CUFE

Columbia University Financial Engineering

Banking Summary

Mergers & Acquisitions

Pfizer and Allergan Said to Be Near Merger for Up to $150 Billion

Pfizer intends to offer $370–380 for each Allergan share – a total of some $150 billion – the biggest-ever takeover bid in the drug industry so far. Pfizer plans to charge a 2–3% breakup fee if Allergan decides to walk away from the deal. Given the suggested bid value, failure to keep to its word could cost Allergan $3–4.5 billion. The highest-ever breakup fee paid out was $4 billion by AT&T, when it abandoned a $39 billion takeover agreement with T-Mobile in 2011. Pfizer's key objective in seeking out Ireland-based Allergan is its low-tax location. Pfizer CEO Ian Read has long been looking to shift the company's headquarters to low-tax jurisdictions.

Investment Bankiing

The Square IPO: Success or Failure

Square began trading on the NYSE with an IPO price of $9 last Thursday. It ended trading, closing at $13.07, up 45 percent with a market cap of $4.4 billion. The $9 price that was set was lower than the $11-13 price range that it had originally set, giving a valuation of $2.9 billion which was well below the $6 billion valuation that private investors had valued the company at last year.

The whole IPO process was turbulent with advisors considering pulling the deal. Jack Dorsey stated that "I want to get back to a steady state and back to business" with a goal of "sav[ing] people trips to the bank". 10% of the deal was made available to retail investors with 90% to institutional investors. Investors are worried about competition from Verifone and PayPal as there are a multitude of other financial intermediaries. To combat this, Square is venturing into new industries such as handling a company's payroll or scheduling appointments. The discrepancy between public and private markets' valuations can also be seen with the IPO price being lower than Square's Series D round which was sold to Rizvi Traverse and JPMorgan Chase for $11.01 per share. This may signal the beginning of the end for Silicon Valley start-ups as investors are starting to really questions the high valuations of private companies with Dropbox and other >$1 billion valued companies having their valuations marked down by mutual fund investors.

Financial Engineering

Short horizon informed traders and the communication of information

Consider a risk-neutral informed trader with insider information and noise traders without such information. With probability 1-q, the private information is publicly revealed in his lifetime. With probability q the private information is revealed after he exits the market. How should the trader trade? Intuition: if q is large, there exists a high probability that the trader will not make a profit unless he signals the private information using his trades. Conversely, if q is small, the trader wants to reduce the information emitted from his trades by hiding behind noise traders. As q approaches 1, the trading intensity

$$\beta = \sqrt{\frac{\sigma_u^2/\Sigma_0}{4}\left(\frac{1+q}{1-q} + \sqrt{\left(\frac{1+q}{1-q}\right)^2 + 8}\right)}$$

becomes huge.