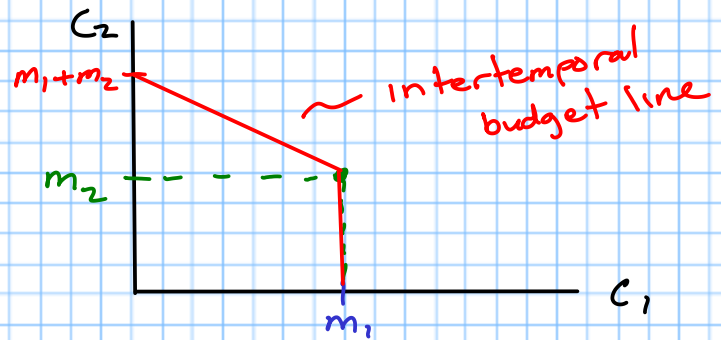


## Intertemporal choice

- So far: well-behaved prefs.
  - Consumers are spending all of their income
  - Model just describes behavior at one point in time
- In the real world, people spend more or less than their income in any given period of time

Example: Suppose I get a paycheck today and another one tomorrow

$m_1$ : income today  
 $m_2$ : income tomorrow  
 $C_1$ : composite of all consumption today  
 $C_2$ : consumption tomorrow



Example: Consumption this year vs consumption next year

- Consumers can invest income this year
- Consumers can borrow against future income
- Assume one interest rate for saving and borrowing ( $r$ )

Suppose I borrow  $\$X$  today  
How much will I have to pay back next year?

$$X + rX = (1+r)X$$

↑                      ↑  
amount            interest  
borrowed

- What is the most our consumer can consume this year?

$$C_2 = 0$$

$$C_1 = m_1 + \frac{m_2}{1+r}$$

- What is the most I can consume next year?

$$C_1 = 0$$

$$C_2 = m_1 + m_2 + r m_1$$

