Topics in Corporate Finance

Chapter 8: Signaling with Payout Policy

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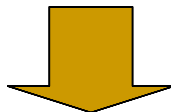
Reactions of the stock market

- Stock price movement of about 10-15% when firms announce changes in…
  - Investment
  - Dividend choices
  - Financing choices
- Also stock prices are affected by stock splits, managers' decision to acquire shares,…



Information is revealed

This chapter's plan

- How does the market react to these announcements?
- How market reactions affect those decisions?

- Implicit assumption: insiders have more information than investors
- Managers may not be able or willing to directly disclose this information
- Some information may be indirectly revealed by managerial actions

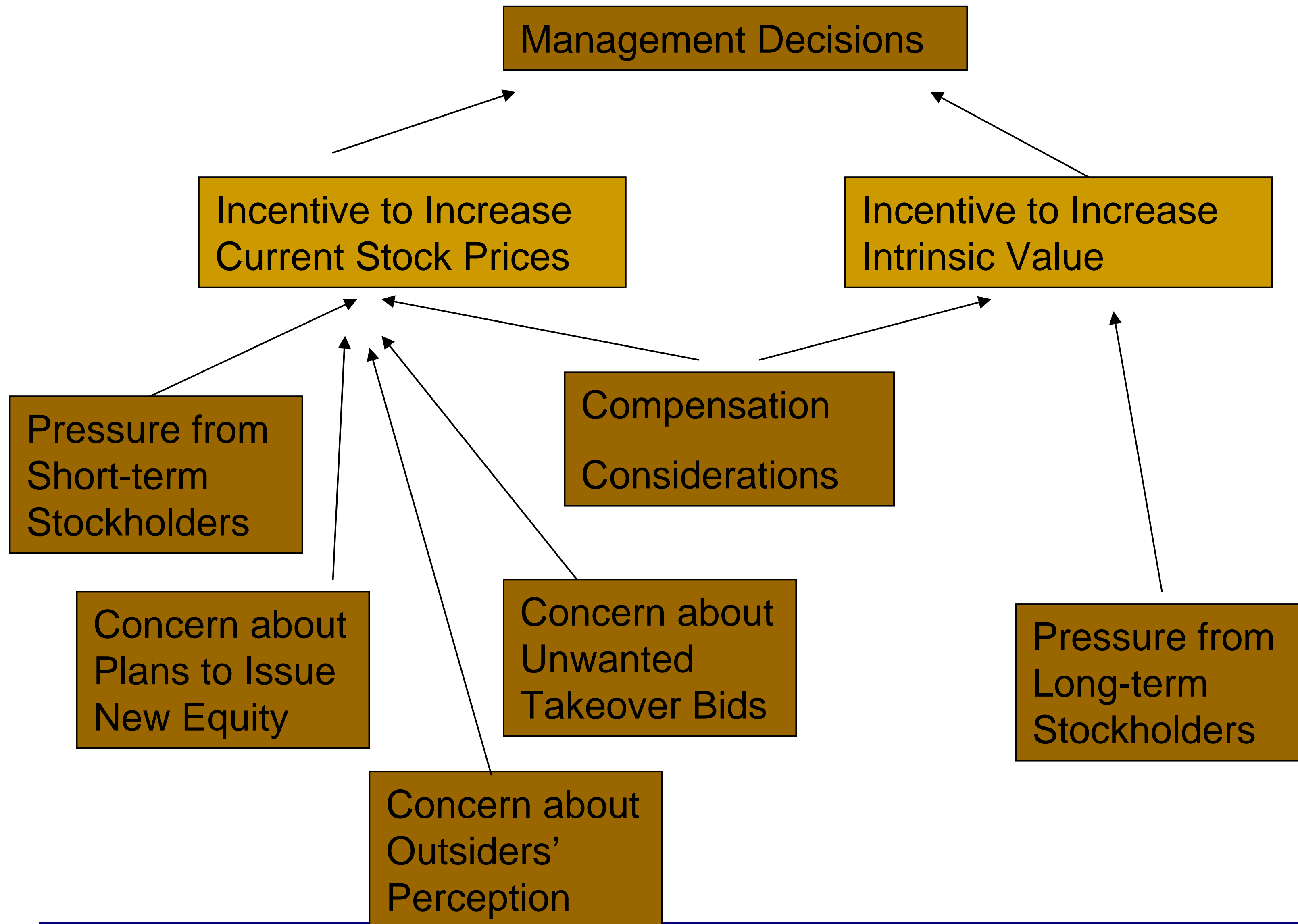
Intrinsic and Perceived Value

- Mostly, we have assumed that managers maximise shareholder value (i.e. share price)
- However, managers may know whether the market over or undervalues the firm

- Intrinsic value: "firm's (full information) value"
- Perceived value: "current market value"

- What should the manager maximise?

