Financial Markets Microstructure

Lecture 15

Liquidity and Corporate Policy
FPR Chapter 10

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Previously on FMM

Value of liquidity

- Empirical finding: liquidity and liquidity risk affects asset value (not just the price)
- Two explanations
  - Speculative view: buy low/sell high speculator makes 'roundtrips' in the asset, and therefore pays the spread
  - Portfolio view: investors are hit by liquidity shocks and must engage in costly adjustments
- We looked at this in different frameworks
  - Asset pricing theory: $p_t = \frac{p_{t+h}}{(1+r)^h}$
  - CAPM: compensation for undiversifiable risk

Today

Liquidity and corporate policy

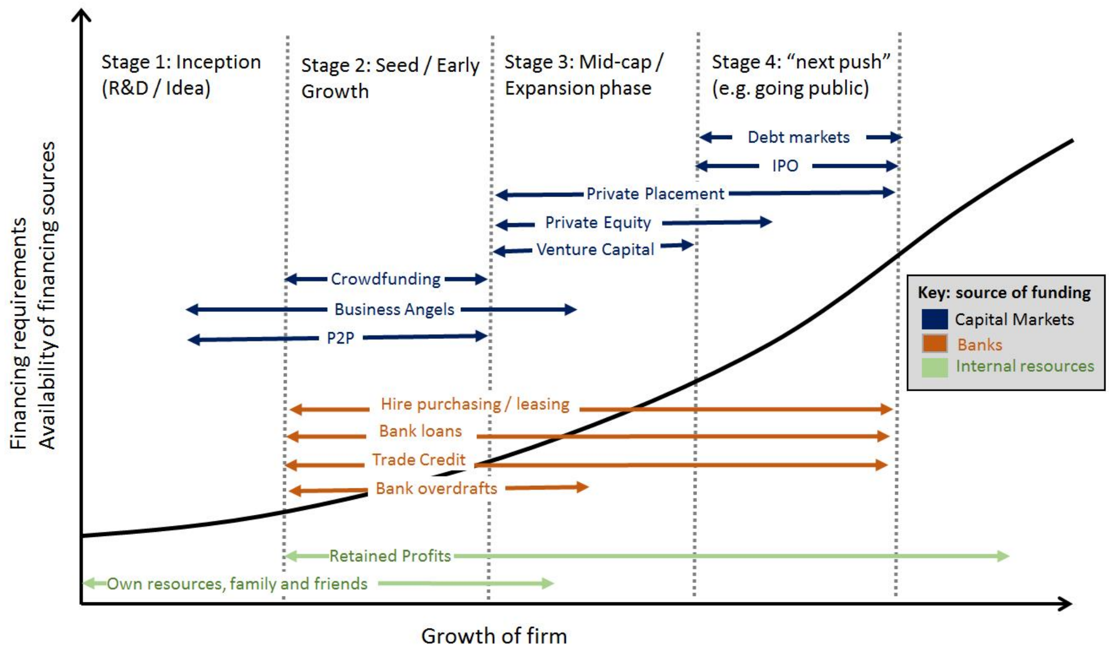
- In looking at secondary markets, we never spoke about how firms behave
  - Just assumed some fundamental value
- But firms both look at financial markets when making decisions
- and can affect the market through their actions

- **Corporate finance:** liquidity affects opportunities to raise capital
- **Corporate governance:** liquidity affects the influence of shareholders on management
- **Information feedback:** managers use stock prices to evaluate managerial decisions

