Corporate Valuation, Restructuring and M&A's

Motives for Mergers

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The Boundary of the Firm

- Any restructuring, merger or acquisition changes the boundary of the firm
- **Why do we need to change the scope of the firm?**
- **Do Mergers and Acquisitions create value?**

Motives for Mergers

1. Economies of scale
   → Bradley, Desai, Kim (1983, 1988)
2. Transaction Cost Efficiency
   → Coase (1937)
3. Agency Costs of Free Cash Flow
   → Jensen (1986)
4. Disciplinary Effects
   → Manne (1965), Alchian and Demsetz (1972)
5. Managerial Entrenchment
   → Shleifer and Vishny (1989)
6. Hubris
   → Roll (1988)
7. Breach of Trust
   → Shleifer and Summers (1988)

Economies of Scale

- Scale Economies
  - Technical and engineering relations
    $\rightarrow$ Mass production can lower the costs
  - Inventory management when demand is subject to random influences
  - Specialization
    $\rightarrow$ Larger firm size implies that workers can specialize in tasks (Adam Smith)
- According to Economies of Scale
  - A firm will only undertake a merger if this is beneficial and therefore mergers should create value

Transaction Cost Efficiency

- Coase (1937)
  - What determines the size of the firm?
  - The relative transaction cost within and outside the firm
    $\rightarrow$ Is it cheaper to produce the good inside or outside the firm?
  - The size of the firm depends on these relative costs
    $\rightarrow$ "Changes like the telephone and the telegraph which tend to reduce the cost of organizing geographically will tend to increase the size of the firm"
    $\rightarrow$ Implies that technological change will alter the optimum size of the firm
  - According to transaction cost efficiency
    $\rightarrow$ A firm will only alter its size if that is efficient and therefore all mergers / carve-outs and so on should create value

Predictions of Economies of Scale / Transaction Cost Efficiency

- Merger / Takeover will only be undertaken if it creates value
  $\rightarrow$ The effect on combined returns (to target and acquiring shareholders) will be positive
- What about target shareholders?
  $\rightarrow$ Definitely they will not lose (nonnegative returns)– otherwise they would not sell. Must be positive in expectation.
- What about acquiring shareholders?
  $\rightarrow$ Definitely they will not lose (nonnegative returns) - otherwise they would not buy
- The positive total gains are split among target and acquiring shareholders
  $\rightarrow$ The split depends on a number of factors.

Agency Costs of Free Cash Flow

- Jensen (1986): Too much cash may lead to value-reducing decisions
- From 1973 to the end of the 1970s, oil prices increased tenfold
- High oil price implied that in 1984 cash flows of the ten largest oil companies were $48.5 billion (28% of top-200 firms)
- Current oil price was high, but expected future oil price is low
- Crude oil reserves (the industry's major asset) were too high
  - Cutbacks in exploration and development were required
- What would an ideal manager do in this case?
  $\rightarrow$ Invest in positive NPV projects
  $\rightarrow$ If there are no positive NPV projects, distribute dividends

Agency Costs of Free Cash Flow-Predictions

- Jensen (1986)
- Managers used free cash flow to build their empires rather than distribute cash to shareholders
  - Invested in unprofitable exploration and development
    - McConnell and Muscarella (1986) study announcements of capital expenditures
    - negative stock price reactions in the oil industry
    - positive stock price reactions for industrial firms
  - Purchased firms outside the oil industry
    - Retailing (Marcor by Mobil)
    - Manufacturing (Reliance Electric by Exxon)
    - Office equipment (Vydec by Exxon)
    - Mining (Kennecott by Sohio, Anaconda Minerals by Arco)
    - These acquisitions were (in general) unsuccessful
  - Agency costs suggest that even though the target may increase its value, mergers can be value-destroying for the acquirers.

Disciplinary Effects

- Manne (1965) and Alchian and Demsetz (1972)
- M&A is a component of the market for corporate control
- There are two rival management teams A and B
  $\rightarrow$ The firm XYZ is worth 100 under management team A and 150 under management team B
- The market for corporate control ensures that management team B is in control
- Mergers are a mechanism of ensuring that the most efficient management team is in control
  $\rightarrow$ Often the threat of a change in control is sufficient to make the management team implement the needed changes

Disciplinary Effects-Predictions

1. Takeover gets rid of bad management hence the combined returns should be positive.
2. Target shareholders do not tender unless they gain so they should experience positive returns
3. Acquiring shareholders would not purchase the target company unless there was something in it for them. So the return to acquiring shareholders should be nonnegative
4. Operating efficiency of the firm should be improved following the merger

