5/23/19

Thursday, May 23, 2019 1:36 PM

continuous version of L of TP

$$f_Y\, y = \int_{-\infty}^{\infty} f_X(x) \cdot f_{Y|X}(y|x)\, dx$$

$$E(Y|X) = \int_{-\infty}^{\infty} y\, f_{Y|X}(y|x)$$

$$E(Y) = \int_{-\infty}^{\infty} f_X(x) \cdot E(Y|x)\, dx$$

$$\hookrightarrow = E_X[E(Y|X)] \longleftarrow \text{(Adam)}$$

Def: $V(Y|X) \triangleq E_X\{[Y - E(Y|X)]^2 | X\}$

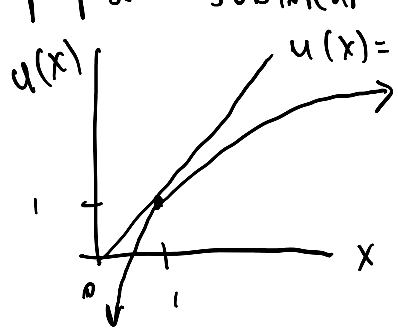
$$V(Y) = E_X[V(Y|X)] + V_X[E(Y|X)] \longleftarrow \text{(EVE)}$$

Utility

risk-averse vs. risk-seeking

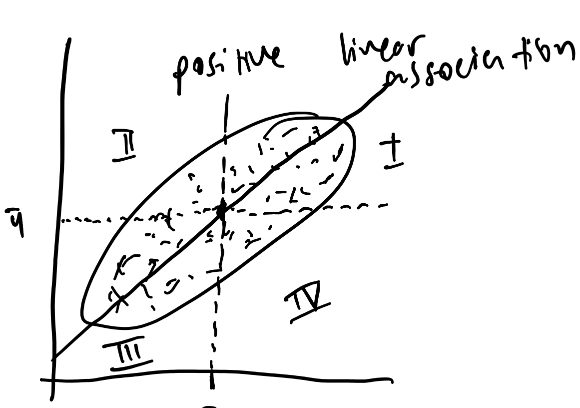
Your utility function $U(x)$ is that function which assigns to each possible net gain $-\infty < x < \infty$ a real # $U(x)$ representing the value to you of gaining x.

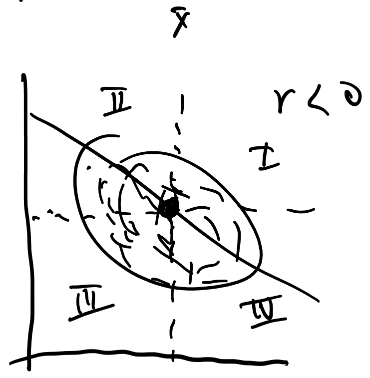
proposed sublinear function:



$U(x) = 1 + \log(x)$

WLOG as $x\uparrow$ $u(x)\uparrow$





negative linear association