Final Exam Grade Contracts

Official Offering

A

An insurance that pays you 20 J-points in the event that your exam score is < 70.

- **Price:** 3 J-points
- *Payoff*: $\begin{cases} 17 \text{ J-points} & \text{if } M < 70 \\ -3 \text{ J-points} & \text{if } M \geq 70 \end{cases}$, where M denotes your exam score.

B

An option that gives you the *right* to buy product A on or before expiration time.

- **Price:** 1 J-point
- **Expiration time**: end of the exam day
- *How it works*: After you purchase this option, you have the right to buy product A any time before the expiration time.
  - ▷ If you exercise your right to buy product A, your final payoff will be $\begin{cases} 16 \text{ J-points} & \text{if } M < 70 \\ -4 \text{ J-points} & \text{if } M \geq 70 \end{cases}$
  - ▷ If you do not buy product A, your payoff will be -1 J-point.

C

A betting contract on whether the class average exam score is ≥ 80.

- **Your position**: either (C.a) the class average is ≥ 80; or (C.b) the class average is < 80.
- **Amount bet**: x J-points ($2.5 \leq x \leq 20$)
- *Payoff for (C.a)* : $\begin{cases} -x \text{ J-points} & \text{if } \overline{M} < 80 \\ x \text{ J-points} & \text{if } \overline{M} \geq 80 \end{cases}$, where $\overline{M}$ denotes the class average of scores
- *Payoff for (C.b)* : $\begin{cases} x \text{ J-points} & \text{if } \overline{M} < 80 \\ -x \text{ J-points} & \text{if } \overline{M} \geq 80 \end{cases}$

D

An option to buy C on or before expiration time.

- **Price:** $y = (x - 2.5)/2.5$ J-points[1], where x denotes the amount bet in contract C
- **Expiration time**: end of the exam day
- *Payoff*:
  - ▷ (C'payoff $-y$) J-points if you exercise the option (i.e. buy C).
  - ▷ $-y$ J-points if you don't.

[1] e.g., if $x = 10$, then $y = 3$. If $x = 20$, then $y = 7$.