Finance 440 - Turbo Finance

Topic 7b
Raising Funds and Issuing Equity

Taking Stock: Where are we?
Part 1 (where we've been):

Valuation Methods

- Present Value
- Accounting for Risk (CAPM)
- Option Pricing
- Accounting for Maturity (Yield Curve)

Our main question has been:
How much is it worth?

Part 2 (where we're going): Financing Decisions

- Dividend Policy
- Capital Structure

Our main question will be:
What is the best structure for payments and finance?
Goals for Topic 7b

• Appreciate the variety of available financing and their usage
• Calculate the effects of equity issuance in perfect markets

Outline of Topics

I. Liabilities
   • types of equity and debt
II. Sources of Funds
III. Issuing Equity
   • types and mechanics
   • in perfect markets
I. Types of Liabilities

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities</th>
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<tbody>
<tr>
<td>Tangible Assets</td>
<td>Common stock</td>
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<td>Real Estate</td>
<td>Preferred stock</td>
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<td>Equipment</td>
<td>Debt:</td>
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<td>Inventories</td>
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<td>Financial Assets</td>
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<td>Intangible Assets</td>
<td>Bonds</td>
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<td>Warrants</td>
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<tr>
<td>Total Assets</td>
<td>Total Liabilities</td>
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Option-like Liabilities

- Warrants
  - Option on stock written by the firm
  - Priced like standard option except for adjustment for dilution
  - Employee stock options are warrants
- Convertibles
  - Often debt into equity, with fixed conversion ratio
  - Priced as risky debt plus an attached warrant
Goal of corporate management:
Obtain financing at the lowest possible cost to shareholders.

Major Considerations:
• tax implications
• information problems
• transactions costs
• clienteles

Where Do U.S. Corporations Get Funds?

• Most comes from internally generated funds (70%-80%)
• Of external financing, debt is much more common than new equity.
• In the last ten years, net equity issues have actually been negative!

Non-U.S. corporations also rely primarily on internally generated funds.
A. Types of Equity Issues

(1) Seasoned Issues

Issues by publicly traded firms that have been trading for some time. These are also called “primary issues.”

(2) Secondary Issues

Large block sales by shareholders are announced as an issue, even though no new shares are issued by the corporation.

(3) IPOs (Initial Public Offerings)
First time stock issues.
• These are notable in that on average they are very under-priced: prices typically rise more than 15% in the days following the issue.
B. Mechanics of Issuing Stock

(1) Underwritten offerings

• “Best Effort” vs. “Firm Commitment”
• Direct costs associated with underwritten offerings:
  Underwriting fees
  Filing and other administrative costs

(2) Rights Offerings

• Shareholders receive the right to buy additional shares at a set price (usually below the current market price).
• The shareholder can either exercise or sell the right.
• Rights offerings are common in Europe, but less so in the U.S.

Issuing Equity – The Case of Perfect Markets

What is a perfect market?

• no information problems
• no taxes
• no transactions costs

This has the implication is that all securities can be sold at a fair, commonly agreed upon price
Why consider this case?

• First, understand and master the basic calculations

• Then, this case serves as a neutral reference point

Issuing Equity in Perfect Markets

Example A:
Firm has 1,000 shares outstanding.
Price per share = $15.
They want to raise $3,000 by issuing new equity.
The $3,000 will be invested in a zero NPV project.

What is the price per share of the old and new equity after the issue?
Example B:
Consider now a similar rights offering, in which old shareholders are given warrants with a strike price of $10 that expire tomorrow.

Assume 300 warrants are issued, so initial investors receive one warrant per 3.3 shares of stock held.

*What is the price per share after the warrants mature?*

*Are the old shareholders better or worse off than before?*
The Effect of Raising Equity: The Case of Perfect Markets

• A benefit of an efficient market is that firms can raise capital for new investment projects on terms that are fair to both the issuer and investors in the new securities.

• This means that if the project is good, the firm can raise money and preserve the (net present) value of the new project for its existing owners.

• It also means that if the project is not good, potential investors are not fooled into over-paying for claims on the cash flows of a bad project.
Issuing Securities: An Example

• Omni Corporation is an all-equity firm (i.e., no debt). Its 20 million outstanding shares of stock are priced at $25 per share.
• The firm’s existing assets generate cash flows of $100 million each year in perpetuity.
• The firm is considering a new investment project that costs $50 million and generates $7 million per year cash flows in perpetuity.
• The new project’s beta implies that its expected return is 10%.

1. Is the new project more or less risky than the firm’s existing assets?
2. Should the firm take the project?
3. If the firm issues additional equity to finance the project, how much does it need to issue and at what price will each new share be sold?
4. What effect does this have on the wealth of the old shareholders?
5. What effect will the new project have on the firm’s earnings (i.e. cash flows) per share? How does this affect your decision concerning the project?
First Question: *Is the new project more or less risky than the firm’s existing assets?*

Second Question: *Should the project be taken?*
Third Question: *If the firm issues additional equity to finance the project, how much does it need to issue and at what price will each new share be sold?*

Fourth Question: *What effect does this have on the wealth of the old shareholders?*
Fifth Question: **What effect will the new project have on the firm’s earnings per share? How does this affect your decision concerning the project?**

The new project is **dilutive**---it decreases earnings per share from $5.00 to $4.88.

This is consistent with the project adding value to the firm because the project is less risky than the firm’s existing assets.

**This example illustrates that earnings dilution is not necessarily a bad thing in an efficient market.**
V. Summary

• Key Concepts
• Definitions
• Notation

Key Concepts

• There is a broad menu of financing instruments available to managers!
• Corporate management tries to use these instruments to minimize costs to shareholders.
Definitions

Common vs. Preferred Stock
Debt: contractually stipulated payments
has priority over equity
funded vs. unfunded
Equity issues:
seasoned vs. secondary vs. IPO
underwritten vs. rights offerings

Next Time:

Payout Policy:
How do firms distribute earnings? What should managers consider when setting payout policy?