

Let's try instead:

$$\left(\frac{\mathbb{E}[\mathbf{m}_{t+1} - \mathbf{m}_t]}{\mathbf{m}_t}\right) = \left(\frac{\mathbb{E}[\mathbf{m}_{t+1}]}{\mathbf{m}_t}\right) - 1 \tag{1}$$

$$= \left(\frac{\mathbb{E}[\mathbf{R}(\mathbf{m}_t - \kappa \mathbf{m}_t)]}{\mathbf{m}_t}\right) - 1 \tag{2}$$

$$= 1 - \kappa - 1 \tag{3}$$

$$= \mathbf{p} \tag{4}$$