Access to capital

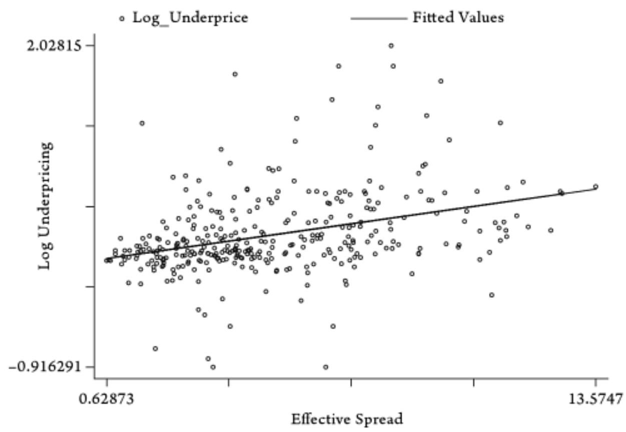
- Firms need financing to invest in profitable activities (section 10.2)
- More liquid markets $\Rightarrow$ smaller cost of capital $\Rightarrow$ easier to fund what needs to be funded
- Side channel: easier to progress through the life stages of a firm
  - E.g. early investment often comes from angels/venture capital
  - but they exit once the company has grown enough
  - more risk averse investors enter then etc

Access to capital



Access to capital

- Initial public offering (IPO): first time a firm gets listed on an exchange
  - Initially allocated via a form of auction (bookbuilding)
  - **Underpricing**: initial allocation is on average priced below the exchange's opening price on the following day
  - Many reasons, but liquidity (due to asymm info) seems to be a factor: (Ellul and Pagano [2006])



Shareholders and governance

- Incentives of owners and managers are often misaligned
  - managers must put in the effort, but its fruit goes to company owners
  - so managers must be managed
- But what are investors' motives when buying stocks? Do they want to engage in such oversight?
  - Short-term profit/speculation?
  - Improving governance for sake of long-term profit?

Shareholders and governance

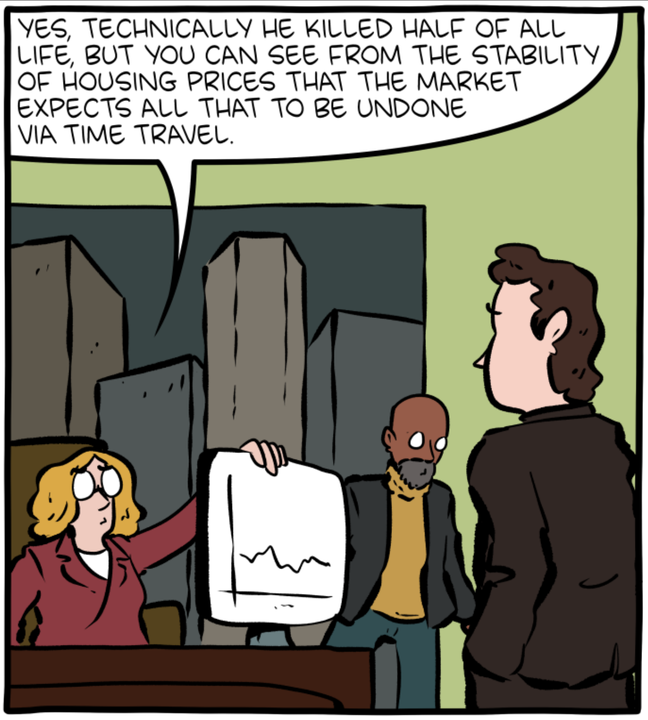
- Particular concern with the governance of widely held corporations (Berle and Means [1932]), many small shareholders
  - Who would actively represent shareholder interests?
  - There may be a need for concentrated ownership (10.3)
- If a manager makes bad decisions, a *large* shareholder may (at some private cost) seek to improve the governance
  - Alternative – sell shares (the Wall Street Walk, vote with your feet)
- If the market is less liquid, potentially less attractive to sell
  - Could be good for corporate governance, more long-sighted behavior
- [Economist & Bloomberg articles on activist investors in Apple and Intel]

Shareholders and governance

- In illiquid stocks the round-trip cost is large
  - Exit is costly – good for activism
  - But less attractive for an activist investor to buy a block of shares
- So illiquidity is bad in that it doesn't incentivize the centralization of ownership, but once this is achieved, is good for activism
- To make the best of this, US regulators allow opaque building of blocks, but require transparent trading by blockholders

Information

- If the market is better informed than the firm on some aspects, the firm can extract this info:
  1. Announce a decision
  2. Gauge stock price reaction
  3. Decide whether to follow through on the decision
- Example: back in 2000, Coca-Cola retracted its $16bn acquisition offer to Quaker Oats after an 8% dip in stock prices.
- Feedback between stock prices and firm decisions opens up scope for manipulation; see Goldstein and Guembel [2008].
  - Kyle-like model, firm announces a decision and watches the stock market
  - Uninformed speculator sells → firm assumes it could be due to bad news and reverts the decision → stock price drops → speculator closes the position at a profit



The finance sector knew Thanos would be defeated before anyone else.

Incentivizing Managers

- Investors depend on the firm to produce cash flows
  - Potential conflict of interest, agency: the field of Corporate Governance
- To reduce the agency problem, in general, executive compensation is made to vary with the share price (10.4.2)
  - The share price is a contractible number which forecasts future company value
  - Again, most helpful if the share price is very informative

Incentivizing Managers: model

- The book considers a simple agency model
  - **Players**: Manager, Shareholders, (Stock market)
  - **Value**: $V \in \{V^H, V^L\}$, with $\mathbb{P}(V = V^H) = \theta$
  - **Effort**: $\theta = \overline{\theta}$ if manager exerts effort (cost c), otherwise $\theta = \underline{\theta}$
  - **Reservation wage**: manager has zero reservation wage
  - **Limited liability**: salary is non-negative: $w \geq 0$
  - **Stock price**: market observes effort and trades stock at expected value
  - **Contracts**: effort is *not* contractible. But value and stock price is
- First-Best contract (if effort were contractible): $w = c$ if $\theta = \overline{\theta}$ and $w = 0$ otherwise
- Consider contract conditional on either value or stock price.

Incentivizing Managers: results

- **Value**: Let w^k be wage conditional on value V^k. Then:

  Incentive constraint: $\overline{\theta}(w^H - w^L) - c \geq \underline{\theta}(w^H - w^L)$. Optimal contract:

$$\begin{cases} w^L = 0; \\ w^H = c/(\overline{\theta} - \underline{\theta}). \end{cases}$$

- **Stock price**: Price: $\overline{P}$ if $\theta = \overline{\theta}$ and $\underline{P}$ if $\theta = \underline{\theta}$. Wages: $\overline{w}$ and $\underline{w}$. Then

  Incentive constraint: $\overline{w} - c \geq \underline{w}$. Optimal contract: $\begin{cases} \underline{w} = 0; \\ \overline{w} = c. \end{cases}$

- Stock price-incentivized contract is cheaper: uses more information
- See Contract Theory course for more

Incentivizing Managers: issue

- Tying compensation to stock prices can backfire due to career concerns
  - Issue arises if managers care about their perceived skill
- CEO may forego risky – but attractive – investment opportunities for the fear of appearing incompetent
- Or the opposite may happen: take on too much risk if benefits for reputation are convex

Instruments

- How can the firm influence the liquidity of its stocks?
- (1) IPO/listing $\Rightarrow$ double listing
  1. cost: increased transparency
  2. must obey state and platform regulation
- (2) Hire a dedicated market maker in own stocks
  1. popular in EU: MMs post aggressive limit orders
  2. such MMs would not have the informational advantage of a dealer in a hybrid market $\Rightarrow$ smaller effect on rest of market
- (3) Choose optimal capital structure
  1. stocks and bonds may have different liquidity
  2. Corporate finance studies all the factors that feed into the "debt vs capital" decision

Conclusion

Corporate governance has a lot of connection to company's financial market performance

- access to capital affected by liquidity
- liquidity and corporate control are somewhat antithetical
- firm can use stock price as market's feedback on its decisions or as benchmark of CEO performance
- firms have some ways in which they can improve the liquidity of their stocks

References I

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A. Ellul and M. Pagano. IPO Underpricing and After-Market Liquidity. *The Review of Financial Studies*, 19(2):381–421, July 2006. ISSN 0893-9454. URL `https://doi.org/10.1093/rfs/hhj018`. Publisher: Oxford Academic.

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