Cost of Capital – Learning Workbook Guide

Self-Directed Learning Companion for Excel Workbook

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Welcome

This workbook and guide help you explore how companies estimate the minimum return they need to justify investments. It breaks down the cost of equity, debt, and blended capital.

Each worksheet corresponds to an Excel tab and a set of lecture slides. Your task: **learn by doing** — make changes, test ideas, and challenge the assumptions. It's a safe space to be wrong (and curious).

> Use yellow cells for input. Blue cells contain formulas. The best way to understand them is to **trace the logic**.

Worksheet 2: Market Value of Equity

What It Measures

The market value of a company's equity, based on its current share price and dividend status.

How to Use It

- Start with the share price (cum or ex-dividend)
- Subtract dividends if needed to get the ex-div price
- Multiply by number of shares

Try This:

- Change a cum-div share price and observe how it affects MV
- Compare scenarios where a dividend has just been paid vs. one about to be paid

MV helps us assess the real value of capital raised from equity today, not historically.

Worksheet 3 & 4: Dividend Valuation Models

What They Measure

The expected return shareholders demand, based on dividends (and optionally, growth).

- **W3: No Growth Model** – works for preference shares
- **W4: With Growth** – better for ordinary shares with a dividend trend

How to Use It

- Enter the annual dividend (D or D)
- For growth models, include an expected g
- Use share price to calculate Ke

Try This:

- Increase growth rate from 2% to 8% — what happens to Ke?
- Reduce share price by 10% — how sensitive is the result?

High-growth assumptions amplify Ke — but may not be realistic.

Worksheet 5: Capital Asset Pricing Model (CAPM)

What It Measures

Expected return for equity holders based on risk (Beta) and market context.

How to Use It

- Start with a risk-free rate and market return
- Adjust Beta to simulate different types of firms

Try This:

- Set Beta to 0.5 (low risk) and then 2.0 (high risk)
- Watch how Ke changes for different industries

CAPM assumes markets are efficient — but use it as a tool, not a truth.

Worksheet 6: Cost of Debt

What It Measures

The cost of borrowing money, net of tax relief. Includes both bank loans and bond finance.

How to Use It

- Use the simple formula for loans
- For redeemable debt, calculate IRR across years

Try This:

- Increase the tax rate from 20% to 40% — what's the impact on after-tax cost?
- Reduce the bond's market price — does that increase or reduce the effective Kd?

Debt can be cheaper than equity, but not risk-free.

Worksheet 7: Weighted Average Cost of Capital (WACC)

What It Measures

The blended cost of funding a firm, based on the relative weight of equity and debt.

How to Use It

- Pull in Ke and Kd from previous sheets
- Input E and D values to reflect a capital structure
- Watch WACC change as weightings shift

Try This:

- Run a WACC at 50/50, then 70/30, then 90/10 equity/debt
- At what point does WACC hit its lowest?

This is the number firms often use as the hurdle rate in project appraisal.

Reflection and Integration

- Does CAPM or DDM give a higher cost of equity? Why?
- Which model is most sensitive to small changes in inputs?
- Is there such a thing as an "optimal" capital structure?

You're not looking for perfect answers — you're learning to reason under uncertainty.

Supporting Resources

- *Atrill (2019)*: Chapters 5, 7, 8
- Damodaran: WACC Resource
- Investopedia: Cost of Capital
- Slides: Day 2 Afternoon

Final Reflection

"All models are wrong, but some are useful." — *George Box*

The Cost of Capital isn't a single number — it's a framework for thinking critically about funding and risk. Use this spreadsheet not to *get it right*, but to get insight.

Adjust. Break. Reflect. That's how better financial decisions are made.