Midterm - ALL multiple choices!

Borrowing and Lending

S: saving (negative if lending)

r_s: rate of interest earned on saving

r_b: rate of interest charged on borrowing

C_1 consumptions in each periods.

C_2

I_1 incomes in different periods.

I_2

if $S \geq 0$:

$C_1 + S = I_1$ (saving income.)

$C_2 = I_2 + (1+r_s) \cdot S$

$S < 0$:

$C_1 + S = I_1$ ($S<0$ here.)

$C_2 = I_2 + (1+r_b) S$.

e.g. $50 + (-10) = 40$ ← income. (consumption, borrowing)

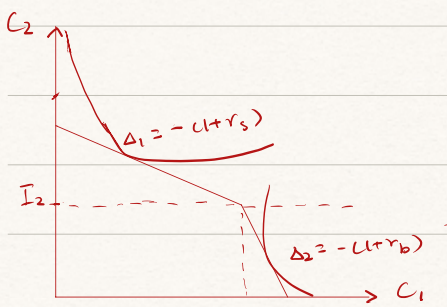
utility depends only on C_1, C_2. $u(C_1, C_2)$.

In period 2 budget: $C_2 - I_2 = (1+r_s) S$

$$S = \frac{C_2 - I_2}{1+r_s}$$

Plug into period 1: $C_1 + \frac{C_2 - I_2}{1+r_s} = I_1$

$$C_1 + \frac{C_2}{1+r_s} = I_1 + \frac{I_2}{1+r_s}.$$



if $S \geq 0$ $\quad C_2 = (1+r_s) I_1 + I_2 - (1+r_s) C_1$

$\frac{C_2 - I_2}{1+r_s} \geq 0$

$C_2 \geq I_2$: Consumption > income

I_1

↑

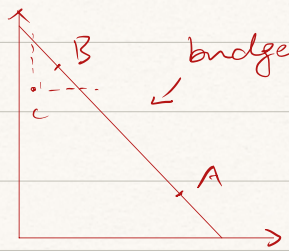
if $C_2 < I_2$: $C_2 = (1+r_b)I_1 + I_2 - (1+r_b)C_1$

Assume $r_s < r_b$

Revaled Preferences:

- main idea: if bundle A and B cost the same but A is chosen by the consumer, then we know that at least A is as preference as B, which is denoted as:

$A \gtrsim B$



B is strictly preferred than C (i.e. $B > C$)

Transivity implies $A \gtrsim B > C$

$A > C$