Andreas Krause

Signalling with dividends

Dividends and future investments

- Managers of companies are better informed about the future prospects of companies than outside investors
- If managers pay out higher dividends, they retain less earnings and can make less future investments
- This would negatively impact the value of companies
- If future earnings are high, this impact would be less pronounced
- Companies might use their dividends to signal their confidence in the companies prospects

Company value

- Managers care about the current value as assessed by outside investors and the future value of the company, which will be revealed fully after investment
- Assume that a company paying high dividends is seen as having good future prospects and those paying low dividends as having less well prospects
- A company will have a current value to outside investors consisting of its dividend and the value of future inferred retained earnings that are invested
- The value of the company in the future will be the return on the actually retained earnings
- $\Pi_M^{ij} = \gamma \left(d_j + (1+R)\left(E_j - d_j\right)\right) + (1-\gamma)(1+R)\left(E_i - d_j\right)$

High future earnings

- High dividends: $\Pi_M^{HH} = \gamma \left(d_H + (1+R)\left(E_H - d_H\right)\right) + (1-\gamma)(1+R)\left(E_H - d_H\right)$
- Low dividends: $\Pi_M^{HL} = \gamma \left(d_L + (1+R)\left(E_L - d_L\right)\right) + (1-\gamma)(1+R)\left(E_H - d_L\right)$
- Company pays high dividends if $\Pi_M^{HH} \geq \Pi_M^{HL}$

$\Rightarrow$ $d_H - d_L \leq \frac{\gamma(1+R)(E_H - E_L)}{\gamma R + (1-\gamma)(1+R)}$

Low future earnings

- High dividends: $\Pi_M^{LH} = \gamma \left(d_H + (1+R)\left(E_H - d_H\right)\right) + (1-\gamma)(1+R)\left(E_L - d_H\right)$
- Low dividends: $\Pi_M^{LL} = \gamma \left(d_L + (1+R)\left(E_L - d_L\right)\right) + (1-\gamma)(1+R)\left(E_L - d_L\right)$
- Company pays low dividends if $\Pi_M^{LL} \geq \Pi_M^{LH}$

$\Rightarrow$ $d_H - d_L \geq \frac{(2\gamma-1)(1+R)(E_H-E_L)}{\gamma R+(1-\gamma)(1+R)}$

Signalling the company's prospects

- Both conditions can be fulfilled simultaneously
- $\frac{(2\gamma-1)(1+R)(E_H-E_L)}{\gamma R+(1-\gamma)(1+R)} \leq d_H - d_L \leq \frac{\gamma(1+R)(E_H-E_L)}{\gamma R+(1-\gamma)(1+R)}$

$\Rightarrow$ Companies can signal through high dividends that their prospects are good

Impact on company value

- Dividends can be used to signal the future prospects of companies
- High dividends reduce the future value as less can be invested and this is only sustainable for companies with high earnings
- The value of companies paying high dividends will increase as information on its prospects is revealed

Andreas Krause
Department of Economics
University of Bath
Claverton Down
Bath BA2 7AY
United Kingdom

E-mail: mnsak@bath.ac.uk