

APPLIED ECONOMICS FOR MANAGERS SESSION 15—

I. REVIEW: UNCERTAINTY AND INFORMATIONAL EFFICIENCY

A. UNCERTAINTY, RISK AVERSION, AND ASSET PRICES:

1. DIMINISHING MARGINAL UTILITY OF WEALTH IMPLIES INDIVIDUALS WILL PAY TO AVOID RISK—WILL NEED TO BE COMPENSATED FOR TAKING RISK
2. CAN APPROXIMATE RISK ATTITUDES BY ASSUMING AGENTS CARE ABOUT AVERAGE INCOME OR WEALTH BUT DISLIKE VARIANCE IN OUTCOMES
3. INSIGHT: RELEVANT RISK IN ANY ACTION IS RISK THAT CANNOT BE EASILY (COSTLESSLY) AVOIDED BY OTHER MEANS, E.G., DIVERSIFICATION
4. INSIGHT: IN RISKY ASSET HOLDINGS, AGENTS MUST BE COMPENSATED FOR NON-DIVERSIFIABLE RISK
 - a. CAN MEASURE NON-DIVERSIFIABLE RISK (ASSET BETA)
 - b. CAN PRICE RISK $(\bar{R}_M - R_F)$
 - c. EQUILIBRIUM: $E(R_A) = \beta_A(\bar{R}_M - R_F)$

B. UNCERTAINTY AND INFORMATIONAL EFFICIENCY CONDITION—NO SURPLUS AT THE MARGIN

1. NO EASILY AVAILABLE PROFIT—NO LARGE PROFIT OPPORTUNITIES (AT THE MARGIN)
2. IF ASSET PRICES DO NOT REFLECT ALL AVAILABLE INFORMATION, PROFIT OPPORTUNITIES EXIST

C. PRICE OF ASSET AT TIME t P_t BASED LARGELY ON PRICE EXPECTED AT TIME $t+1$, P_{t+1}^e

1. FORECAST ERRORS MUST REFLECT INFORMATION THAT *ONLY* BECOMES AVAILABLE AT TIME $t+1$, I.E., REAL NEWS
2. $P_{t+1} - P_{t+1}^e = \varepsilon_{t+1}$ IS RANDOM AND INDEPENDENT OF P_{t+1}^e
3. SINCE P_{t+1}^e REFLECTS SAME INFORMATION AS P_t THE TWO SHOULD BE CLOSELY RELATED, I.E., A PURE RANDOM WALK OR A RANDOM WALK WITH DRIFT

II. MARKET EFFICIENCY AND INFORMATION PRODUCTION

A. THE CONUNDRUM OF INFORMATIONAL EFFICIENCY

1. IF INFORMATION IS REFLECTED IN MARKET PRICES AS SOON AS IT IS KNOWN, INFORMATION IS A PUBLIC GOOD
2. PUBLIC GOODS ARE UNDER PRODUCED IN A PRIVATE, FREE-ENTERPRISE MARKET

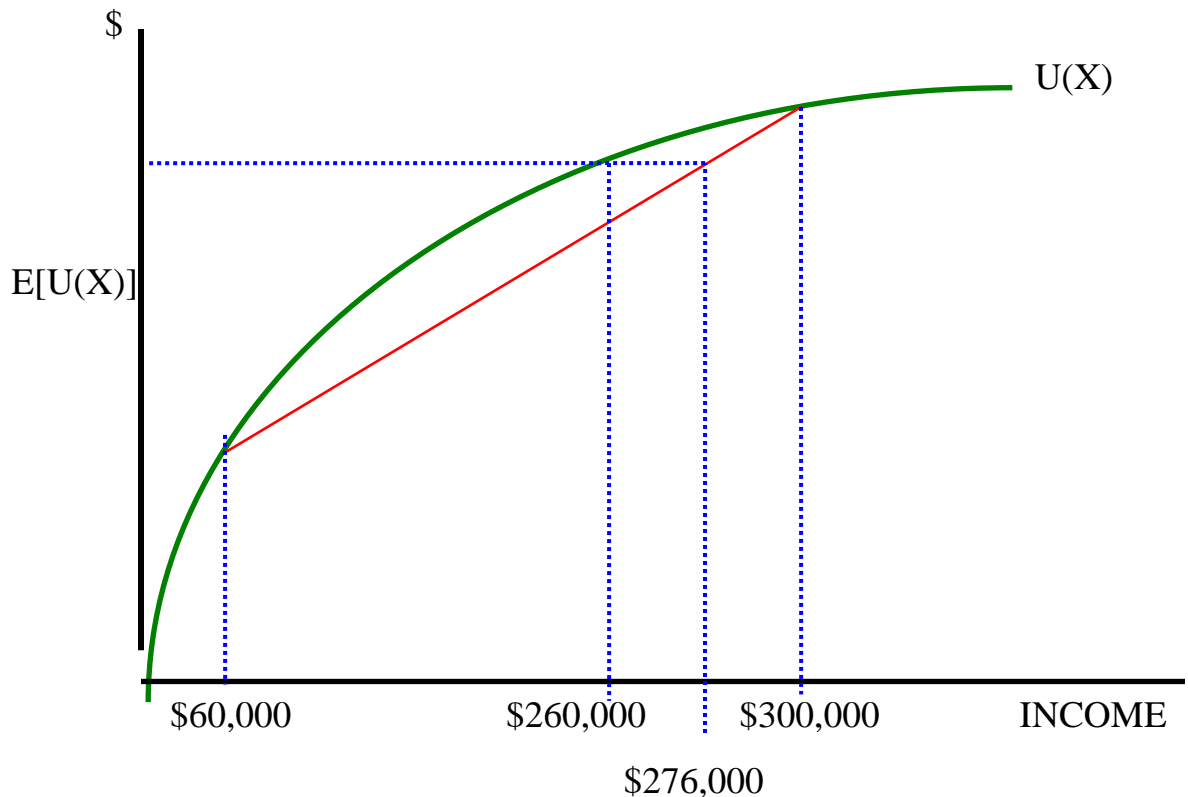
B. ATTEMPTS TO ECONOMIZE ON INFORMATIONAL COSTS AND INFORMATION CASCADES

C. INFORMATION AND INFORMATION PRODUCTION

III. ASYMMETRIC INFORMATION

A. RISK AVERSION AND INSURANCE MARKETS

1. CONSIDER EARLIER EXAMPLE WITH WEALTH \$300,000 BUT A 10% CHANCE THAT IT WILL FALL IN VALUE TO \$60,000
2. INSURANCE DEMAND:
 - a. POSSIBLE LOSS = \$240,000 WITH PROBABILITY = $P_L = 0.1$
 - b. WOULD PAY SAY, \$40,000, TO AVOID RISK (CERTAIN INCOME OF \$260,000)



3. INSURANCE SUPPLY (COMPETITION \Rightarrow NO PROFIT)

a. WITH PROBABILITY 0.1, INDEMNIFY THE LOSS OF \$240,000

b. ACTUARIALLY FAIR PREMIUM = \$24,000

B. ANOTHER PAPER CLIP MARKET

C. INFORMATIONAL ASYMMETRIES AND:

1. ADVERSE SELECTION

2. MORAL HAZARD