Ch. 13 Global Cost of Capital

Topics

- Global Cost & Availability of Capital
- Capital Budgeting and Cost of Capital
- Cost of Capital for MNEs

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Cost of Capital

- **Weighted Average Cost of Capital (WACC):** The return the firm's investors could expect to earn if they invested in securities with comparable degrees of risk.
  - The weighted average cost of capital is the discount rate used in calculating the NPV of investment projects and is the minimum acceptable rate of return when compared to the internal rate of return (IRR).
- Capital Structure: The firm's mix of long term financing and equity financing.

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Interpreting the WACC

- The cost of capital is determined by average risk of a company's assets and operations.
  - The cost of capital is applicable as a discount rate only on projects with the average risk of the business.
  - The project cost of capital depends on project risk, not the company cost of capital.
  - Investment projects under consideration with higher or lower risk than average business risk should be discounted with rates above or below the WACC.
  - → The project cost of capital is a risk-adjusted minimum acceptable rate of return used as a discount rate on a specific project.

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Global Cost & Availability of Capital

- Global integration of capital markets has given many firms access to new and cheaper sources of funds beyond those available in their home market.
  - Firms constrained by home financial market conditions must develop a strategy to escape their own limited capital markets and source some of their long-term capital needs abroad.
  - Gaining access to global capital markets should allow a firm to lower its cost of capital. A firm can improve access to global capital markets by increasing the market liquidity of its shares and by escaping its home capital market.
  - The costs and availability of capital is directly linked to the degree of market liquidity and segmentation. Firms having access to markets with high liquidity and low segmentation should have a lower cost of capital.

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Global Cost & Availability of Capital

- Illiquid Domestic Market
  - A firm that must source its long-term debt and equity in a highly illiquid domestic securities market will probably have a relatively high cost of capital and will face limited availability of such capital.
  - This, in turn, will limit the firm's ability to compete both internationally and vis-à-vis foreign firms entering its market.
- Small Capital Markets
  - Firms resident in small capital markets often source their long-term debt and equity at home in these partially-liquid domestic markets.
  - The costs of funds is slightly better than that of illiquid markets, however, if these firms can tap the highly liquid international capital markets, their competitiveness can be strengthened.

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Global Cost & Availability of Capital

- Segmented Capital Markets
  - Firms resident in segmented capital markets must devise a strategy to escape dependence on that market for their long-term debt and equity needs.
  - A national capital market is segmented if the required rate of return on securities differs from the required rate of return on securities of comparable expected return and risk traded on other securities markets.
  - Capital markets become segmented because of such factors as excessive regulatory control, perceived political risk, anticipated FOREX risk, lack of transparency, asymmetric information, cronyism, insider trading and other market imperfections.

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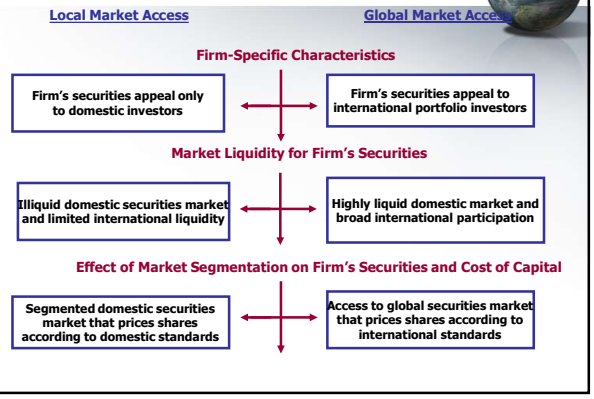
Global Cost & Availability of Capital



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Capital Budgeting and Cost of Capital

- The expected return on any capital budgeting project should be at least as great as the expected return on a financial asset of comparable risk. Otherwise the shareholders would prefer the firm to pay a dividend.
- A project's required return depends on the project's β.
- A project's β can be estimated by considering comparable industries or the cyclicality of project revenues and the project's operating leverage.
- If the firm uses debt, the discount rate to use is the k_{WACC}.

