Corporate Financing and Investment Decisions When Firms Have Information That Investors Do Not Have

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Main Findings: Asymmetric Information Can Reduce Firm Value

1. Asymmetric information between firm management and investors can reduce firm value as positive NPV projects are foregone
2. Consider a firm with assets in place and profitable investment opportunity (positive NPV)
    - If invested, project has to be financed by issuance of new equity
    - Management has superior information about value of firm's assets and investment opportunity that investors do not have ("know the true state of nature"), and acts in old shareholders' interest
    - New equity issued only if: share of existing assets and cash going to new shareholders is smaller than share of increment to firm value obtained by old shareholders
    - If current equity is undervalued in the market, there are cases where it is optimal to forego profitable investment because new equity would have to be sold too cheap
      $\Rightarrow$ Lower ex-ante firm value
    - Issuing equity can signal overvaluation ("bad state of nature") $\Rightarrow$ stock price drops
3. Conveying information from firm to investors is costly

Main Findings: Asymmetric Information Can Reduce Firm Value

1. Alternative: Firm has sufficient cash to finance investment internally
   - Avoids external financing and thus avoids possible conflict between old and new shareholders
   - Positive NPV projects are always invested
2. Alternative: Debt financing is possible
   - Risk-free debt: problem vanishes, firm never passses up positive-NPV opportunities (as good as holding cash)
   - Risky debt: still some profitable opportunities might be foregone, but opportunity loss is smaller than with equity

     $\Rightarrow$ Ex-ante firm value is higher under debt financing, because loss due to underinvestment is less

     $\Rightarrow$ Firms prefer debt over equity; never issue new equity
3. Problem is larger the larger the amount that has to be raised externally

Implications for Financing Policy and Further Questions

Implications for Financing Policy:

- Firms prefer internal financing to financing by security issues
- When they issue, debt is prefered over equity
- Firms with insufficient cash at hand may not undertake all valuable investment opportunities
- Firms have incentive to build up cash reserves in order to avoid security issues under asymmetric information
  - Raise equity and/or debt when asymmetry of information is low (assuming information asymmetry is only temporary)
  - Retention of earnings, i.e. limit dividends
  - When managers have superior information and stock is issued, stock price will fall (bad signal)

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Further Questions:

- What if firm could be split up, i.e. splitting assets in place from profitable investment opportunities?
- What happens if there are agency and bankruptcy costs of debt?