COMM 421

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SeaWorld Entertainment, Inc.

Below is a step-by-step method - with justifications - for how we determined the cost of common equity and the weighted average cost of capital (WACC) for SeaWorld Entertainment, Inc. (SEAS). For a complete list of variables collected, their sources, as well as intermediate calculations, please see Appendix A.

We begin by researching the company beta for SEAS from external sources. On the Bloomberg Terminal, we found the value 2.006 (unadjusted) and 1.671 (adjusted). However, we believe that using an adjusted beta is more appropriate given the current level of volatility in the financial market. It is thus likely that the current beta is heavily deviated from the mean, so we adjust the beta to keep our further calculations conservative and "fair". For clarity, the adjusted beta calculation is given below:

Adjusted beta = 2.006 * (2 / 3) + 1.000 * (1 / 3) = 1.671.

For simplicity, we then use CAPM to determine SEAS' cost of equity, as it is the most "complete" model pertaining to the data we have available to us. First, we deduce the risk-free rate, given by the U.S. 30-year treasury bond YTM (this is the most widely-used metric to represent the risk-free rate), which is currently 1.60% (Bloomberg). However, the market portfolio return is also needed. For this variable, we chose the 5-year geometric average return of the Wilshire 5000 index (11.17% / annum), as opposed to the S&P 500 index, the industry standard (Bloomberg). This decision was again chosen due to the current market volatility, which has seen the larger-cap stocks fare better than smaller ones. Thus, we used the Wilshire 5000 as a more realistic gauge of the broader market. We feel that this also falls in line with the capital structure of SEAS, which is heavily composed of debt; this is especially risky during these uncertain economic times. The cost of equity calculation is given below:

Cost of equity = 1.60% + 1.671 * (11.17% - 1.60%) = 17.59%.

This calculation seems reasonable, since the expected return on equity is higher than that of the market portfolio return. This is congruent with the fact that SEAS is a riskier-than-average company during these uncertain economic times, and thus, investors demand a higher return than the market.

Finally, we use the WACC formula to compute SEAS' weighted average cost of capital. SEAS' cost of debt was determined to be 9.5% (Bloomberg), since they issued long-term debt to investors at this yield-to-maturity back in July, 2020. Regarding SEAS' capital structure, they just recently took on a large amount of debt in response to the COVID-19 pandemic, likely used to keep the company afloat while they are unable to earn cash from their shuttered amusement parks. We have determined their capital structure to be 99.58% debt, with the remaining 0.42% equity (Capital IQ). Finally, the effective tax rate was determined to be 30.64% (Bloomberg). The WACC calculation is given below:

WACC = 99.58% * 9.50 * (1 - 30.64%) + (1 - 99.58%) * 17.59% = 6.56%

Appendix A:

Variable	Calculation	Source
Beta (adjusted)	1.671	Bloomberg
Risk-free rate	0.0160	Bloomberg
Expected market return	(1+0.6977)^(⅕) - 1 = 0.1117	Bloomberg
YTM of LT bond	0.0950	Bloomberg
LTD/Total Capital @ MV	2148.0 million / (2148.0 million + 9.1 million) = 0.9958	Capital IQ
Tax rate	0.3064	Bloomberg
Cost of equity	0.0160+1.671*(0.1117-0.0160) = 0.1759	
WACC	0.9958*0.095*(1-0.3064) + (1-0.9958)*0.1759 = 0.0656	

References:

Bloomberg Terminal. Retrieved October 9, 2020.

Capital IQ. Retrieved October 8, 2020.