Decisions Under Uncertainty

Module 4: Risk Tolerance

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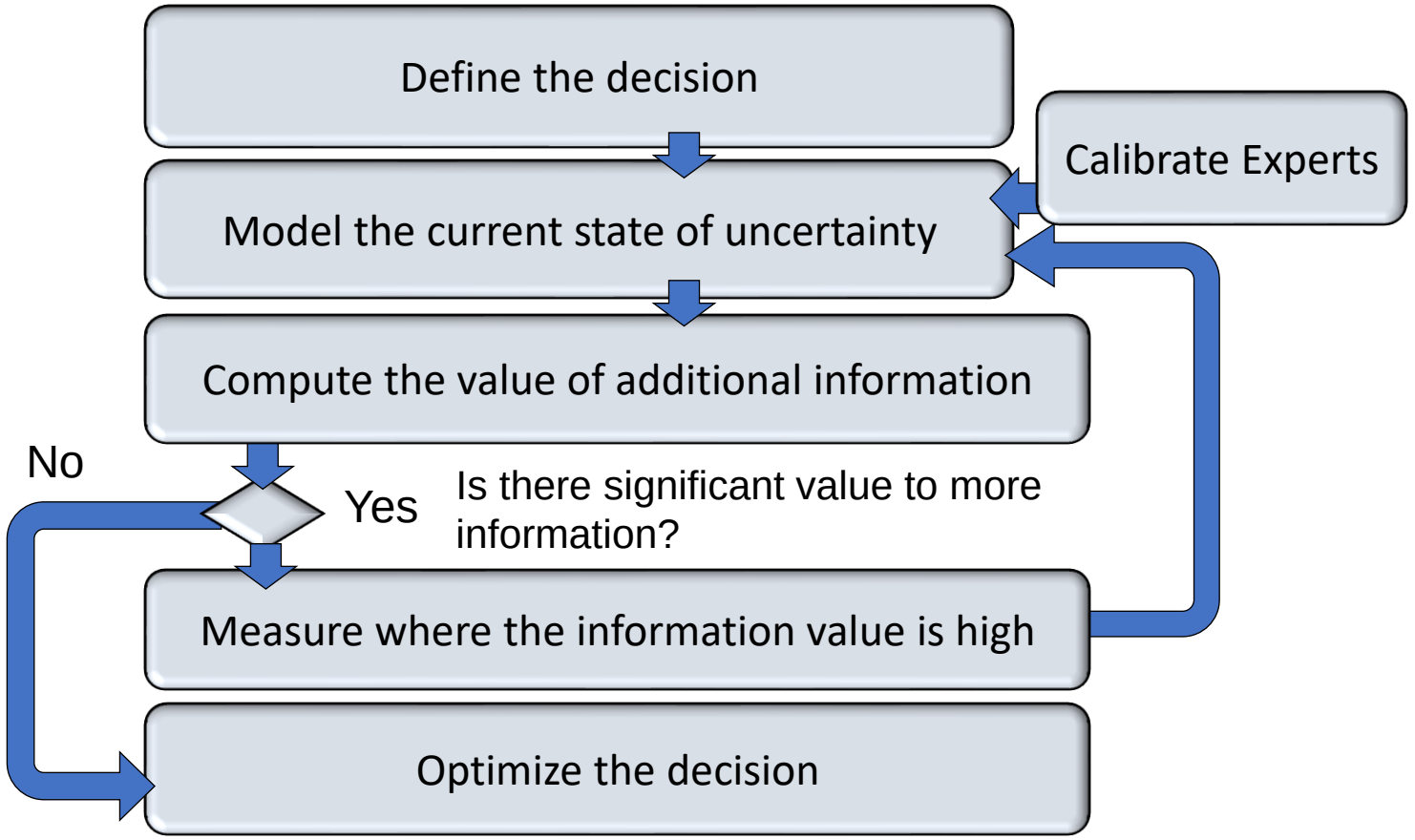
Applied Information Economics Training

AIE can quantify *anything* and then optimizes decisions by focusing measurements where they matter most.



