

# BA3320 Fundamentals of Production

EXAM 1 Fall 2005

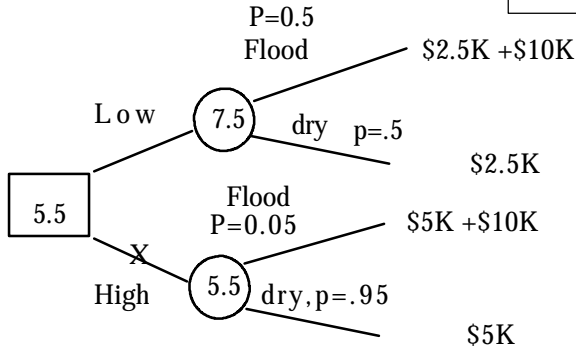
Dr. Banis

I

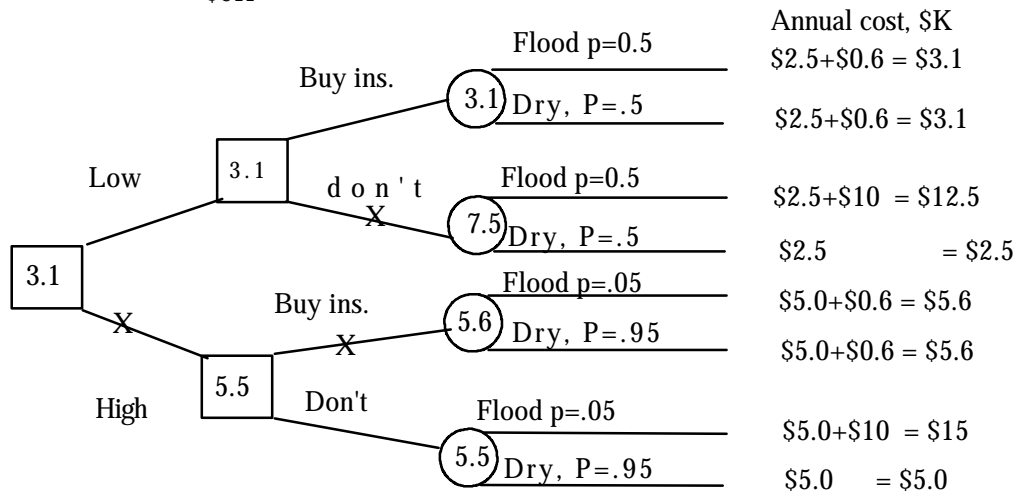
- I
- 1: D Salami Technique
  2. G Tit-for-tat strategy
  3. C 0.9
  4. D The P-chart
  5.  $32 \pm 3 \cdot \frac{2}{\sqrt{16}} = 33.5, 30.5$

II.

- A) B .5892
- 2) D \$15.87
- 3)  $(2500-500)/(3-1) = 1000$
- 3) sticker costs  $4 \cdot 3 \cdot \$17 = \$204$
- Tickets cost  $40 \cdot 10\% \cdot \$75 = \$300$
- buy the sticker
- if tickets still cost  $40 \cdot 10\% \cdot 50\% \cdot \$75 = \$150$ , the total cost with the sticker is  $\$204 + \$150 = \$354$ , Better to only spend \$300 (expected) on tickets.
- Oh, by the way, the sticker went up to \$18/credit hour this year.



**There's no such thing as a free lunch.** Insurance companies can't make costs disappear, they just average the risk, so on average, expected cost is about the same. Government dumps the burden on taxpayers to subsidize incentives for people to build in high risk areas. John Stossel has a good discussion about his beachhouse in his new book "Give Me A break". Every few years it gets knocked down, but you and I pay to rebuild it. It's right next to Dick Gephardt's place. Someone said of New Orleans, "We'll rebuild it, only higher this time."



## Retained assets for each at the end of the breakup

| Jane / John | amicable  | Spiteful    | Attorneys  | John's Maximum Assets |
|-------------|-----------|-------------|------------|-----------------------|
| amicable    | 350 / 200 | 200 / (250) | 10 / 230   |                       |
| Spiteful    | 375 / 90  | 325 / 100   | 35 / (200) |                       |
| Attorneys   | 400 / 10  | 400 / 15    | 80 / (80)  |                       |

Jane's Maximum assets

the stable solution is  $80+80=160$  for Jane & John, and the rest goes for the attorneys. If that's the way you settle breakups, your reputation will hinder you in finding new partnerships. Have you ever heard someone brag about how they shafted a previous partner? How long did it take you to get out of there?

Total profit as a function of market conditions this period (\$M)

| Market conditions | Total profit (\$M) |        |      | EMV   | Optimist | Pessimist |
|-------------------|--------------------|--------|------|-------|----------|-----------|
|                   | Low                | medium | High |       |          |           |
| Probability       | 0.4                | 0.5    | 0.1  |       |          |           |
| conservative      | 18                 | 18.2   | 18.5 | 18.15 | 18.5     | 18        |
| Moderate risk     | 14                 | 20     | 30   | 18.6  | 30       | 14        |
| High Roller       | 2                  | 20     | 50   | 15.8  | 50       | 2         |
| EMVc              | 18                 | 20     | 50   | 22.2  |          |           |

EVPI=22.2 - 18.6 = 3.6

regrets

| Market conditions | Total profit (\$M) |        |      | Maxregret |
|-------------------|--------------------|--------|------|-----------|
|                   | Low                | medium | High |           |
| conservative      | 0                  | 1.8    | 31.5 | 31.5      |
| Moderate risk     | 4                  | 0      | 20   | 20        |
| High Roller       | 16                 | 0      | 0    | 16        |

Lost profit due to CYA is =18.6 - 15.8 = 2.8

LP problem:

- A) S=26, N=22, F=56, OV= 1265
- B) - infinity
- C) 100-93=7
- D) none, too expensive, value is \$2
- E) >\$5
- F) 150-147=3

