

FIN 411 -- Investments

Examples of things you can do by analyzing stock returns

Data in Excel spreadsheets

- "F411M.XLS" -- monthly data from 85-94
- "F411D.XLS"-- daily data from 85-94
- similar data in Eviews files f411D.WF1 & F411M.WF1

Event studies: How Does the Stock Price React to Important Events?

Control for price behavior that is unrelated to the event

- market movements
- industry movements
- effects of other firm-specific events at the same time

Remember: stock price reaction measures the effect of new information

- i.e., revision of expectations

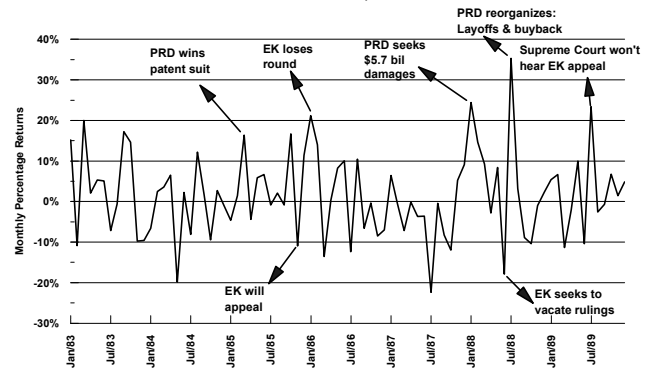
Polaroid & Kodak Had Protracted Litigation Over Instant Photography Patent Rights

Many events over several years:

- two-phase trial:
 - (1) liability, then
 - (2) damages
- appeals at every major outcome

security analysts were valuing both companies based on the expected outcome of the suit

Polaroid - Kodak Stock Returns, 1983-89



Kodak was "White Knight" Bidder for Sterling Drug Target

Hoffman-LaRoche bid \$72/share for Sterling (STY) in early 1988

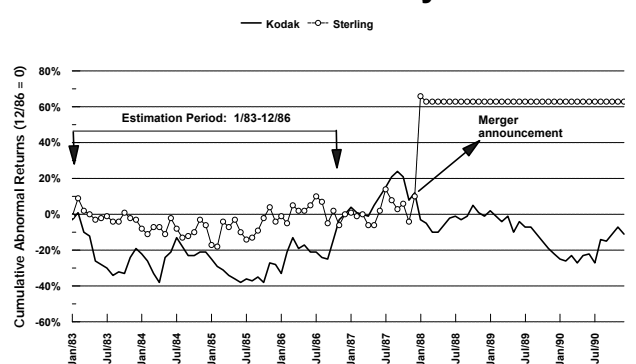
On 1/22/88 Kodak offers \$89.50/share for Sterling

I estimated the market model using monthly returns from 1/83 - 12/86

- then form prediction errors for 1/87-end:

$$\epsilon(it) = R(it) - \alpha(i) - \beta(i) R(mt)$$

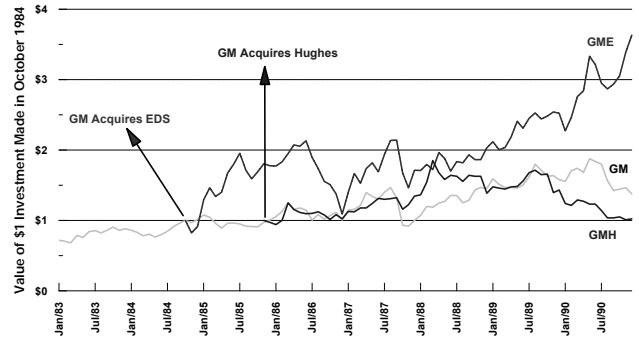
Kodak & Sterling Drug Merger Announced January 1988



GM Pursues Large Diversifying Acquisitions

- bought Electronic Data Systems (EDS) - Ross Perot company [recently spun-off]
- created new class of stock (GME), linked to EDS profits, and less strongly linked to the auto business
 - the NYSE considered delisting GM for having multiple classes of stock
- bought Hughes Aircraft (defense contractor) in auction
- created new class of stock (GMH), linked to Hughes profits

Performance of GM Stock (Autos, EDS & Hughes)

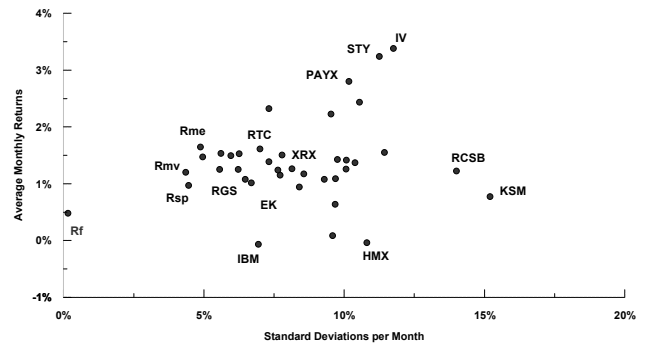


Investment Opportunity Set (Mean vs. Std Deviation)

Based on returns from 1984-93

- obviously these estimates contain some estimation error
- usually would be surprised to see investors buy stock if they expected returns to be negative
- standard deviations are quite large for firms that have major surprise events
- means are quite large for firms that are targets in takeovers (e.g., STY)

Avg Returns vs. Standard Deviations Rochester-related Stocks, 1984-93



Capital Asset Pricing Model: Avg Returns vs. Beta

Security Market Line:

$$E[R(i)] = R(f) + \beta(i) \{ E[(R(m) - R(f))] \}$$

- I drew a line from R(f) through E[R(m)], but I also estimated a regression of average returns on beta estimates
- obviously these estimates contain a lot of estimation error

- Note the abnormal performance for the "Inefficient Market Fund"

Avg Returns vs. Betas Rochester-related Stocks, 1984-93