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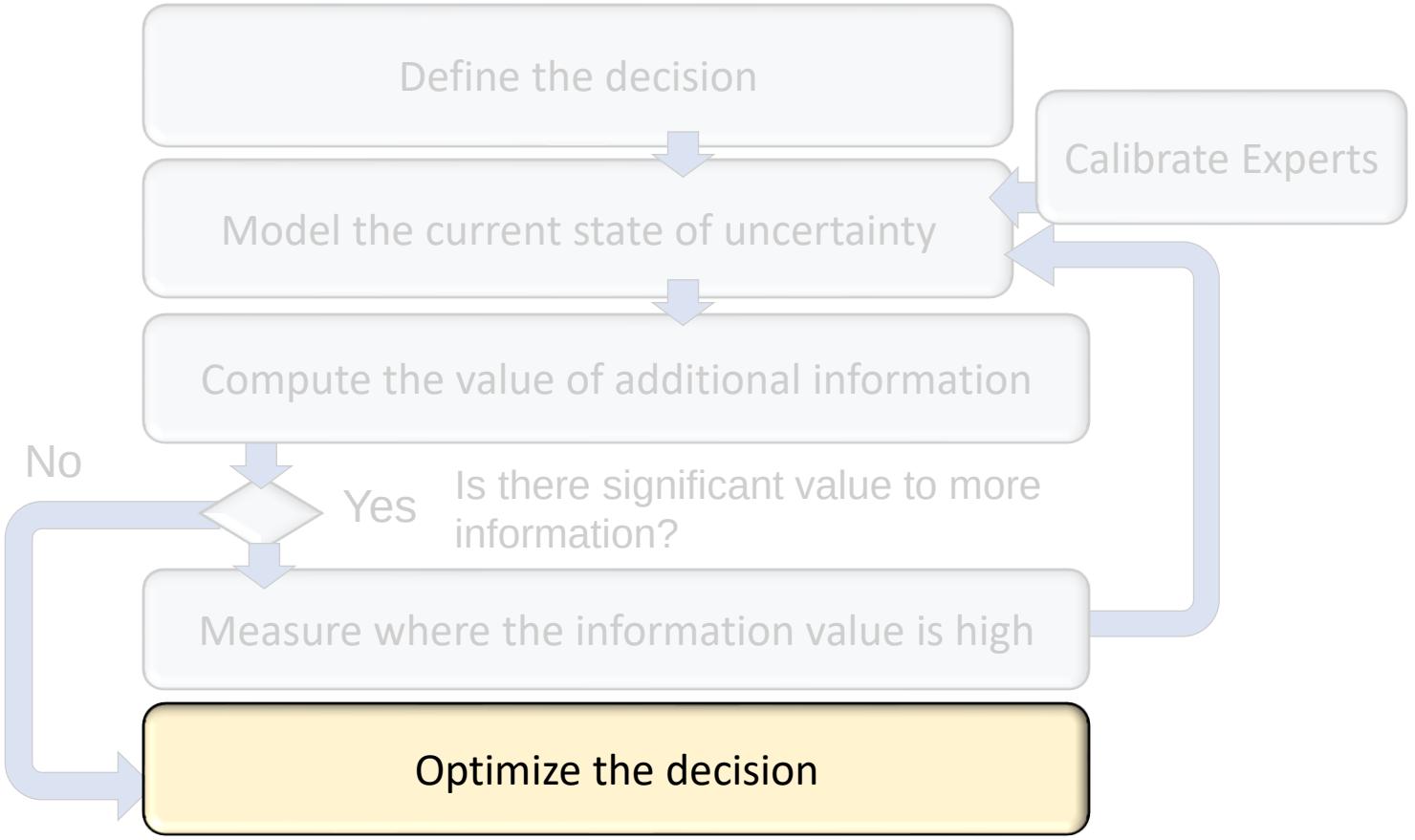
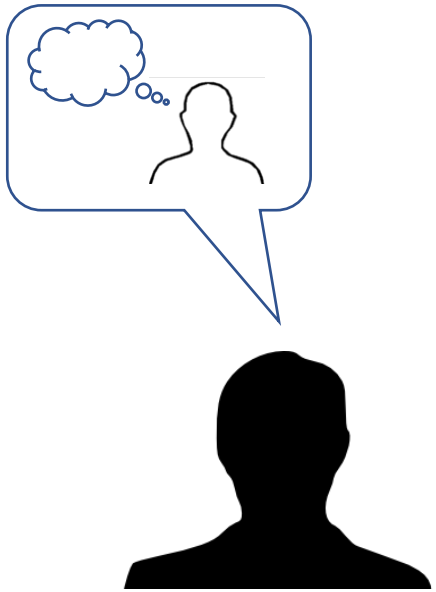


Quantifying Risk Preferences

The Psychology of Risk Aversion

Decision makers are inconsistent regarding their own aversion to risk.