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Weighted Average Cost of Capital

$$k_{WACC} = k_e \times \frac{E}{V} + k_d \times (1-t) \times \frac{D}{V}$$

where,

k_{WACC}	= weighted average cost of capital
k_e	= risk adjusted cost of equity
k_d	= before tax cost of debt
t	= tax rate
E	= market value of equity
D	= market value of debt
V	= market value of firm (D+E)

1. Estimate the cost of equity and the cost of debt.
2. Determine the WACC by weighting these two costs appropriately.

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Cost of Equity and Debt

- We estimate an equity beta to estimate the k_e using the Capital Asset Pricing Model (CAPM).

$$k_e = k_{rf} + \beta \times (k_m - k_{rf})$$

where,

k_e	= expected rate of return on equity
k_{rf}	= risk free rate on bonds
k_m	= expected rate of return on the market
β	= coefficient of firm's systematic risk

- We can often estimate the kd using the YTM of the firm's debt. The normal calculation for cost of debt is analyzing the various proportions of debt and their associated interest rates for the firm and calculating a before and after tax weighted average cost of debt.

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The Cost of Capital and Risk

- The key component of CAPM is beta:
  - the measure of systematic risk, a measure of how the firm's returns vary with those of the market
  - < 1.0 if firm's returns are less volatile than the market,
  - = 1.0 if the same as the market, or
  - > 1.0 if more volatile - or risky -than the market
  - needs to be for the future beta and not the past

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Cost of Capital for MNEs

- The cost of capital for MNEs may differ from that for domestic firms because of the following differences:
  1. Size of Firm
  2. Access to International Capital Markets
  3. International Diversification
  4. Exposure to Exchange Rate Risk
  5. Exposure to Country Risk

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Cost of Capital for MNEs

- An MNE that increases its foreign sales may be able to reduce its beta, and it lowers overall cost of capital.
- However, MNEs may consider unsystematic risk as an important factor when determining a foreign project's required rate of return.
- Hence, we cannot be certain if an MNE will have a lower cost of capital than a purely domestic firm in the same industry.
  - The cost of equity required by investors is higher for MNEs than for domestic firms. Possible explanations are higher levels of political risk, foreign exchange risk, and higher agency costs of doing business in a multinational managerial environment.
  - An MNE should have a lower cost of capital because it has access to a global cost and availability of capital.

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Do MNEs Have a Higher or Lower WACC than Their Domestic Counterparts?

Is MNE_{WACC} > or < $Domestic_{WACC}$?

$$k_{WACC} = k_e \left[\frac{\text{Equity}}{\text{Value}}\right] + k_d\,(1-t) \left[\frac{\text{Debt}}{\text{Value}}\right]$$

Empirical studies indicate that MNEs have a lower debt/capital ratio than domestic counterparts, indicating that MNEs have a higher cost of capital.

And indications are that MNEs have a lower average cost of debt than domestic counterparts, indicating that MNEs have a lower cost of capital.

The cost of equity required by investors is higher for multinational firms than for domestic firms. Possible explanations are higher levels of political risk, foreign exchange risk, and higher agency costs of doing business in a multinational managerial environment. However, at relatively high levels of the optimal capital budget, the MNE would have a lower cost of capital.

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Cost of Capital and Foreign Projects

- Foreign projects may have risk levels different from that of the MNE, such that the MNE's weighted average cost of capital (WACC) may not be the appropriate required rate of return.
- How to account for this risk differential in the capital budgeting process:
  1. Derive NPVs based on the WACC: The probability distribution of NPVs can be computed to determine the probability that the foreign project will generate a return that is at least equal to the firm's WACC.
  2. Adjust the WACC for the risk differential: The MNE may estimate the cost of equity and the after-tax cost of debt of the funds needed to finance the project.

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