Chapter 4: Uncertainty in Decision-Making

# Expected Utility (part 2)

## Corresponding reading: Chapter 4, Page 4

### Purpose: Gaining deeper insight about using mathematical expectation.

1. Search the term “expected utility”. The following video is a good starting point.

<https://www.youtube.com/watch?v=IFnoaLSXKGg&ab_channel=AdamG>

Explain, in your own words, what expected utility is?

1. How can you use expected utility instead of expected payoff in decision-making?
2. What are the three approaches a person might have towards risk? The following video is useful:

<https://www.youtube.com/watch?v=cSZvSy4Vopc&ab_channel=IrisFranz>

1. Now consider the Fantasia Restaurant payoff table discussed in the text. We know that EVPI = $52,000. Assume the Fantasia restaurant can obtain perfect information from a marketing firm at a price of $45,000. Using the mathematical expectation approach, Fantasia restaurant should accept the offer. Given that rejecting the offer is slightly risky (demand may turn out to be low!), devise a *risk loving* utility function that will reject the offer. Remember to show your calculations.

***Note:*** *Understanding the case and what you need to do is PART OF THE CASE. If you do not understand a specific part, or are not sure what you should do, you need to review the corresponding reading section in the text before asking for help. You might also need to do some search on the internet. That is all part of the case and your learning process.*