

Solution to the 3rd set of assignment Financial Econometrics

3.

for convenience : $R_{t+1}^a = R^a, R_{t+1}^b = R^b, R_{t+1}^m = R^m$

$$a = \frac{E_T(R^m R^b) - E_T(R^m R^a)}{E_T(R^m R^b)E_T(R^a) - E_T(R^m R^a)E_T(R^b)}$$

$$\tilde{b} = \frac{E_T(R^a) - E_T(R^b)}{E_T(R^m R^b)E_T(R^a) - E_T(R^m R^a)E_T(R^b)}$$

$$\left[\text{NOTE: } E_T = \frac{1}{T} \sum_{t=1}^T \right]$$