Merger activity in the US during the past century

The Five Merger Waves

Source: FAZ / Müller-Stewens / Jansen
Mergers in Europe

Graph 1: Value and number of M&A operations
target countries: EU-15, bidder countries: EU-15, USA, Canada, Norway, Switzerland

Albert Banal-Estanol

Lecture
Mergers come in waves and are pro-cyclical

Sources: Mergers: 1895-1920 from Nelson (1959); 1921-67 from FTC; 1968-2002 from M&A. P/E ratios: Homepage of Robert Shiller:
http://aida.econ.yale.edu/~shiller/data.htm; for 2002 we use the average P/E ratio until July; mergers: number of mergers in the first 8 months multiplied by 1.5 Population:
Statistical Abstract of United States (several years).
## Recent Mergers

<table>
<thead>
<tr>
<th>Industry</th>
<th>Acquiring Company</th>
<th>Selling Company</th>
<th>Payment (S billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telecoms</td>
<td>Vodafone (UK)</td>
<td>Mannesmann (Germany)</td>
<td>203.0</td>
</tr>
<tr>
<td>Pharmaceuticals</td>
<td>Sanofi (France)</td>
<td>Aventis (France/Germany)</td>
<td>64.0</td>
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<tr>
<td>Pharmaceuticals</td>
<td>Pfizer</td>
<td>Pharmacia</td>
<td>59.5</td>
</tr>
<tr>
<td>Banking</td>
<td>JP Morgan Chase</td>
<td>Bank One</td>
<td>58.0</td>
</tr>
<tr>
<td>Banking</td>
<td>Bank of America</td>
<td>FleetBoston Financial Corp.</td>
<td>49.3</td>
</tr>
<tr>
<td>Telecoms</td>
<td>Cingular Wireless</td>
<td>AT&amp;T Wireless Services</td>
<td>41.0</td>
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<tr>
<td>Banking</td>
<td>Mitsubishi Tokyo Financial Group (Japan)</td>
<td>UFJ Holdings (Japan)</td>
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<tr>
<td>Healthcare</td>
<td>Anthem</td>
<td>Wellpoint Health Networks</td>
<td>16.4</td>
</tr>
<tr>
<td>Insurance</td>
<td>St. Paul Companies</td>
<td>Travelers property Casualty</td>
<td>16.1</td>
</tr>
<tr>
<td>Banking</td>
<td>Banco santander Central</td>
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<tr>
<td>Banking</td>
<td>Hispano</td>
<td>Abbey (UK)</td>
<td>15.6</td>
</tr>
<tr>
<td>Banking/Consumer Finance</td>
<td>HSBC Holdings (UK)</td>
<td>Household International Vivendi Universal Entertainment</td>
<td>15.3</td>
</tr>
<tr>
<td>Media</td>
<td>General Electric</td>
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<td>13.7</td>
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Today’s Lecture

- Evidence of merger activity
- Definitions and classifications
- Gains and losses from merging
- Empirical evidence
- (Bidding strategies in takeovers)
Definitions

- **Merger**: “A merger is a transaction in which assets of two or more firms are combined in a new firm”

- **Acquisition**: “Purchase of one firm (“target”) by another firm (“acquirer”)”
  - Friendly: made directly to the management
  - Hostile: making a tender offer to the shareholders

- **Tender offer**: “Offer to purchase a certain number of shares at a certain price and date”

- **(Leverage) buyout**: “Individual or group arranges to buy the company (often with debt) and take it private”
Types of Mergers

- **Vertical merger**
  - Combination of firms at different stages of production

- **Horizontal merger**
  - Combinations of two firms in the same line of business

- **Conglomerate merger**
  - Firms in unrelated markets combine
Financial classification of M&A

- **Strategic acquisitions:**
  - Generate operating synergies (reduce competition, attain economies of scale or scope, R&D synergies…)
  - Most of them horizontal

- **Financial acquisitions:**
  - Bidder thinks that target is undervalued (due to different information or because of bad management)
  - Leverage buyouts (e.g. RJR Nabisco)

- **Conglomerate acquisitions:**
  - Motivated by financial synergies (taxes, diversification…)
  - Example: ITT (communications, cars, TVs, hotels,…)

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Lecture
Takeover Gains (1)

- Tax gains:
  - Increase leverage
  - Tax shields from losses in one of the firms

- Operating synergies:
  - Improve productivity or cut costs, e.g. in R&D or advertising (economies of scale)
  - Eliminate coordination and bargaining issues in case of a vertical merger
  - Reduce competition in horizontal mergers
  - Combination of distribution networks
  - Diversification? (e.g. tobacco buying food companies)
Management incentives and takeovers:

- If managers’ interests deviate from shareholders’ takeovers can correct that.
- Example: Gulf in the 1980s was taken over by Chevron. Stock was trading at low values because of investment in negative NPV (oil exploration).
- Sometimes replacing caring by ruthless managers (gains at a cost for employees).
- Usually hostile leading to break-ups and sometimes using large amount of debt (leverage buyout).
- Not necessary to involve two firms nor even a change in management (management leverage buyout).
Takeover Gains (3)

- Financial synergies:
  - Diversification is not generally a good reason because it is cheaper for shareholders to diversify themselves (CAPM and APT)
  - However, merging two companies can bypass paying personal taxes before reinvesting
  - In addition, problem of information may impede transfers
Takeover Gains (Summary)

