231018 – IS Curve

Motivating Questions

Ch 11: What is the relationship between interest rates and short run output?

The Fed can directly change _____.
The Fed is also interested in keeping _____ around 2% and unemployment near the _____ rate, but it can't change either of those things directly.
From Okun's Law and the Phillips Curve, we know unemployment and inflation depend on: output _____.
The IS curve tells us how _____ influence _____.

IS Curve: "Investment Equals Savings" or "Investment-Savings" curve. Why?

$$Y = C + I + G + X - M$$
$$I = Y - C - G - X + M + (Taxes - Taxes)$$
$$I = \underbrace{(U - C - Taxes)}_{Private\ Savings} + \underbrace{(Taxes - G)}_{Gov\ Savings} + \underbrace{(M - X)}_{Foreign\ Savings}$$

IS curve comes from GDP:

$$Y_t = C_t + I_t + G_t + X_t - M_t$$

231018 –IS Curve Components

Assume G, X, M are a constant percent of potential:

$G_t = \bar{a}_G \bar{Y}_t$	$X_t = \bar{a}_X \bar{Y}_t$	$M_t = \bar{a}_M \bar{Y}_t$

$\bar{Y}_t$:	$\bar{a}_G$:

Investment depends on Interest rates:

$$\frac{I_t}{\bar{Y}_t} = \bar{a}_I - \bar{b}(R_t - \bar{r})$$

$\bar{b}$: Comes from:	R_t: Comes from:	$\bar{r}$: Comes from:

Consumption grows in good times and shrinks in bad times:

$$\frac{C_t}{\bar{Y}_t} = \bar{a}_C + \bar{x}\,\tilde{Y}_t$$

$\bar{x}$:	$\tilde{Y}_t$: