Asset Pricing In A Financial Crisis.

In August 2007 global financial markets underwent a period of turmoil triggered by a reassessment of the market for U.S. subprime mortgage debt securities. Inspired by these events, this question requires you to consider several possible interpretations of asset price movements, using the **?**/C-CAPM model (Hint: The Gordon model of asset pricing is useful but can also be misleading because it neglects general equilibrium effects).

The Lucas economy has two risky assets, which we will call 'subprime debt' (S) and 'other risky assets' (O). The distinction between S and O is that S is subject to larger shocks than O and therefore, for any given quantity of holdings of the two securities, the covariance between consumption and movements in S will be greater. (Both covariances are positive because in a Lucas economy all production is consumed).

Leading up to period t the two assets were priced according to a belief that the variance of the payoff from a unit holding (a share) of S was $x > 1$ times the size of the variance of the payoff from a share of O. Using the Lucas model, describe the patterns you would expect to observe at time t in response to each of the following three possible scenarios. (Assume that, aside from the change described, nothing else about the economy changes). For each case, describe what happens to the level of the two prices P_S and P_O and to the two price/dividend ratios P_S/D_S and P_O/D_O (you can assume that the subprime market is small relative to the size of the other market).

1. There is a one-time, permanent drop in the level of dividends per share of S to half the original level. The expected future relative variance of dividends per share for S is unchanged (around this new lower level) in the future.

2. The variance of dividends associated with holding a share of S will be permanently higher, but the mean expected level of dividends remains unchanged.

3. There is an increase in the level of 'risk aversion' (the coefficient of relative risk aversion of the representative agent) in the market. (You can assume that there is a riskless asset in the market as well).