. One way of estimating the appropriate cost of capital would be to look at the comparable companies where that particular investment would be a typical investment. For example, an investment in sports equipment could be evaluated by looking at the cost of capital used by a sports club that uses similar equipment.) If Marriott used a single hurdle rate for evaluating projects in each of its divisions, what would happen to the company over time? Marriott has three separate divisions with dissimilar operations. The firm-wide cost of capital is probably a weighted average of the three individual costs of capital commensurate with each of the three divisions. While the firm-wide cost of capital might be a good measure of the risk of an average investment undertaken by the company, it is probably not a good measure of the investment risk inherent in each division’s average project.

If the company continues to use a single discount rate for each of its three divisions, the project cash flows of the division with more than average risk would be overstated, while the project cash flows of division with less than average risk would be understated. Therefore, division with more than

average risk would start accepting projects that would have been otherwise rejected if a more appropriate higher discount rate were used. On the other hand, the division with less than average risk would start rejecting projects that would have been accepted if a more appropriate lower discount rate were used.

In short, the more risky division would accept negative NPV projects, while the less risky division would reject positive NPV projects. What are the costs of capital for the lodging and restaurant divisions of Marriott? The division wise calculations of the cost of capital are shown in the attached spreadsheet. The weighted average costs of capital for the lodging and restaurant divisions are 9. 76% and 13. 32% respectively. It is important to note that the discount rates differ because certain inputs in the calculations are dissimilar.

The most significant differences are in riskfree rates, asset betas, and debt proportions. What risk-free rate and market risk premium do you use in calculating the cost of equity capital for each division? How do you choose these numbers? There is no full consensus of which proxy for riskfree rate should be used. Nevertheless, it is generally believed that the maturity of the riskfree rate proxy should match the purpose for which the rate is utilized. It is mentioned that the lodging division has more long-term assets, while assets of restaurant division are short-term in nature.

Therefore, one-year riskfree rate has been employed in the restaurant division, whereas a higher ten-year rate has been utilized in the lodging division. On the other hand, the market risk premium for both divisions is the

same as the market risk premium previously used for the whole company. Although the asset betas for the divisions have been calculated using the past five years data, it is believed that a larger pool of data should be used to estimate the market risk premium because the recent volatility in the markets might distort results. Did you use arithmetic or geometric averages to measure rates of returns? The arithmetic mean adds the annual historical risk premiums and averages the results, while the geometric mean is equal to the compounded annual risk premium. In professional practice, both these methods of calculating average historical risk premiums are regularly employed. However, there is a major statistical difference between the two approaches. Geometric mean is a compounded average of risk premiums and is, therefore, a good predictor of the risk premium over multiple future time-periods.

On the other hand, arithmetic mean is the best predictor of risk premium for the forthcoming time-period. In other words, arithmetic mean would be better at predicting the risk premium for the next year, while geometric mean would be superior at predicting the average risk premium over the next few years combined. In this case, we are calculating the risk premium for the purposes of using it in the CAPM model. The CAPM is a single period model, which estimates the cost of equity over a specified time interval. Therefore, the arithmetic mean might be a better method in this context. How do you measure the cost of debt for each division? Should the cost of debt differ across divisions? The rationale for using different riskfree rates for the division has already been explained in the preceding section. The case study also provides different levels of risk premiums that should be added to

the riskfree rate to calculate the total cost of debt. It could be argued that the company only pays a single cost of debt, and there is no need to calculate separate cost of debt for each division. However, each division has separate financial leverage, different sales, and a unique ability to cover its debt obligations.

Therefore, each division’s debt should also be rated separately for more accurate capital budgeting. How do you measure the beta of each division? The betas for the divisions have been calculated using the pure play approach. Under this approach, the equity betas for companies, comparable to each division, are unlevered in accordance with the respective leverage. The resulting asset betas are then averaged to obtain an estimate of the asset beta for each division. Subsequently, the respective asset beta for each division is relevered, using the target debt ratio for the division, to obtain the equity beta.) What is the cost of capital for Marriott's contract services division? How can you estimate its cost of equity when there are no publicly traded comparables? The beta for contract services division cannot be obtained directly because there are publicly traded comparable companies, which could have been used to employ the pure play approach. However, we do have information about the asset beta of the overall company as well as the asset betas for the remaining two divisions. Theoretically, the overall asset beta for Marriott should be a weighted average of the individual asset betas for the three divisions.

The weights can be calculated using the information about identifiable assets in each division. Thereby, the only unknown in the equation is contract

services division’s asset beta, which can be obtained through basic arithmetic. Subsequently, the asset beta can be levered using the target debt proportion to obtain the equity beta, which can be used is the CAPM equation to calculate the cost of equity for contract services division. The WACC for the division is simply the weighted average of its cost of equity and cost of debt. The calculations in the attached spreadsheet estimate the cost of capital to be 8. 4%. Marriott also considered using the hurdle rates to determine incentive compensation. How do we link this with the Economic Value Added (EVA) approach? The objective of any company’s management should be to maximize the shareholder wealth. Shareholder wealth increases when a company consistently produces positive economic value. In this context, economic value added is measured as the excess operating profits over the dollar cost of capital. In mathematical terms, economic value added equals net operating profits after tax minus the product of cost of capital and capital employed (dollar amount of WACC).

The concept of economic value added is closely linked to the concept of net present value (NPV) calculated using the hurdle rates. Specifically, a positive NPV project will generate positive EVA, while a negative NPV project will generate negative EVA. Therefore, if a company only accept positive NPV projects, calculated using the appropriate hurdle rates, it will generate positive EVA on the profits generated from these projects. Therefore, a manager’s compensation could be linked to the amount of positive net present value that the manager generates through new investments.