

The Digital Economist

Intermediate Macroeconomics

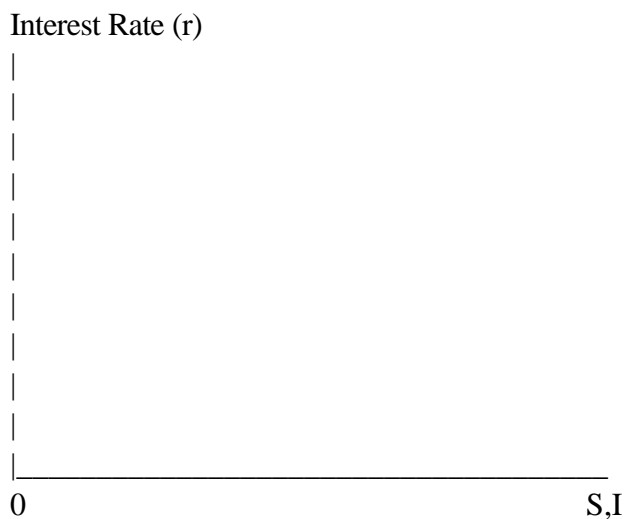
Worksheet #3: **The Flow of Funds** Name: _____

1. Potential Output ' Y^* ' for a given economy is \$10,000 [i.e., \$10 trillion]. Given the following equations:

$$\begin{aligned} C &= 0.80(Y^* - T) && \text{-- Consumption Expenditure} \\ T &= 0.10Y^* && \text{-- Taxes [tax rate = 10\%]} \\ G &= \$2,000 && \text{-- Government Expenditure} \\ I &= \$1,500 - 100(r) && \text{-- Domestic Investment Expenditure} \\ &&& \text{[r = market interest rate]} \\ NX &= \$0 && \text{-- Net Exports (balanced trade)} \end{aligned}$$

- a. Calculate the level of Private, Public, and National Savings.
- b. At what market interest rate will Domestic Investment be equal to National Savings?

Graph the results of parts 'a-b' in the diagram below:



- d. Describe how an increase in the tax rate from 10% to 15% will affect Private, Public and National Savings and the level of Net Exports.

2. Given the following:

- $Y^* = \$10,000$ -- Potential Output (held constant)
- $C = b(Y^* - T)$ -- Consumption Expenditure
[b = Marginal Propensity to Consume]
- $T = 0.10Y^*$ -- Tax Revenue [Tax rate = 10%]
- $S_{public} = T - G = \$0$ -- Public Savings [G = T *always!*]
- $S_{private} = Y^* - T - C$ -- Private Savings
- $S_{national} = S_{public} + S_{private}$
- $NX = \$0$ -- Net Export Expenditure
[always in balance]
- $I_{domestic} = 1000 - 100(r)$ Investment Expenditure [r = interest rate]
- $I_{domestic} = S_{national}$ -- Assume that the interest rate adjusts such that Domestic Investment Expenditure is always equal to National Savings.

Complete the following table:

MPC	Potential Output	=	Consumption Expenditure	+ Government Expenditure	+ Investment Expenditure	Nat'l Savings	Interest Rate
0.50	\$10,000		_____	_____	_____	_____	_____
0.55	\$10,000		_____	_____	_____	_____	_____
0.60	\$10,000		_____	_____	_____	_____	_____
0.65	\$10,000		_____	_____	_____	_____	_____
0.70	\$10,000		_____	_____	_____	_____	_____
0.75	\$10,000		_____	_____	_____	_____	_____
0.80	\$10,000		_____	_____	_____	_____	_____
0.85	\$10,000		_____	_____	_____	_____	_____
0.90	\$10,000		_____	_____	_____	_____	_____
0.95	\$10,000		_____	_____	_____	_____	_____
1.00	\$10,000		_____	_____	_____	_____	_____

and Graph the relationship between *Consumption Expenditure* and *Investment Expenditure* in the diagram to the right:

