

# Financial Markets Microstructure

## Lecture 17a

Liquidity and Corporate Policy  
FPR Chapter 10

Egor Starkov

Københavns Universitet  
Spring 2023

# 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

## **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

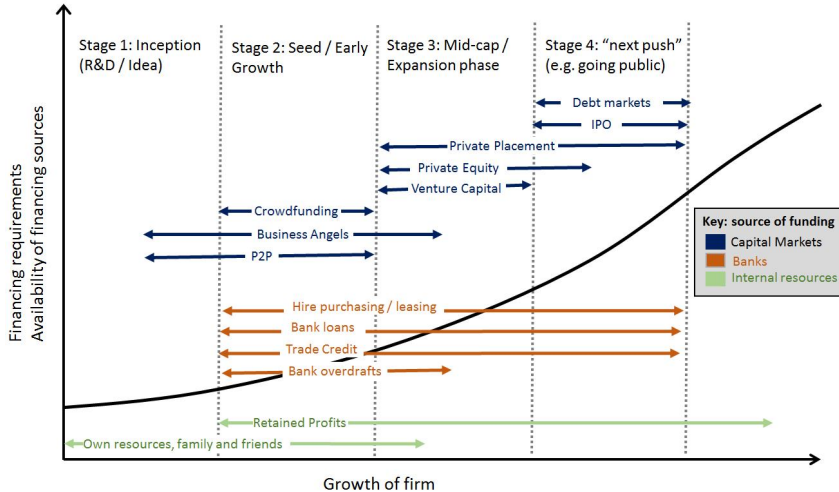
## Liquidity and corporate policy

- 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)

# Access to capital

- Initial public offering (IPO): first time a firm gets listed on an exchange
  - Initially allocated via a form of auction (bookbuilding)
  - **Bliz quiz:** what kind of prices do IPOs produce, compared to subsequent prices in the market?
    - 1 Higher, more so for liquid assets
    - 2 Higher, more so for illiquid assets
    - 3 Lower, more so for liquid assets
    - 4 Lower, more so for illiquid assets

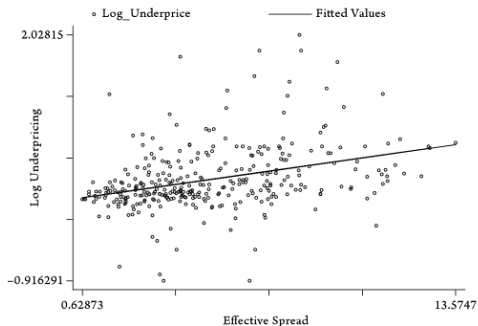


# Access to capital

- Initial public offering (IPO): first time a firm gets listed on an exchange
  - Initially allocated via a form of auction (bookbuilding)
  - **Bliz quiz:** what kind of prices do IPOs produce, compared to subsequent prices in the market?
    - 1 Higher, more so for liquid assets
    - 2 Higher, more so for illiquid assets
    - 3 Lower, more so for liquid assets
    - 4 Lower, more so for illiquid assets

# 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
  - so managers must be managed
- But what are investors' motives when buying stocks?
  - 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)
- A large shareholder may (at some private cost) seek to **improve the governance**
  - Alternatively 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 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

# 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
- How often would you say the market has superior information compared to firm?

- 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



# 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:**  $\theta = \bar{\theta}$  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  $\theta = \bar{\theta}$  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:  $\bar{\theta}(w^H - w^L) - c \geq \underline{\theta}(w^H - w^L)$ . Optimal contract:

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

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

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

- 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

- A. A. Berle and G. G. C. Means. *The modern corporation and private property*. Transaction publishers, 1932.
- 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. Publisher: Oxford Academic.
- I. Goldstein and A. Guembel. Manipulation and the Allocational Role of Prices. *Review of Economic Studies*, 75(1):133–164, January 2008. ISSN 0034-6527, 1467-937X.