# Task 16 - Cost of Equity (CAPM and Dividend Discount Model)

You are a financial analyst at BlueLeaf Capital Industries, a fast-growing sustainable manufacturing company.

The leadership team is reviewing methods for estimating the cost of equity to improve accuracy in investment appraisal decisions. You have been asked to calculate the company's cost of equity using both the Capital Asset Pricing Model (CAPM) and the Dividend Discount Model (DDM). You will prepare Excel/Google Sheets outputs including tables and graphs.

## Company Data (for Excel input table)

|  |  |
| --- | --- |
| Item | Value |
| Risk-Free Rate (Rf) | 3% |
| Expected Market Return (Rm) | 10% |
| Beta (β) | 1.2 |
| Current Dividend (D₀) | £1.50 |
| Expected Dividend Growth Rate (g) | 4% |
| Current Share Price (P₀) | £25.00 |

## Tasks (Excel Spreadsheet Outputs Required)

### 1️⃣ Cost of Equity Calculation Table

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Formula | Calculation | Cost of Equity (%) |
| CAPM | Rf + β(Rm - Rf) |  |  |
| DDM | (D₁ / P₀) + g |  |  |

- Use CAPM formula to calculate cost of equity.
- Calculate D₁ = D₀ × (1 + g) for DDM.
- Use DDM formula to calculate cost of equity.

### 2️⃣ Sensitivity Analysis Table

|  |  |
| --- | --- |
| Beta | CAPM Cost of Equity (%) |
| 1.0 |  |
| 1.2 |  |
| 1.4 |  |
| 1.6 |  |

- Recalculate CAPM cost of equity as beta changes.

### 3️⃣ Graphs (Excel or Google Sheets Chart Suggestions)

- Line Chart: CAPM Cost of Equity vs Beta (from sensitivity table)

- Bar Chart: Compare CAPM vs DDM estimated costs of equity

### 4️⃣ Strategic Discussion (Text Output / Discussion Slide)

- What is the company’s cost of equity using CAPM and DDM?

- How do the two models compare?

- How sensitive is CAPM cost of equity to changes in beta?

- Which model may be more appropriate for Green Horizon Industries and why?

- Discuss implications for WACC calculation and investment decisions.

## Deliverables

- Excel / Google Sheets file with:

 - Cost of Equity Calculation Table

 - Sensitivity Analysis Table

 - Graphs (at least one)

 - Strategic Discussion Slide