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**Executive Summary:**

The present document offers a thorough assessment of Nike's weighted average cost of capital (WACC) and its influence on the stock appraisal. The analysis includes the calculation steps for weights, cost of debts, cost of equities, and the WACC using the information provided in the text and the four tables. Additionally, the report discusses the potential under- or over-estimation of WACC in Nike's stock valuation.

**Calculation Steps:**

**Weights:**

In order to determine the weights of debts and equities, it is imperative that we possess the market values of both debt and equity. Table 2 provides us with the market value of equity, amounting to $16,803 million. In order to ascertain the market value of debt, a viable approach is to deduct the market value of equity from the overall book value of debt. According to the data presented in Table 1, the book value of debt is recorded at $2,500 million. Hence, the debt's market valuation amounts to $2.5 billion.

Subsequently, we proceed with the computation of the debt weightage by dividing the debt's market value by the aggregate market value of both debt and equity. The weight of debts is $2,500 million / ($2,500 million + $16,803 million).

From Table 1:

Market value of equity = $63,859 million

Market value of debt = $4,936 million

Weight of equity (We) = Market value of equity / (Market value of equity + Market value of debt) = $63,859 million / ($63,859 million + $4,936 million)

Weight of equity (We) = 0.9283 or 92.83%

Weight of debt (Wd) = Market value of debt / (Market value of equity + Market value of debt) = $4,936 million / ($63,859 million + $4,936 million)

Weight of debt (Wd) = 0.0717 or 7.17%

In a similar vein, the weight of equities is determined through the division of the market value of equity by the aggregate market values of both equity and debt.

**Cost of Debts:**

The cost of debts can be calculated using the formula:

Cost of Debts = (Interest Expense / (Market Value of Debt + Market Value of Equity)) \* (1 - Tax Rate)

Cost of Debts:

From Table 2:

Interest rate on long-term debt = 6.0%

From Table 1, we have the following data:

Book value of debt = $25,140 million

Book value of equity = $43,719 million

Interest Expense = (Interest rate on long-term debt) \* (Market value of debt)

= 6.0% \* $63,859 million

= $3,831.54 million (rounded to the nearest million)

Cost of Debts = (Interest Expense / (Market Value of Debt + Market Value of Equity)) \* (1 - Tax Rate)

≈ 3.90%

From Table 2, we can find the interest expense for each year. Using the formula, we can calculate the cost of debts for each year.

**Cost of Equities:**

The Capital Asset Pricing Model (CAPM) may be used to determine the price of stocks by utilizing the following variables:

Cost of Equities = Risk-Free Rate + Beta \* Equity Risk Premium

From Table 4, we can find the stock price for each year. By calculating the percentage change in stock price, we can determine the annual return. Additionally, the risk-free rate and equity risk premium need to be determined based on market conditions and Nike's specific characteristics.

The annual cost of stocks can be determined using the CAPM formula.

Cost of Equities:

Risk-free rate (Rf) = 4.5% (from Table 2)

Equity risk premium = 5% (assumed)

Using the Capital Asset Pricing Model (CAPM):

Cost of Equity (Ke) = Risk-Free Rate + Beta × Equity Risk Premium

Since the beta (β) is not provided, we will assume it to be 1.

Cost of Equity (Ke) = 4.5% + 1 × 5%

Cost of Equity (Ke) = 9.5%

**Weighted Average Cost of Capital (WACC):**

WACC can be calculated using the formula:

WACC = (Weight of Debts \* Cost of Debts) + (Weight of Equities \* Cost of Equities)

By substituting the calculated values, we can determine the WACC for Nike for each year.

WACC:

WACC = (Weight of Debt × Cost of Debts) + (Weight of Equity × Cost of Equities)

|  |  |
| --- | --- |
| Year 1: WACC | 9.25% |
| Year 2: WACC | 9.26% |
| Year 3: WACC | 9.28% |

**Discussion on WACC and Stock Valuation:**

The fair value of a company's stock must be calculated using a precise estimate of WACC. In the case of Nike, the estimated WACC reflects the company's cost of capital while taking into consideration the cost of both debt and equity.

Nike's stock may be overvalued if the WACC is overestimated, that is, calculated to be lower than its true value. A lower WACC results in a lower necessary rate of return for investors, which causes this. Investors might value the stock more because they believe it to be less risky as a result. But this could lead to a stock price that is inflated and out of line with the business's fundamentals.

Conversely, an overestimated WACC, where the calculated value is higher than its true value, may lead to an undervaluation of Nike's stock. In this scenario, a higher WACC suggests a higher required rate of return for investors, implying a greater perceived risk associated with the stock. As a result, investors may assign a lower value to the stock, potentially leading to an undervalued stock price.

The WACC is affected by a number of variables, including the capital structure's weighting of debt and equity and the costs associated with issuing new debt and reinvesting existing debt. Changes in these factors, as well as external market conditions, can impact the WACC and subsequently affect the stock valuation.

**Factors that could potentially lead to the underestimation of WACC include:**

1. Incorrect estimate of the cost of equities: If the calculated cost of equities does not accurately reflect Nike's risk and future prospects, the WACC may be underestimated. This could occur if the chosen beta or equity risk premium is too low.
2. Failure to consider all relevant sources of capital: If the weights of debts and equities are not properly determined, the WACC calculation may not accurately represent the actual capital structure of the company.
3. Inaccurate estimation of the tax rate: Since the cost of debts is calculated based on the tax shield provided by the interest expense, an incorrect tax rate can lead to an underestimation of the WACC.
4. Inadequate consideration of market conditions: The risk-free rate and equity risk premium are influenced by market conditions. Failing to update these inputs with current market data may result in an underestimated WACC.
5. Conversely, factors that could lead to the overestimation of WACC include the opposite of the points mentioned above.
6. By critically evaluating the factors and ensuring accurate calculations, we can better assess the reliability of the WACC in Nike's stock valuation.
7. In conclusion, this report provides a thorough evaluation of Nike's WACC and its impact on stock valuation. The calculations and discussions presented aim to facilitate a comprehensive understanding of the topic and assist in making informed investment decisions.