A brief synopsis of Finance 4335 course content to date...

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1. The most important concept covered in Finance 4335 to date centers around the notion that people vary regarding their preferences for bearing risk. Although we have focused much of our attention on modeling risk averse behavior, we have also considered examples of risk neutrality (where you only care about expected wealth and are *indifferent* about riskiness of wealth) and risk loving (where you actually *prefer* to bear risk and are willing to pay money for the opportunity to do so).

2. Related to point 1: irrespective of whether you are risk averse, risk neutral, or risk loving, the foundation for decision-making under conditions of risk and uncertainty is expected utility. Given a choice amongst various risky alternatives, one selects the choice which yields the highest expected utility.

   - If you are risk averse, then $E(W) > W_{CE}$ and the difference between $E(W)$ and W_{CE} is equal to the risk premium λ. Some practical applications – if you are risk averse, then you are okay with buying "expensive" insurance at a price that exceeds the expected value of payment provided by the insurer, since (other things equal) you would prefer to transfer risk to someone else if it is not too expensive to do so. On the other hand, you are not willing to pay more than the certainty equivalent for a bet on a sporting event or a game of chance such as rolling dice or tossing a coin; i.e., you are only willing to take risk if you earn "profit" (in the form of a positive risk premium) for doing so.
   - If you are risk neutral, then $E(W) = W_{CE}$ and $\lambda = 0$; risk is inconsequential and all you care about is maximizing the expected value of wealth.
   - If you are risk loving, then $E(W) < W_{CE}$ and $\lambda < 0$; i.e., you are quite willing to pay for the opportunity to (on average) lose money.

3. We also discussed a couple of different methods for calculating λ.

   - The "exact" method involves calculating expected utility ($E(U(W))$), setting expected utility equal to the certainty-equivalent of wealth ($E(U(W)) = U(W_{CE})$), and solving for W_{CE} directly; e.g., if $E(U(W)) = U(W_{CE}) = 10$ and $U(W_{CE}) = \sqrt{W_{CE}}$, then W_{CE}= 100; if $E(W) = \$110$, then the risk premium $\lambda = E(W) - W_{CE}$= \$10.
   - The approximate method involves evaluating the Arrow-Pratt coefficient at the expected value of wealth and multiplying it by half of the variance of wealth; i.e., $\lambda \cong .5\sigma_W^2 R_A(E(W))$. Furthermore, the approximate method provides important intuitive insights into the determinants of risk premiums. Specifically, risk premiums depend upon two factors: 1) the "size" of the risk itself (as indicated by variance), and 2) the degree to which the decision-maker is risk averse (as indicated by the Arrow-Pratt coefficient).

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