# Financial Risk Measures

- What is financial risk?

eg Loss associated with an investment

Let $X$ = Loss associated with an investment

- What is a financial risk measure?

eg probabilities associated with $X$.

$$P(X > £1 \text{ million}) > 0.9$$

$\Rightarrow$ not start the investment

$$P(X > £1 \text{ million}) < 10^{-30}$$

$\Rightarrow$ ok to start the investment

# NGO Financial Risk Management: Balancing Risks and Controls

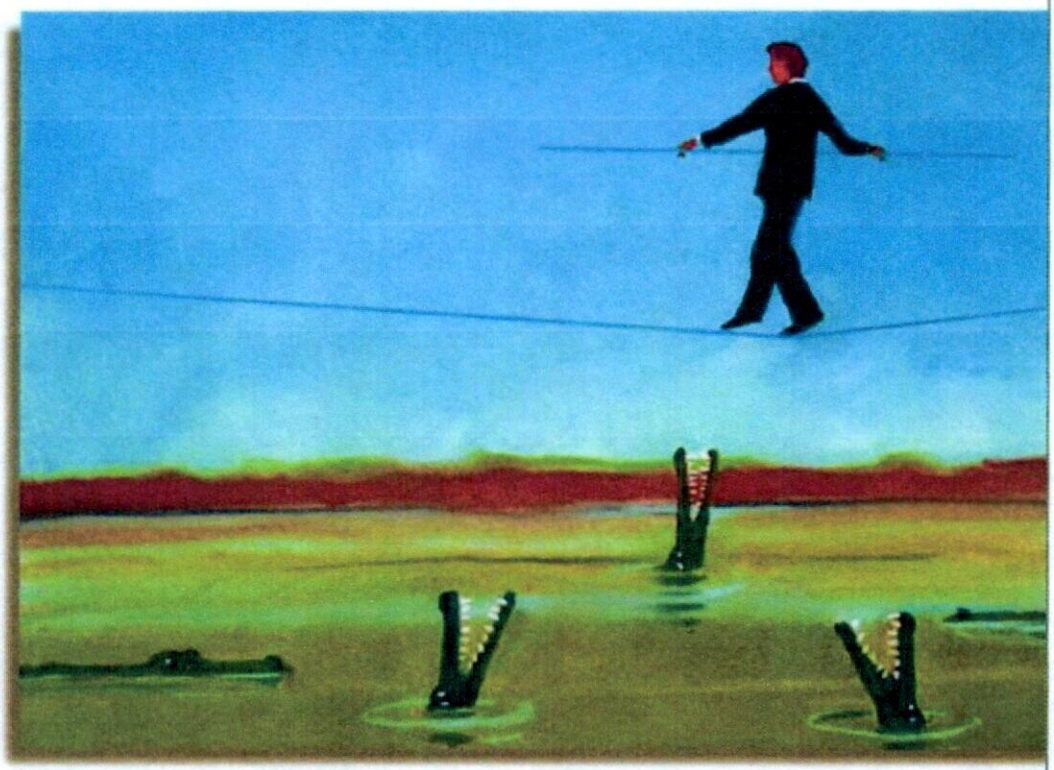
Search this site



A tip of the hat to you!

I would like to welcome everyone to my Frankenstein project for Fall 2009's Finance Function at the Monterey Institute of International Studies! Enjoy browsing! Thanks for passing by!

## Why this website?



The intention for creating this website is to help those in the non-profit sector understand the implications of financial risk management for their given organization paying special attention to the ideas of risks vs. controls, illiquidity and conflict of interest. There are a couple major ideas that I would like to explore. One idea that will be examined is that of controls. Is there such a thing as having too many controls in an organization? I want to stress the importance of organizational liquidity as well as explore a hypothetical financial conflict of interest situation. This is not a page about general risk management but instead focuses on financial risk in non-profits. I hope that this

## Definition of a risk measure

A risk measure $\rho(\cdot)$ from a set of random variables to $(0, \infty)$ must satisfy

- $\rho(0) = 0$ — normalised property
- $\rho(X + c) = \rho(X) + c$ — translative property
- $X \leq Y \Rightarrow \rho(X) \leq \rho(Y)$ — monotone property

## Definition of a coherent risk measure

A risk measure is coherent if it satisfies

- normalised property
- translative "
- monotone "
- $\rho(cX) = c \cdot \rho(X)$ positive homogeneity
- $\rho(X+Y) \leq \rho(X) + \rho(Y)$ sub-additivity