Managerial Entrenchment

- Shleifer and Vishny (1989)
- There is an active market for managerial talent
- Managers have an incentive of making themselves indispensable
  $\rightarrow$ Acquire a set of assets that the manager can run more efficiently than any other manager
- These managers may acquire firms
  $\rightarrow$ Goal is to entrench, therefore manager is willing to overpay
  $\rightarrow$ Particularly important when performance vis-a-vis industry peers is poor (threat of replacement is larger)
- Lang, Stulz and Walkling (1988)
  $\rightarrow$ Firms that have a low valuation – low (market value / book value) tend to overpay more
  $\rightarrow$ Consistent with Shleifer and Vishny (1989) since these managers are most likely to lose their jobs

Managerial Entrenchment-Predictions

- Shleifer and Vishny (1989)
  $\rightarrow$ The goal of the merger is to entrench management
  1. The combined returns should be negative
  2. The returns to target shareholders should be positive
  3. The returns to acquiring shareholders should be negative

Hubris

- Roll (1986)
- Managers have "hubris" – overconfident concerning their own valuation
- Valuation is not a perfect science – mistakes are made
  $\rightarrow$ On average, valuation is correct
- Example:
  - Suppose that traded price of the target firm is \$10 per share
  - Five bidders, A, B, C, D, E that undertake valuation
  - True value 11
  - As expected, the managers have different valuation. Suppose that they the following valuation for the target
    $\rightarrow$ A=10, B=9.5, C=11, D=11.5, and E=12
  - Company is sold in a first price auction (highest bidder wins)
  - Who wins at what price?

Hubris

- E is willing to bid \$12
- True value: \$11
- Outcome E wins auction and makes a loss of \$1 per share
- What is going on here?
- **Winner's Curse**
- The most optimistic valuation is most likely a valuation that is higher than the fair asset value of the firm. If you win the auction for the firm you have most likely overpaid
- Bidders should take into account the "winner's curse" when examining their valuation
- The hubris of the manager prevents this self-reflection

Hubris-Prediction

- With hubris there will be a change of control even though there is no gains to the merger
    1. Total gains to the merger is zero
    2. Positive gains to the target shareholders
    3. Negative gains to acquiring shareholders
- In effect takeovers are a reallocation from acquiring to target shareholders

Breach of Trust

- Shleifer and Summers (1988)
- Firm is a nexus of contracts with stakeholders. Stakeholders include
  1. Employees
  2. Suppliers
  3. Creditors
  4. Government
- Many of these contracts are implicit – contracting world is extremely complex
- After a merger / takeover, many of these implicit contracts can be reneged
  1. Wages may be cut (managers may have verbally promised wage increases)
  2. Risk of the firm may be increased (debt will lose value)
  3. Suppliers that have been loyal to the firm may be substituted for more "efficient" suppliers
- To measure total welfare gain associated with the merger / takeover, we need to consider the losses of other stakeholders as well

Breach of Trust-Predictions

- Shleifer and Summers (1988)
- The goal of the merger / takeover is to breach implicit contracts with stakeholders
    1. This means the total gain to shareholders is positive (others lose)
    2. Target shareholders will have a positive return
    3. Acquiring shareholders will have a nonnegative return
    4. Other stakeholders will lose

Predictions of Merger Theories

Theory	Combined Gains	Gains to Target	Gains to Bidder
Economies of Scale / Synergies	positive	positive	nonnegative
Transaction Cost Efficiency	positive	positive	nonnegative
Disciplinary Effects	positive	positive	nonnegative
Agency Costs	negative	positive	more negative
Managerial Entrenchment	negative	positive	more negative
Hubris	zero	positive	negative
Breach of Trust	positive	positive	nonnegative

Merger Arbitrage

- **Merger Arbitrage:** Practice of buying or selling stock of a takeover target and thereby gamble on whether the merger would be completed. Long Term Capital Management (LTCM) was heavily involved in merger arbitrage.
- One empirical pattern: Usually, the price that the bidder offers is higher than the market price
- If an investor buys the shares after the announcement of the merger and holds it until the deal is done, she can pocket the difference between the market and bid price
- Note that this is different than the original concept of arbitrage
    - Arbitrage refers to a case, in which there is no risk: Arbitrage is defined as buying an asset in one market and sell it in another market immediately with a higher price.
    - In merger arbitrage, there is a risk. That is the investor thinks that the merger deal will be successful.