

Daily Exercise Solution

Given information:

Preferences:

$$\frac{C_0}{C_1} = \frac{2}{1}$$

$$C_0 = 2C_1$$

Income and interest rate:

$$I_0 = 180k$$

$$I_1 = 60k$$

$$r = 20\%$$

Budget constraint:

$$C_0 + \frac{C_1}{1+r} = PVI$$

$$PVI = 180k + \frac{60k}{1.2} = 230k$$

Solving for the optimal bundle:

$$2C_1 + \frac{C_1}{1.2} = 230k$$

$$C_1 \left(2 + \frac{1}{1.2} \right) = 230k$$

$$C_1 = 81.2k$$

$$C_0 = 162.4k$$

Saving or borrowing?

Since $I_0 > C_0$ must be saving

$$\text{Saves: } S = I_0 - C_0 = 180k - 162.4k = 17.6k$$

$$\text{Earns: } E = S * (1 + r) = 17.6k * 1.2 = 21.2k$$

$$\text{Check: } C_1 - I_1 = 81.2k - 60k = 21.2k$$

Graph:

