

Finance 4335 Insurance Economics Outline and Study Questions  
 Here is a summary of the key points from [Demand for Insurance: Full vs. Partial Coverage](#), along with Study Questions and Answers:

## Summary

- Insurance economics showcases the application of expected utility to the demand for insurance.
- State-contingent wealth ( $W_s$ ) depends on initial wealth ( $W_0$ ), premium paid ( $P_i$ ), and net exposure to loss ( $L_s - I_s$ ).
- Full coverage contract: insurer covers entire loss ( $I_s = L_s$ ) so there's no exposure to risk.
- Partial coverage contracts:
  - Coinsurance: insurer covers proportion  $\alpha$  of loss ( $I_s = \alpha L_s$ ) so  $(1 - \alpha)L_s$  remains uninsured.
  - Deductible: insurer covers loss  $>$  deductible  $d$  ( $I_s = \max(0, L_s - d)$ ) so  $L_s - \max(0, L_s - d)$  remains uninsured.
  - Upper limit: insurer covers losses up to limit  $U$  ( $I_s = \min(L_s, U)$ ) so  $L_s - \min(L_s, U)$  remains uninsured.
- Actuarially fair premium = expected indemnity ( $P_i = E(I)$ ).
- With actuarially fair premiums, Bernoulli principle implies that full coverage is preferred.
- With unfair premiums ( $P_i > E(I)$ ), Mossin's theorem implies that partial coverage is preferred.
- Arrow's theorem implies, other things equal, that the optimal partial insurance contract is the deductible contract.

Question	Answer
What factors determine state-contingent wealth?	Initial wealth, premium paid, and net exposure to loss
How is net exposure to loss calculated under coinsurance?	Proportion $1 - \alpha$ of the loss is retained, where $\alpha$ is the coinsurance rate

<b>Question</b>	<b>Answer</b>
When is full coverage preferred according to the Bernoulli principle?	When premiums are actuarially fair
Under what conditions will a risk averse client prefer partial coverage?	When premiums are actuarially unfair per Mossin's theorem