Neuron Vol. 47, (2005): 763–770

The Neural Basis of Financial Risk Taking

Journal of Personality and Social Psychology
2001, Vol. 81, No. 1, 146–159

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0022-3514/01/$5.00 DOI: 10.1037//0022-3514.81.1.146

Fear, Anger, and Risk

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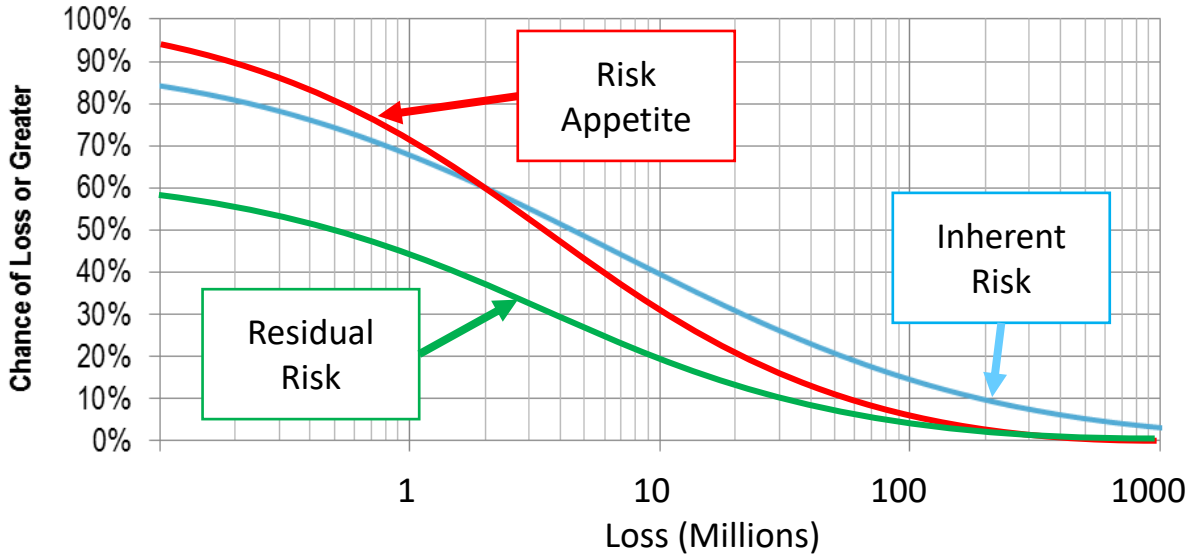
Factor	Risk Aversion
Being around smiling people	↓
Recalling an event causing fear	↑
Recalling an event causing anger	↓
A recent win in an unrelated decision	↓
A recent loss in an unrelated decision	↑

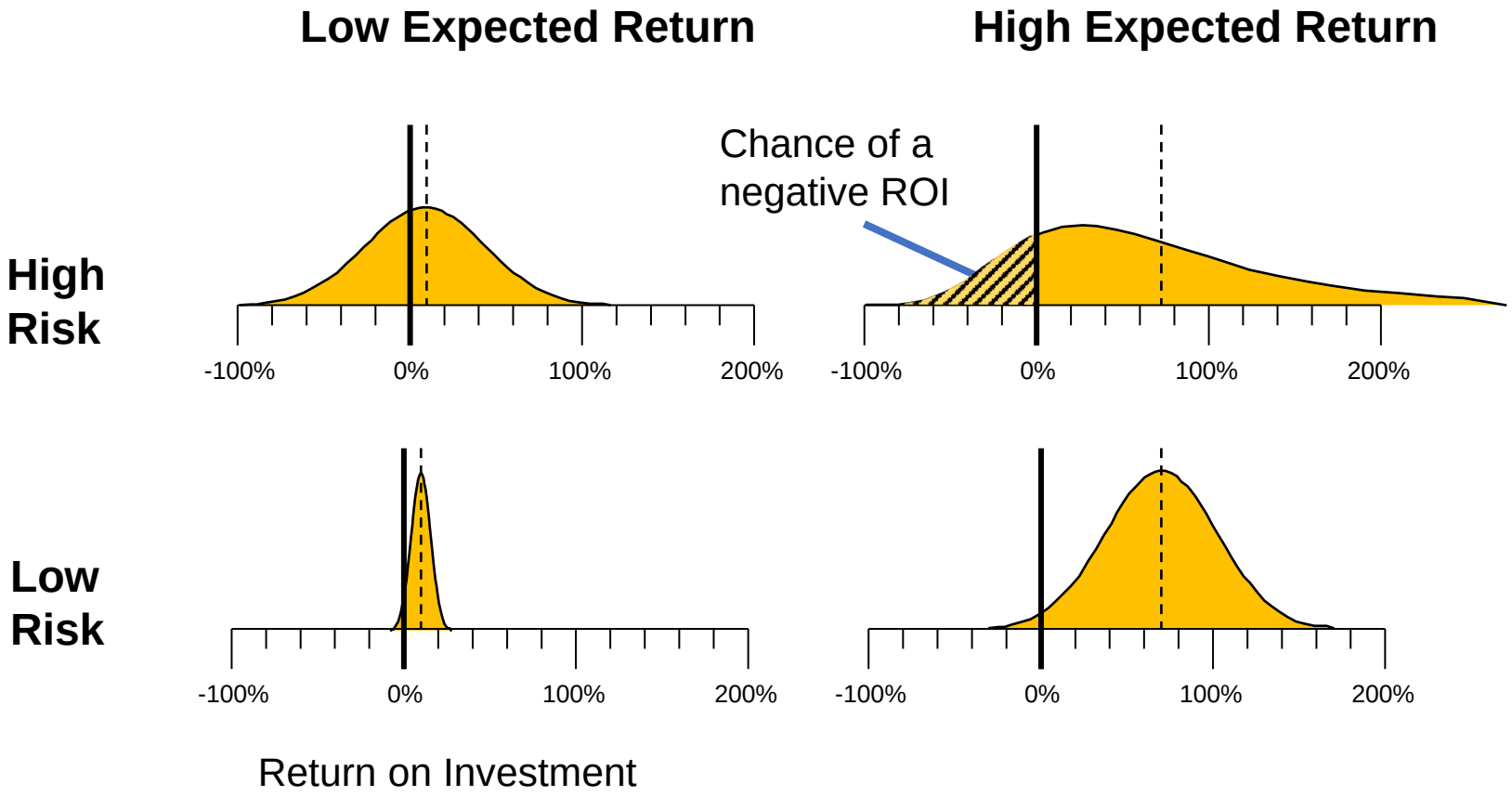
A Version of Absolute Tolerable Risks

An Unambiguous Risk Appetite Using Loss Exceedance Curves.

The Loss Exceedance Curve (LEC) is a simple visual for defining a maximum tolerable risk. But it doesn't directly address risk return tradeoffs. It also requires that standards are defined for when a cost becomes a risk.



