Homework 3 – Macro-Finance

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Forecasting regressions:

$Regressions$	b	t	$R^2(\%)$	$\sigma(bx)$
$R_{t+1} = a + b\left(\frac{D_t}{P_t}\right) + \varepsilon_{t+1}$	3.94	3.14	6.45	1.25
$\frac{D_{t+1}}{D_t} = a + b\left(\frac{D_t}{P_t}\right) + \varepsilon_{t+1}$	-0.57	-0.5	0.18	1.12
$r_{t+1} = a_r + b_r(d_t - p_t) + \varepsilon^r_{t+1}$	0.2	3.36	7.35	0.06
$\Delta d_{t+1} = a_d + b_d(d_t - p_t) + \varepsilon^{dp}_{t+1}$	-1.8	1.65	1.86	1.09

The first regression shows that dividend price ration has a positive and statistically significant impact on real returns. An increase of one unit in $\left(\frac{D_t}{P_t}\right)$ leads to an increase of approximately 3.94 in the t+1 real return.

The second regression implies that real dividend growth in t+1 cannot be predicted from the previous period dividend price ratio as the coefficient of the covariate is not statistically significant.

The last two regressions have been run for the same values but in log and we obtain the same result: real returns in log can be predicted, dividend growth not.
The third regression implies that as the dividend price ratio in t increases by 10%, in t+1 real return increases by approximately 20%.