Econ 243

October 5, 2018

0. mergers: handout on GE. frothy market so starting point is a high market valuation, then must pay a premium on top of that to push an acquisition through quickly.

investment banks love M&A, they collect advisory fees and then if the deal goes through, a percentage – sometimes a percent – of the total value. then before the deal goes through there's the bridge loan package, "financing secured" and then once it goes through there's the long-term financing package, shifting debt post-merger to arbitrage differences in credit ratings and so on.

warning: investment banks are biased against telling you an acquisition is stupid. they have little or no skin in the game. they just want to avoid the reputational hit of being on the losing side, that is, deals that don't go through.

so … GE: at $10 billion acquisition has turned into a $23 billion write-down

- no synergies, the CEO touted their ability to lower costs. we know how to market their products. instead costs continued to rise, and sales to fall. see "due diligence"
- buyers' (winners') curse: why do you think a company would agree to being bought out? because they know things aren't going well. if you're bidding against someone else, the most optimistic and/or aggressive party wins. being the winning CEO in a bidding battle against another big-ego CEO [there are small ego CEOs, but not so many] is the type of deal most likely to lose money for the acquirer's shareholders. and make the biggest fee for investment bankers
- due diligence: yes, we examined them. no, we couldn't send our factory people into their factories. once GE did that they were horrified. sales not strong? it turns out that they're losing a bunch of business that no outsider knew was at risk. costs high, revenue low, and key people jumping ship once they cashed their M&A payout.

[not from class: *when Ford bought Jaguar in 1990, Ford's factory managers couldn't get into Jaguar's main plant until after the deal closed. what they found were operations so poorly structured, in ancient facilities, that the only rational choice was to build a new factory from scratch, with a price tag of $1+ billion. but that money had to be spent up front, and with the low quality product from the old factory, Jaguar continued to lose market share. so it took Ford years to rebuilt the brand image … just as they were succeeding, 15 years later, they had to unload Jaguar to stave off bankruptcy in the 2008 Great Recession*]

am I being cynical? or realistic?

tacit collusion, plus setting up examples besides beer for discussing product differentiation and "theory of the firm"

GM overtook Ford in 1920s, after restructuring starting in 1920 under DuPont and new CEO Alfred Sloan

Ford faced used Model Ts as their greatest competitors. GM saw challenge, and used regular model changes to turn cars into a fashion good where staying in style encouraged their best customers to buy a new car regularly.

M&A origins of GM. so into 1950s realistic to think the Dept of Justice could force GM to undo a merger or two if they became too successful / pushed Ford or Chrysler out of business.

collusion: announce new prices with new cars, in a stylized corporate dance where all parties were separated by smoked glance and could barely hear the music. GM went first with p with "tentative' list prices, Ford came in with p - ε. Ford had higher costs, so as per our models, they were reluctant to choose too low a price. GM also made it clear from time to time that Ford's (or Chrysler's) new price was too low by announcing a new, lower list price.

what else could help stave off price war? all had the UAW as their labor union, with pattern bargaining.

actual prices couldn't be directly observed, so some ability to quietly discount towards the end of a model year or in a recession. but lots of consultants and data firms made it hard to cheat a lot and not be found out.

but … post-merger new entrant American Motors Corporation in 1955, with strong small car. didn't play the game → sales rose 45% in that year, but normal before and (AMC learned quickly) in 1956. additional evidence: sales changed much less in luxury cars, a segment where AMC was not a player.

[*note this can be viewed as an entry barrier: the likelihood of a price war rises, so that a would-be entrant is less certain they can join in oligopoly profits. in fact AMC was never able to parlay its toehold into a stable foothold, much less take a step up the stairs*]

so … product differentiation lessens the probability of price wars

game: cf. Prisoner's Dilemma. what happens though when repeated?

- if goes 10 periods, then both parties cheat in period 10. but if it's clearly optimal to cheat in period 10, then it becomes really tempting to cheat in period 9, and the whole thing unravels to no cooperation ever. only if the game is infinite…or at least is long-lasting with uncertain timing for the end game.
- that **defies** common sense **and** empirical observation. price wars occur, but tacit collusion is everywhere.
- Robert Axelrod The Evolution of Cooperation. a short, fun book. pitted computer games against each other – plus literary references, *Im Westen Nichts Neues* [did not mention in class]. found that when pitted pairwise, some strategies did really well against certain types of opponents and really badly against others. only "tit-for-tat" with foregiveness was robust: start out cooperating, punish cheating, but revert to cooperation. not so good against "always cheat" but does well against random cheating where cooperation-oriented strategies fared very poorly.

repeated games.

algebra in the book. but π^M → discounted at 1/(1+r) ⇒ $\boldsymbol{\sum \pi^M/(1+r)^n = \pi^M/r}$

[OK, in our duopoly it's $\pi^M/2$, same difference]

what's "r" today? 2%? then 1/r is huge!!! if you don't cooperate, you forego a lot of profit!!

book calculates threshold values for a specific version of cooperate until cheated, then revenge forever (at non-cooperative outcome of $\pi^{Cournot}$).

a low "r" facilitates collusion. what else? the book has a long list.