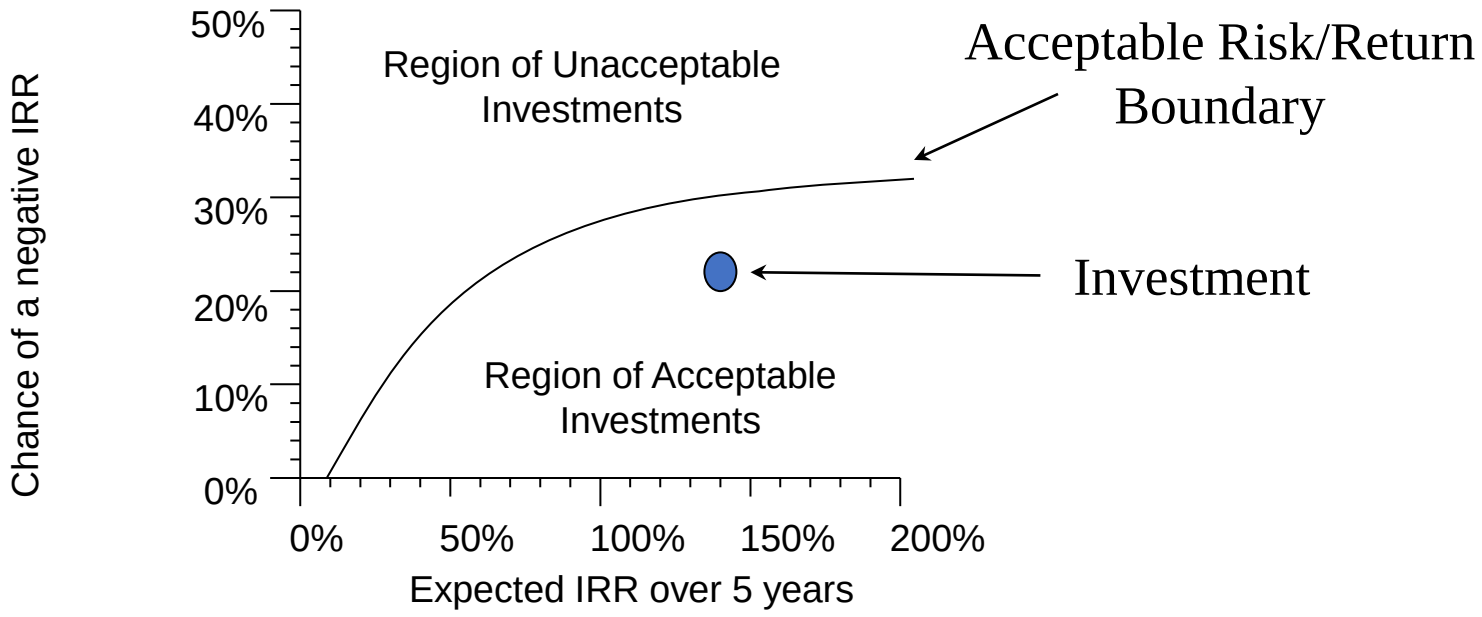
The Risk vs. Return Decision



Simplified Risk/Return Tradeoffs

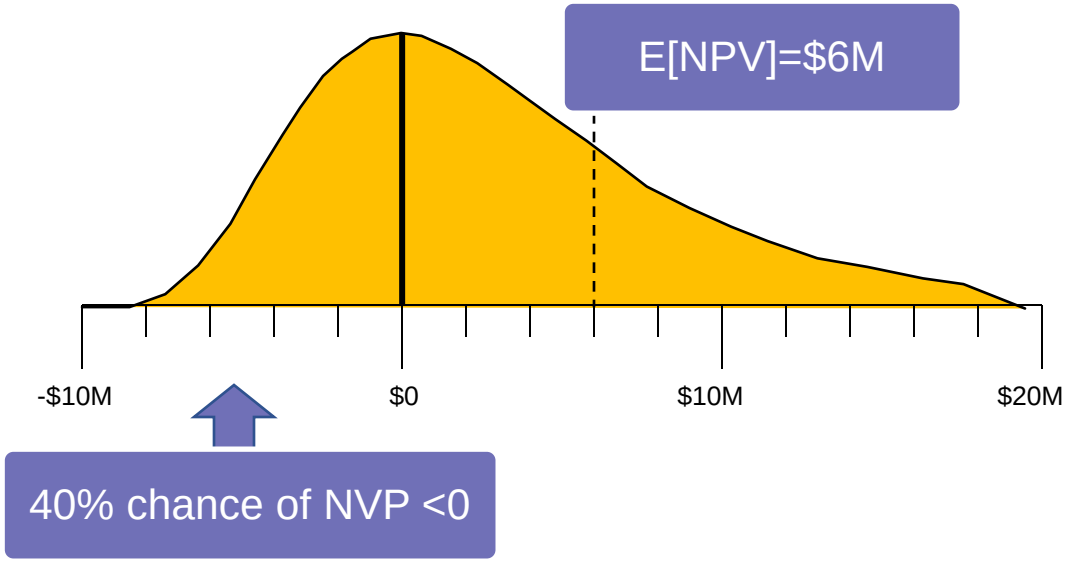
You could simply draw a curve that represents how much chance of a negative return is acceptable for a given expected return.

This ignores some issues – like how much the negative return could be.



Certain Monetary Equivalent

High Risk High Expected Return



Certain Monetary Equivalent (CME)

Win $X

Question: What "$X" makes you indifferent between the two choices?