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ficiently high. Total profit (in two periods) can be expressed as follows:  $Z = (4 - r^2)Qx/2 - Qy - r [Q(y - x) - M]^2 / 2Qx - [r^2 + 2r + \rho(1 + r)] \cdot [Q(y - x) - M]$ 



TIME 

 $m^e = [Q^e/M] = \sqrt{\rho} \cdot \{y^2 \cdot \rho + 2xy [(r+1)^2 + r\rho] - x^2 [r(r+\rho+2)+2]\}^{-1/2}$ . One can establish that the optimal level of production and investment decreases when, ceteris paribus, r and/or  $\rho$  increase (<sup>25</sup>). The profit function is shown in Figure 9.

Consider a sequence of models with an increasing variety of maturities in the spectrum of financial assets and liabilities. If the term-structure of interest rates is perfectly arbitraged, the sequence tends to a model where





 $\binom{2^4}{y/x} > [r(r+\rho+2)+2] \{(r+1)^2+r\rho+|\sqrt{[(r+1)^2+r\rho]^2}+r(r+\rho+2)+2\}^{-1} < 2$ . Note that  $y/x \le 2$  is a necessary condition to repay the principal within two periods.

$$\binom{2^{s}}{2} \frac{\partial Q^{e_2}}{\partial r} = \frac{m^{e_4}}{\rho} \left\{ x^2 \left[ (r+\rho+2)+r \right] - 2xy \left[ 2(r+1)+\rho \right] \right\}$$

and