

A numerical example of intertemporal decision

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Example 1

- Suppose the consumer can access to money market, let
 $Y_0 = 2, Y_1 = 3$
- Draw the intertemporal budget constraint of this consumer if
 - $r = 0\%$
 - $r = 50\%$
 - $r = 100\%$
- Suppose his consumption is at (3,2) when $r = 0\%$, will this consumer be better off if the interest rate increases?

Example 2

- Suppose the consumer can access to money market, let
 $Y_0 = 2, Y_1 = 3$
- Draw the intertemporal budget constraint of this consumer if
 - $r_L = 0\%$ and $r_B = 100\%$
- Suppose his consumption decision is at $(1,4)$, will he be better off if the borrowing interest rate falls down to 50%?

Example 3

- Suppose the consumer can access to both investment and money market, and let $Y_0 = 2, Y_1 = 3$
- His investment gives diminishing returns
- Draw the intertemporal budget constraint of this consumer if $r = 50\%$