

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

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
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- **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

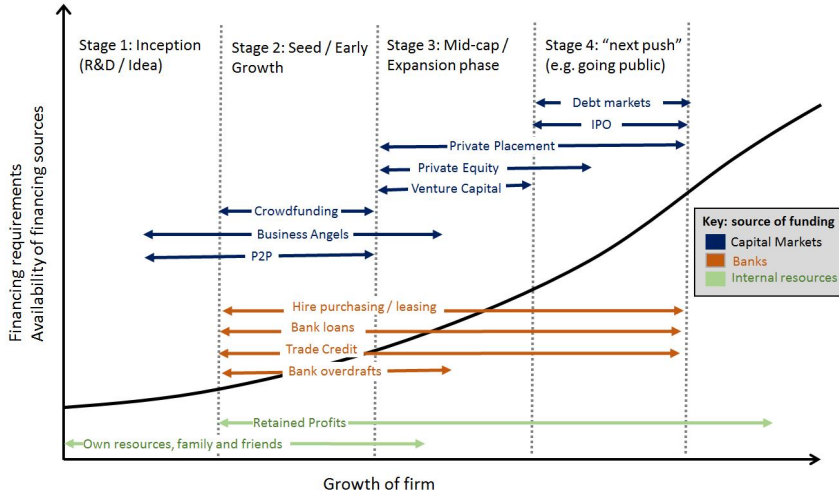
This lecture:

- 1 Corporate finance
- 2 Activism
- 3 Using information from the stock market
- 4 Stock incentives
- 5 Controlling the liquidity of your stocks

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

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 - Initially allocated via a form of auction (bookbuilding)

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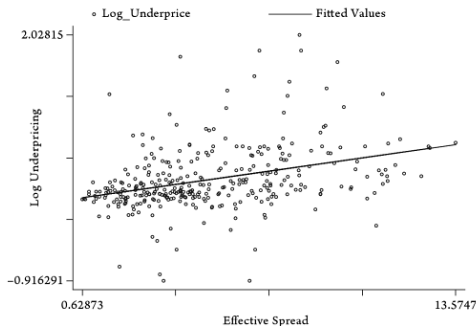
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 - **Bliz quiz:** what kind of prices do IPOs produce, compared to subsequent prices in the market?
 - 1 Higher, more so for liquid assets
 - 2 Higher, more so for illiquid assets
 - 3 Lower, more so for liquid assets
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Access 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])



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Shareholders and governance

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 - managers must put in the effort, but its fruit goes to company owners
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- 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

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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
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- 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



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

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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

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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

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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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