120. An insurer has excess-of-loss reinsurance on auto insurance. You are given:

(i) Total expected losses in the year 2001 are 10,000,000.

(ii) In the year 2001 individual losses have a Pareto distribution with

$$F(x) = 1 - \left(\frac{2000}{x + 2000}\right)^2, \; x > 0.$$

(iii) Reinsurance will pay the excess of each loss over 3000.

(iv) Each year, the reinsurer is paid a ceded premium, C_{year}, equal to 110% of the expected losses covered by the reinsurance.

(v) Individual losses increase 5% each year due to inflation.

(vi) The frequency distribution does not change.

Calculate C_{2002} / C_{2001}.

(A) 1.04

(B) 1.05

(C) 1.06

(D) 1.07

(E) 1.08