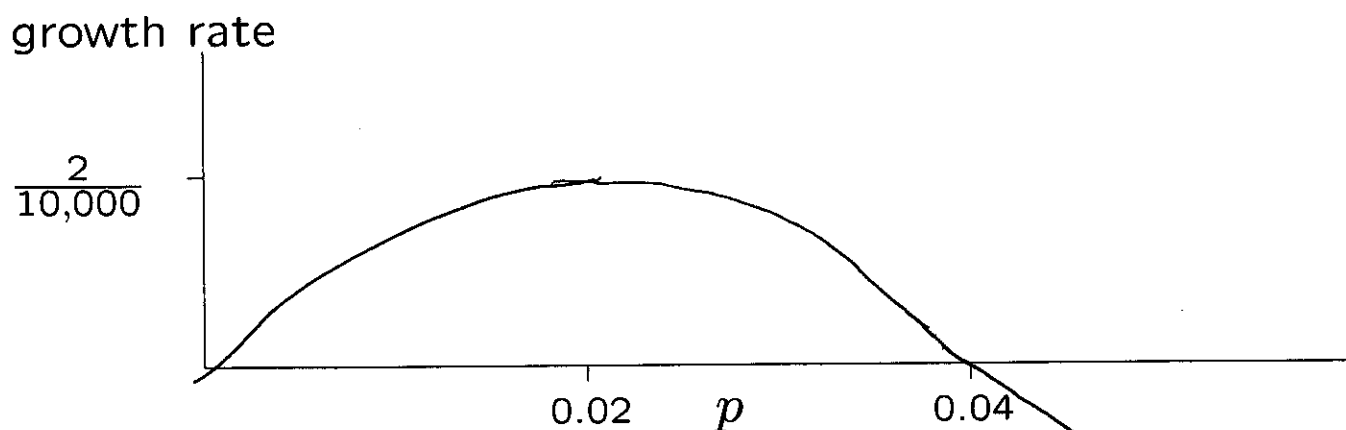


51% chance to double money
49% chance to lose all money.

Looks good – expected gain 2% per day – but don't want to risk all your money on one day. Instead use strategy: bet fixed proportion p of money each day. Theory says: long-term growth rate, depends on p , but in an unexpected way.



Optimal strategy: bet $p = 2\%$ of your capital each day; this provides growth rate $\frac{2}{10,000}$ per day, which (250 trading days per year) becomes 5% per year.