What will the manager maximise?



Simple Numerical Example

- A CEO owns 20,000 shares and…
  - Plans to sell 10,000 in near future and
  - Hold 10,000 indefinitely

- If she has a fixed salary and does not have any of the previous concerns…
  - She will weight current and intrinsic value equally
  - Reduction of £1 in intrinsic value needs to be compensated with an increase £1 in current value

Real Life Example

- Joint venture of IBM, Motorola and Apple to collaborate on PC and workstations
- On announcement, the market evaluates…
  - Whether the JV is a good decision for IBM
  - New information about IBM signaled indirectly by the decision
    - Good: IBM is confident to fund a major new investment
    - Bad: IBM does not have confidence in the mainframe business

In the end…

- It may well be that…
  - Good decisions can reveal unfavourable information and
  - Bad decisions can reveal favourable information
- As a consequence:
  - Stock market reactions can be poor indicators about the change in intrinsic value
  - Managers concerned about the short-term prices may take decisions reducing intrinsic vale

Effects of Announcements about Dividends and Share Repurchases

- Announcement of…
  - An increase in dividends (+2%)
  - Initiation of quarterly dividends (higher)
  - Omission of a dividend (-9.5%)

  - A repurchase of share with tender offer (+16%)
  - A repurchase of share at the open market (3%)

A Simple Model (Miller and Rock, 1985)

- All-equity financed firm, sources and uses of funds:

OPERATING CASH FLOW = INVESTMENT EXPENDITURES - CHANGE IN EQUITY + DIVIDENDS

- Assume: investment expenditures (and equity and dividend) are observable by investors
- Higher than expected dividend implies good news about the company

A Simple Model (Miller and Rock, 1985)

OPERATING CASH FLOW	=	INVESTMENT EXPENDITURES	-	CHANGE IN EQUITY	+	DIVIDENDS

- Assume: operating cash flows and investment expenditures can’t be observed by investors
- If manager has incentives to…
  - maximise intrinsic value, it will pick the optimal investment level
  - maximise share price, she may underinvest and increase the dividend

Numerical Example (no equity changes)

	Option 1	Option 2	Option 3
(observed)	£10m dividend	£15m dividend	£20m dividend
(not observed)	£15m invested	£10m invested	£5m invested
Intrinsic Value	£220m	£210m	£200
Current Value	£190m	£210m	£215

What is the best option for the firm?
What are the expected cash flows?

What if dividends are higher?

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Which option would you take?

What does the market expect?

Summary

- A manager with equal weight for short and long term value will choose option two
- Market correctly inferred that the firm would choose this option
- If they had unexpectedly paid more…
  - Because e.g. management face takeover threat
  - Investors would have incorrectly believed that firm had better than expected cash flows

Information content of the debt-equity Choice

- Managers avoid increasing leverage if the firm is in bad shape
  - Debt issue signals confidence about the firm
- Managers do not issue equity if their stock is undervalued
  - Equity issue signals that stock may be overvalued

Credibility

- In order to signal quality, managers have an additional incentive to increase their debt ratios
- However, a signal transmits information only if firms in bad shape cannot mimic behaviour of firms in good shape
- But a higher debt ratio will be costly for bad firms and therefore is a credible signal
  - Higher impact in the probability of bankruptcy

Adverse Selection while Selling Equity

- We said that mangers have incentives to issue equity when stock is overvalued
- Similarly an insider has incentives to sell her shares when the stock is overvalued
- But holding shares has costs!
- Insiders' job: convince investor that costs are high

Adverse Selection while Issuing Equity

- Again need to convince investors that good investment opportunities arose
- Sometimes, impossible and therefore positive NPV investments not taken
- Using debt or preferred stock can sometimes be a solution

Reading

- Miller and Rock (1985) Dividend policy under asymmetric information, Journal of Finance.
- Dewenter and Warther (1998), “Dividends, asymmetric information , and agency conflicts: evidence from a comparison of dividend policies of Japanese and US firms” Journal of Finance
- Grullon and Michaely (2004), “The information content of share repurchase programs” Journal of Finance