



SFB/Transregio 266

ACCOUNTING FOR TRANSPARENCY

CROSS-SECTIONAL VARIATION IN THE EARNINGS RESPONSE COEFFICIENT: CURRENT EVIDENCE FROM S&P500 COMPANIES

Jonas Materna

HU Berlin

28 June 2021

EARNINGS RESPONSE COEFFICIENTS

BASICS

- The earnings response coefficient is the sensitivity of stock prices to earnings news
- It can be calculated from firm specific regressions or pooled cross-sectional regressions
- $CAR_{it} = a + bUE_{it} + e_{it}$
- CAR is a stocks abnormal returns for an announcement period and UE is the firms unexpected earnings

EARNINGS RESPONSE COEFFICIENTS

METHODOLOGY

- I use the cross sectional regression methodology
- Unexpected earnings are the difference between the firms' earnings forecast and actual earnings. For additional checks I also scale the difference by the absolute value of the forecasted EPS
- Abnormal returns are calculated using the CAPM. In addition I use the simple difference of stock returns and market returns
- CARs are calculated using a seven day time window centered around the announcement day
- The ERC is then calculated for the cross section of S&P 500 companies

EARNINGS RESPONSE COEFFICIENTS

RESULTS

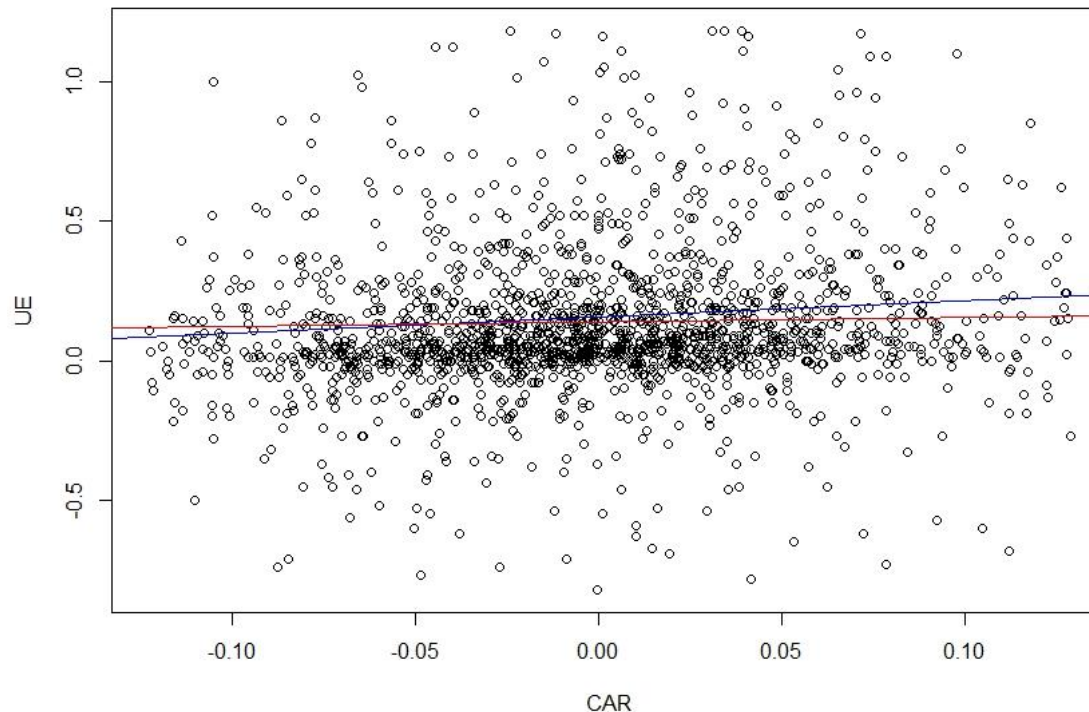
- The ERC in the complete dataset is 0.0259
- The table below displays the ERC for the cross section of S&P 500 companies
- Literature suggests a negative relation between leverage and ERC as well as risk and ERC. My results do not exactly agree with that

ERC	0.2	0.4	0.6	0.8	0.99
Leverage	0.0169	0.0309	0.0362	0.0359	0.0047
Size (Total Assets)	0.0288	0.0166	0.0199	0.0335	0.0224
Risk (Beta)	0.0163	0.0233	0.0384	0.0281	0.0241

EARNINGS RESPONSE COEFFICIENTS

RESULTS

- The graph displays the relation between CAR and unexpected earnings
- The blue line is a regression based on firms in the lowest leverage quantile, the red one is based on highly leveraged firms



EARNINGS RESPONSE COEFFICIENTS

LIMITATIONS

- Theoretically the ERC is based on the assumption that earnings predict future dividends. However, I use accounting earnings which measure the firm's dividend paying ability with an error
- The forecasted earnings are based on analyst estimations and might not reflect market expectations
- The results presented in this presentation are based on unscaled unexpected earnings
- I use an ex post measure for expected returns

EARNINGS RESPONSE COEFFICIENTS

LITERATURE

- Collins, D.W., Kothari, S.P. (1989): An analysis of intertemporal and cross-sectional determinants of earnings response coefficients. *Journal of Accounting and Economics*, 11, 143-181.
- Teets, W.R., Wasley, C.E. (1996): Estimating earnings response coefficients: Pooled versus firm-specific models. *Journal of Accounting and Economics*, 21, 279-295.
- Bissessur, S.W., Veenman, D. (2016): Analyst information precision and small earnings surprises. *Review of Accounting Studies*, 21, 1327-1360.