

Model 3
IS-LM MODEL

Goods and Asset Markets Only

Goods Market (Model applies only when $Y < Y^*$)

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|----|--------------------------|---------------------------------|---------------|
| 1. | Consumption | $C = a + b \cdot Y_d$ | $1 > b > 0$ |
| 2. | Disposable Income | $Y_d = Y - T$ | |
| 3. | Income Taxes | $T = t_0 + t_1 \cdot Y$ | $0 < t_1 < 1$ |
| 4. | Investment Demand | $I = e - d \cdot r$ | $d > 0$ |
| 5. | Net Export Demand | $X = g - m \cdot Y - n \cdot r$ | $m, n > 0$ |
| 6. | Planned Expenditures | $AD = C + I + G + X$ | |
| 7. | Goods Market Equilibrium | $Y = AD$ | |

Equations 1 - 7 can be used to derive an IS Curve.

$$Y = \frac{a - b \cdot t_0 + e - (d+n) \cdot r + g + G}{1 - b \cdot (1 - t_1) + m}$$

with slope $\frac{\Delta r}{\Delta Y} = - \frac{1 - b \cdot (1 - t_1) + m}{d + n}$

Asset Market

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|----|--------------------------|---|------------|
| 8. | Portfolio Balance | $\frac{M_d}{P} = k \cdot Y - h \cdot r$ | $k, h > 0$ |
| 9. | Money Market Equilibrium | $M = M_d$ | |

Equations 8 and 9 are used to derive an LM curve

$r = (k/h) \cdot Y - (1/h) \cdot (M/P)$ which has slope $\frac{\Delta r}{\Delta Y} = \frac{k}{h}$

Endogenous Variables
C, Y_d, Y, T, I, r, X, AD, M_d

Exogenous Variables
a, t₀, t₁, e, g, G, P, M