

Linear Econometrics for Finance - Fall II - Gianni De Nicolo'

Regression, predictability and robust standard errors

- It is standard to predict stock returns using financial ratios, like the dividend-to-price ratio or the book-to-market ratio. We will also discuss the economic justification underlying this approach.
- The file *predict.xls* contains monthly data on returns on the value-weighted market portfolio, the t-bill rate, the dividend-to-price ratio (dyny), and the book-to-market ratio (bmdy).
- We will run a baseline regression of the excess continuously-compounded return (with respect to the risk-free rate) of the value-weighted market portfolio on the past dividend-to-price ratio. The regression is:

$$\log(1 + R_t^M) - \log(1 + R_t^f) = \beta_0 + \beta_1 \times \left(\frac{d}{p}\right)_{t-1} + u_t$$

- We will also consider the same regression, but rather than predicting monthly excess returns, we will predict yearly excess returns using:

$$\sum_{j=0}^{11} \left[\log(1 + R_{t+j}^M) - \log(1 + R_{t+j}^f) \right] = \beta_0 + \beta_1 \times \left(\frac{d}{p}\right)_{t-1} + u_{t,t+11}$$

- We will also consider predicting 3-year excess returns, and specifications with the addition of the book-to-market ratio.
- We will test a typical conclusion drawn in the literature (and in the industry) that yearly and longer horizons' returns are easier to predict than monthly returns.