Mergers and R&D: The Financial Channel

Giacinta Cestone (Cass Business School)
Chiara Fumagalli (Bocconi University)

EAGCP Meeting

Bruxelles, 26 March 2014

Mergers and R&D: The Financial Channel

Absent operating synergies, mergers can affect R&D through a **purely financial channel**:

- Mergers can make access to finance easier/cheaper.
- This in turn can facilitate innovation.

Three channels:

- Benefits of joint financing
- "Liquidity mergers"
- Internal Capital Markets and the cost of external capital

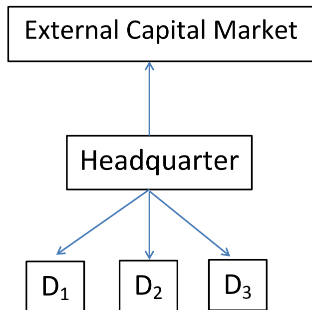
Central question: under which conditions are mergers likely to generate **sizeable financial synergies**?

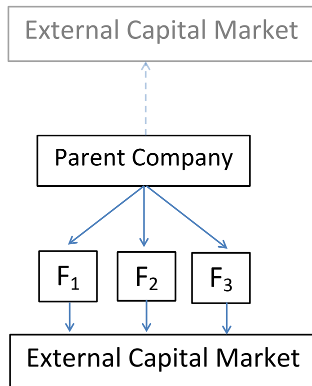
Which Mergers?

MERGER: A common party acquires control over the merging firms' assets.

- Two modes:
  - Merging parties become separate divisions of a single company $\Longrightarrow$ a **multidivisional company**.
  - Merging parties remain independent legal entities controlled by a common parent company $\Longrightarrow$ a **business group**.
- Access to external finance:
  - Multidivisional company: **joint financing**.
  - Business group: individual subsidiaries access the external capital market **autonomously**.
- Both multidivisional companies and business groups operate **internal capital markets**.

Multidivisional Companies and Business Groups





MULTIDIVISIONAL COMPANY
The HQ allocates pooled retained earnings and external capital.

BUSINESS GROUP
The PC may allocate pooled retained earnings (minority shareholders' protection)

Joint Financing: Benefits and Costs

- **COINSURANCE EFFECT** (Lewellen 1971): Excess cash flow from a successful division can support an unsuccessful division.

  In the presence of financial market imperfections, this **increases debt capacity** by decreasing:
  - expected default costs (Leland 2007)
  - expected agency costs (Diamond 1984/Tirole 2006; Inderst-Muller 2003)

- **CONTAGION EFFECT** (Leland 2007; Banal Estanol et al. 2013): A successfull division may be dragged into default by an unsuccessful division.

  This may increase expected default costs and **decrease debt capacity**.

- **LESS CAPITAL MARKET DISCIPLINE** (Inderst-Muller 2003)

  Cash pooling reduces the need to go back to the ECM to fund continuation investment. This in turn kills ex-ante incentives, which may **tighten financial constraints**.

Joint Financing: Remarks

- Coinsurance effect stronger when **low correlation** between firms' cash flows

  $\implies$ degree of diversification matters!

- Absent joint liability, can diversified **business groups** capture the coinsurance-related financial synergies?
  - Group firms can issue **conditional guarantees** to support affiliated subsidiaries, while retaining limited liability (Luciano-Nicodano, 2013).
  - Conditional guarantees do not trigger default of the guarantor $\implies$ benefits of coinsurance without contagion effect.

“Liquidity Mergers”

(Fluck-Lynch 1999; Cestone-Fumagalli 2005, Almeida et al. 2011)

- A firm with **excess liquidity/debt capacity** acquires a firm facing **binding financial constraints** (liquidity problems).
- The merger allows a profitable firm/investment project to obtain funding that it would not be able to raise as a stand-alone.

REMARKS:

- An unlikely scenario if the acquired company is itself owned by a group (and thus in a position to receive cash injections internally).
- Mechanism is independent of whether the acquired entity is fully incorporated into a multidivisional company or turns into a business group subsidiary.

Internal Capital Markets and the Cost of External Capital

Cestone-Fumagalli (2005): Business group units receive cash injection from ICM and then raise additional funds on (imperfect) external financial markets.

- Efficient ICM smooths financial constraints across units $\rightarrow$ in cash-rich group, subsidize those units that have more problematic access to outside finance.
- Group-affiliated units operating in innovation-intensive (hence more financially constrained) sectors may face lower cost of capital with respect to stand-alone rivals.

Trade off: R&D financing vs competition

- Boutin et al. (2013) find little entry and poor survival of new entrants in high-growth, innovation-intensive sectors dominated by cash-rich groups.
- Bottom line – in innovation-intensive sectors:
  - Diversifying mergers more likely to generate financial synergies.
  - Asymmetry between wealthy group-affiliated firms and stand-alone rivals is a source of market power.

Empirical Evidence

Is the "finance channel" at work?

- Traditionally, conglomerates and groups have been associated with lower efficiency and innovativeness - due to selection bias?
- Recent evidence: conglomerate firms (Kuppuswami-Villalonga 2012), and business groups (Almeida-Kim 2013) are more **resilient to financial shocks**.
- US conglomerate segments experiencing industry distress reduce R&D expenses less than their stand-alone rivals (Gopalan-Xie 2011).
- European group affiliates patent more than stand-alones, especially in industries that rely more on external funding and in more diversified groups (Belenzon-Berkovitz 2010).

Common trait: conglomeration and groups-affiliation make a positive difference to investment/R&D *when access to external capital is difficult*.

What to Look for in Mergers

When Looking for Financial Synergies

- **Financial constraints**: a necessary condition for mergers to generate financial synergies.
  - R&D intensive firms $\rightarrow$ more likely to face financial constraints $\rightarrow$ more likely to extract financial synergies from mergers.
- **“Diversifying” mergers**
  - Low correlation between cash flows/investment opportunities: more likely if merging parties operate in unrelated sectors/different lines of business.
  - Differential access to the external capital market/ different external financial needs
    $\rightarrow$ A merger involving an innovative firm and a ‘mature’ firm is more likely to generate financial synergies.
- **Note of Caution:** if the acquired firm is not a stand-alone firm, why would it enjoy more financial synergies after joining a different group?