10 Extra Problems

Monday, March 15, 2021 5:47 PM

$U = \sqrt{w}$ $\quad w_0 = 60000$ $\quad Pr(L) = 1/20$ $\quad L = 20000$

$E(w)?$ $\quad CE?$

$E(w) = (40000 \cdot \frac{1}{20}) + (\frac{19}{20} \cdot 60000) = 59000$

$60000 - 20000$

$U(CE) = \frac{19}{20} U(60000) + \frac{1}{20} U(59000)$

$\hookrightarrow CE = 58904$

UTP for full insurance?

P is insurance for 20k

$\sqrt{60000 - P} = \sqrt{58904} \rightarrow P = 1096$

Gains from trade for full insurance?

$1096 - (\frac{1}{20} \cdot 20000) = 1096 - 1000 = 96$

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2 people w/ same lottery $\rightarrow$ CE? Value of risk pooling

b/ shared risk

f	w
$1/20^2$	40000
$38/400$	50000
$19^2/20^2$	60000

$CE = \frac{1}{400}\sqrt{40000} + \frac{38}{400}\sqrt{50000} + \frac{361}{400}\sqrt{60000} \rightarrow CE = 58956$