- Do the benefits outset the costs?
- Can the benefits be obtained otherwise?
  - Tax gains
  - Joint marketing agreement to use distribution networks of each other
  - However, an explicit contract may be too complicated or costly to write
Costs of Merging

- Hierarchical structure of organisation (Meyer et al., 1992)
- Divisional rent seeking (Sharfstein and Stein, 2000)
- Coordination problems in large organisations (Van Huyck et al., 1990)
- Cost of integrating two companies with different production processes, accounting methods or corporate cultures
- Misallocation of capital can also occur, decreasing value
- Mergers reduce information content of stock markets
Empirical Evidence: Methods

1. Analysis of the stock returns around the time of the tender or merger offer
2. Are diversified firms more valuable than non-diversified firms?
3. Did profits (of the target) increase after merging?
Target shareholders are offered a premium and therefore gain from a takeover (10-50%)

Bidder shareholders tend to be negative (bad mergers or too high premium)

- Market reaction can contain other (primarily positive) information about bidder
- Bidders buying in cash instead of own shares experienced higher returns (again cash good and shares bad signals)
- Bids can also provide (primarily positive) information about the target (targets on failed mergers trade at a premium)
Diversification increased from 60s and peaked in the late 70s

Empirically, diversification lowers value

However, this significantly depends on the period in time (Morck et al. 90):

- Diversifying acquisitions had lower returns in the 80’s (-) than in the 70s
- Non-diversifying acquisitions had higher returns in the 80’s (7%) than in the 70s (1%)
Accounting Studies

- Compare profits of merged firms (or business units) with respect to a control group.
- On average profits of the acquired units till 1975 declined (Ravenscroft and Scherer 87).
- Problems:
  - Accounting data
  - Total value of the firm may be higher still
  - Targets may already be firms with poor prospects (low Tobin’s q)
- Studies on recent merger performance tend to offer more positive numbers (Andrade et al. 2001)
Why failures?

1. **Bad luck**
   - When realization lower than expectations
   - Failure because of bad luck

2. **Empire Building**
   - Managers maximise own utility, not shareholders’
   - This utility is typically linked with growth and size of assets
   - Gugler et al. (2003): Around 15% of all mergers and 35% of all failures

3. **Hubris and bounded rationality**
   - Being over-optimistic about efficiency gains (Booz-Allen & Hamilton, 1999).
   - Not foreseeing cultural conflict and post-merger problems (Weber and Cameron, 2003).
   - Interaction of synergies and agency conflicts can lead to coordination problems (Fulghieri and Hodrick, 2003)
     - Managers foresee “good equilibrium”, but end up in “bad equilibrium”.
   - Gugler et al. (2003): Around 28% of all mergers and 65% of all failures
Empirical Evidence: LBOs

- Buy a public company using a lot of debt and transformed it into a private company
- Common in the 70’s and 80’s
- High increase in stock price suggesting increased management incentives
  - High premia for low growth-high cash (suggesting reduction of tendency to overinvest)
  - Higher cash flows and productivity levels despite some defaults
Financing Acquisitions

- Acquisitions may be paid in...
  - Cash (probably borrowing or issuing debt)
  - Own shares (very common in the 90s)
  - A combination of the two
- Need to take into account...
  - Taxes and accounting issues
  - Their current debt ratios
  - Private information about over/undervaluation of the bidder and target (see later!)
Bidding Strategies in (Hostile) Takeovers

- Sometimes firms bid for part of the firm
  - Not necessary to buy all firm to introduce changes
  - Need to pay high prices to some investors

- In theory, there is also a free-rider problem (Grossman and Hart 80):
  - Outside bidder can improve share price from $20 to $30
  - Makes a conditional tender offer for 51% of shares at $25
  - Would you tender? Would it be successful? Is it efficient?
  - What does the bidder needs to offer? Would it offer that?
Solutions to the Problem (1)

- Buy secretly from the open market:
  - Legal maximum 5%
  - Profit from the increase in price on those shares

- Presence of another large shareholder:
  - If one affects the probability of success, it might be optimal to tender at a lower price
  - Example: if tendering (success for sure) and not tendering (only 50%), accept tender if price > 25
  - Large shareholders may appear during the offer ("risk arbitrageurs")
Solutions to the Problem (2)

- If bidder benefits more from the shares than the market, then she may pay full price

- Two-tiered offers:
  - Minority shareholders may be forced to sell shares
  - Tender offer accompanied with a price that will be paid to the remaining shares (if successful)
  - Generally lower value than the tendering price and therefore shareholders could be forced to sell
  - Nowadays, regulations in place
Management Defenses

- **Paying greenmail:**
  - Buying back bidder’s stock at a premium conditional on suspending bid

- **Supermajority rules:**
  - Firms may have rules saying that more than 50% of shares are necessary to gain control

- **Poison pills:**
  - Provide rights to not-tendering shareholders
  - e.g. right to buy firm’s stock at discount if there is a merger

- **Lobbying for anti-takeover legislation:**
  - e.g. prevention of voting all of your shares (max 20%)
  - or allowing directors to consider rights of employees,…

- **Are these defenses good for shareholders?**