



## Chapter 8.1

# Financial analyst access to company information

# Companies prefer positive coverage

- ▶ Financial analysts should provide the best forecast possible, given their information
- ▶ Companies provide access to additional information to financial analysts
- ▶ Companies have an interest in positive coverage
- ▶ If financial analysts provide more positive coverage, companies provide more information

# Information and forecast

- ▶ Financial analysts obtain a signal of the current value  $s = P + \varepsilon$
- ▶ The signal is imperfect
- ▶ The published forecast is  $\hat{P}$
- ▶ Objective forecast is  $E[P|s]$

# Forecast error

- ▶ Financial analyst would minimize the forecast error  $\Pi_B = E \left[ \left( \hat{P} - P \right)^2 \middle| s \right]$
- ▶  $\Pi_B = E \left[ \left( \hat{P} - E[P|s] \right)^2 \right] + Var[P|s]$
- ▶ Bayesian learning gives  $Var[P|s] = \frac{1}{\frac{1}{\sigma_P^2} + \frac{1}{\sigma_\varepsilon^2}}$
- ▶  $\Pi_B = b^2 + \frac{1}{\frac{1}{\sigma_P^2} + \frac{1}{\sigma_\varepsilon^2}}$

# Minimal forecast error

- ▶ Forecast error is minimal if  $\frac{\partial \Pi_B}{\partial b} = 0$ , or  $b = -\frac{1}{2} \frac{\partial \sigma_\varepsilon^2}{\partial b} \left( \frac{\sigma_P^2}{\sigma_P^2 + \sigma_\varepsilon^2} \right)^2 > 0$
- ▶ If companies give better access for positive coverage  $\frac{\partial \sigma_\varepsilon^2}{\partial b} < 0$
- ▶ The bias will be positive
- ▶ The positive bias trades off the positive bias against the more precise information

# Properties of the bias

- ▶ The more sensitive companies are to the bias  $\frac{\partial \sigma_\varepsilon^2}{\partial b}$ , the higher the bias is
- ▶ The more precise the signal is  $\sigma_\varepsilon$ , the lower the bias
- ▶ The more uncertainty in the market  $\sigma_P$ , the lower the bias

# Summary

- ▶ Companies prefer positive analyst coverage and can encourage that by granting more access to information in return for more positive coverage
- ▶ Minimizing their forecast error trades off the biased prediction against access to better information
- ▶ This will result in a positive bias of the analyst forecast
- ▶ Such a bias is optimally minimizing forecast errors



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