

Payoff Matrix

Compare Profiles

Risk Indexing

Risk Ranker

Help

Save, Load, Delete

Enter names of risk management alternatives, probability states, their probabilities, and their payoffs

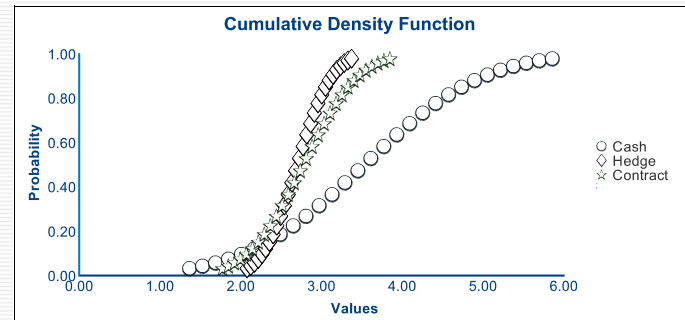
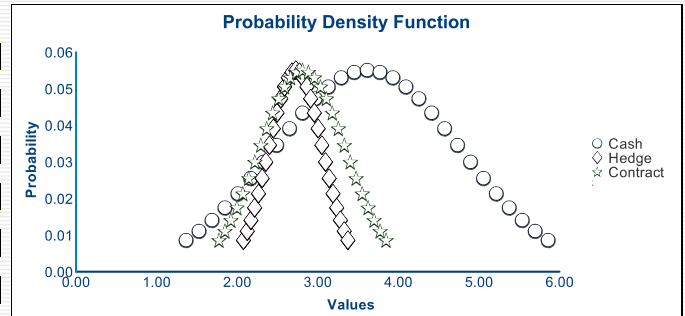
Management Alternatives

Probability States	Probabilities		Cash	Hedge	Contract		
Poor Prices	0.1	⊕	2.43	2.80	2.31	0.00	0.00
Weak Prices	0.2	⊕	2.8	2.55	2.89	0.00	0.00
Average Prices	0.4	⊕	3.8	2.60	2.43	0.00	0.00
Good Prices	0.2	⊕	3.22	2.33	2.58	0.00	0.00
High Prices	0.1	⊕	5.4	3.22	3.65	0.00	0.00
Total Probability	1.00		Probabilities must add to 1				

Use the probability density function (PDF) and cumulative probability function (CDF) charts to compare profiles

Probability	Cash	Hedge	Contract		
0.1	2.43	2.80	2.31	0.00	0.00
0.2	2.8	2.55	2.89	0.00	0.00
0.4	3.8	2.60	2.43	0.00	0.00
0.2	3.22	2.33	2.58	0.00	0.00
0.1	5.4	3.22	3.65	0.00	0.00

Statistics	Cash	Hedge	Contract		
Mean	3.53	2.70	2.77	0.00	0.00
Variance	1.35	0.11	0.29	0.00	0.00
Standard Deviation	1.16	0.34	0.54	0.00	0.00
Coefficient of Variation	3.04	8.05	5.17	NaN	NaN
Max	5.40	3.22	3.65	0.00	0.00
Min	2.43	2.33	2.31	0.00	0.00



Is your risk premium large enough to justify risk analysis?

**Risk Indexing Results**

Probability	Cash		Somewhat risk averse	1	2	3	4	Highly risk averse
0.1	2.43	<b>Risk Preference</b>	0.5	1	2	3	4	
0.2	2.8	Certainty Equivalent (CE)	3.46	3.42	3.35	3.29	3.23	
0.4	3.8	Risk Premium (RP)	0.04	0.08	0.15	0.22	0.27	
0.2	3.22	CE Index (% of EV)	99%	98%	96%	94%	92%	
0.1	5.4	RP Index (% of EV)	1%	2%	4%	6%	8%	

Compare your CE + RP to the expected value below based on your own risk aversion level:

Expected Value (EV)

Select the risk index for general information

**Risk Index**

Maximize Expected Value

Maxmax Index

Maximum Likelihood (Modal) Index

Minimax Regret

The Hurwicz Index

Maxmin Index

The expected value is the weighted sum of the outcomes using the probabilities of occurrence as the weights. The expected value is what you would expect to average over a long period of time. A risk-neutral person would base their choice on the expected value. This person would not be concerned with the variability in the outcomes, but rather the expected return over the long haul. We can compute the expected value of rainfall as follows: 0.25 chance of 10 inches/year, 0.50 chance of 15 inches/year and 0.25 chance of 20 inches =  $0.25 \times 10 + 0.5 \times 15 + 0.25 \times 20 = 15$ .

If no risk index appeals to you, you may select the Most Indices option in the Results. Most Indices option is the mode of ranking.

**Results**

Select your preferred risk index and find the ranking in Risk Index table below. 1 means the best alternative (least risk) based of the index and 5 means the worse alternative (most risk). When there disagreement between risk indices you may use the mode (last row in the table for ranking).

Risk Index	Cash	Hedge	Contract		
Maximum Expected Value	1	3	2	4	4
Maxmax Index	1	3	2	4	4
Maximum Likelihood (Modal) Index	1	2	3	4	4
Minimax Regret	1	3	2	4	4
The Hurwicz Index	1	3	2	4	4
Maxmin Index	1	2	3	4	4
Laplace Insufficient Reason Index	1	3	2	4	4
<b>Mode</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>4</b>