where $\overline{PCM_t} = (p_t q_t - \eta c_t) / p_t q_t$ and where, relative to (13), we have: $\gamma_1 = -\varepsilon/(1+\lambda)$, $\gamma_2 = \alpha_1$, and $\gamma_3 = -\alpha_3\left[1+\varepsilon/(1+\lambda)\right]$. In equation (14) the dependent variable is modified in order to allow for the existence of variable returns to scale. Among other things, this specification improves the quality of our accounting measure of PCM as a proxy for the ratio of price to marginal costs. In fact, when returns to scale are decreasing (η>1) marginal costs are higher than total average costs c_t , while the opposite occurs when returns to scale are increasing (η<1).

In estimating (14) we expect γ_1 to be negative and γ_2 to be positive. In particular, the last regressor of the equation measures the impact of imperfect capital markets on the firm's markup. The sign of γ_3 is not univocally defined and is discussed in the next section. Finally, since the true value of η is unknown, we will check the robustness of our findings with respect to alternative plausible values for the cost elasticity.

3. Capital Market Imperfections and Firms' Markup Decisions

From equation (13) it appears that the impact of capital market imperfections on markup decisions depends crucially upon the sign of the following partial derivative:

$$\frac{\partial PCM_t}{\partial \alpha_3} = -\rho_{t+1}\left(\frac{b_t}{p_t q_t}\right)^2\left(\frac{\varepsilon_t}{1+\lambda_t}+1\right) \tag{15}$$

In particular, following an increase in the premium on external finance parametrized here by α_3, firms will have an incentive to cut prices if

$$\lambda_t > |\varepsilon_t| - 1 \tag{16}$$

Obviously, if the inequality is reverse, firms will instead react to an increase in financial constraints by raising prices.

To make things simple, let us start from the benchmark case of a monopolisitc firm, where λ_t is equal to zero. Since ε_t is bounded between zero and one in absolute