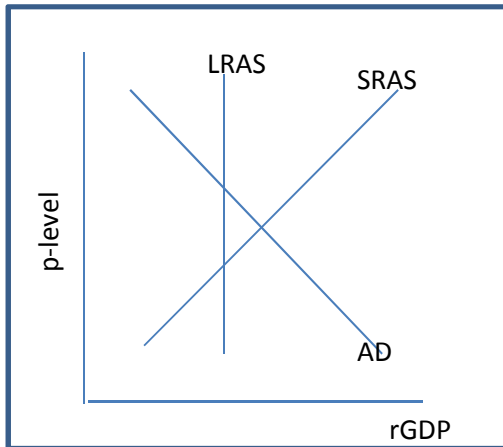
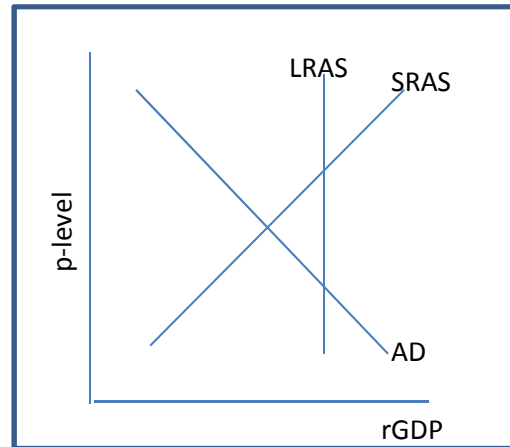


## Critical Graphs Required for Success on the AP Macroeconomics Exam

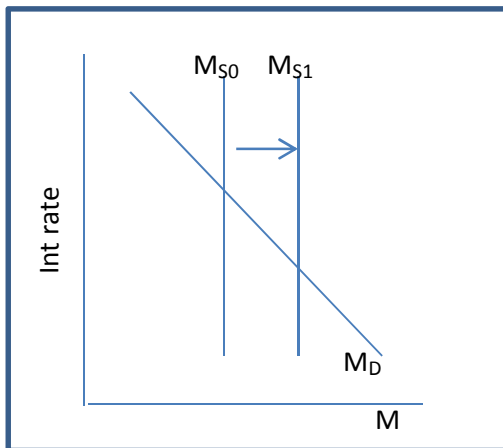
AD / AS – Recessionary Gap



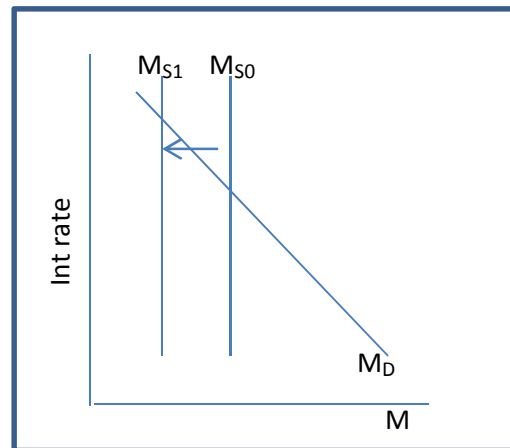
AD / AS – Inflationary Gap



Fed Funds Mkt - Expansionary



Fed Funds Mkt - Contractionary



FOMC Actions:

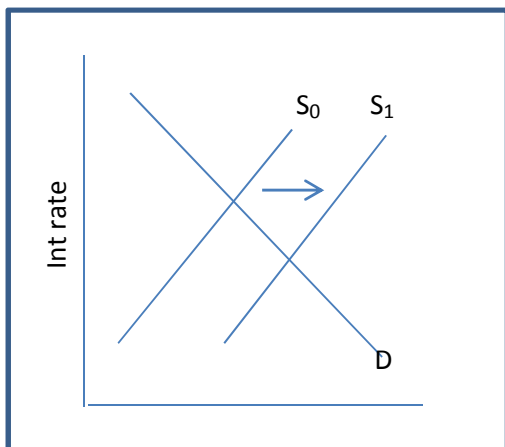
Fed buys bonds

Fed sells bonds

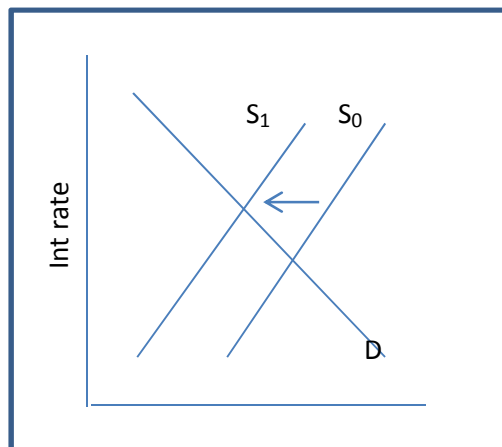
Easy key to remembering the effect on the market: Ask yourself who has the money at the end of the day? For all transactions, the SELLER will have the money at the end of the day. So, for example, if the Fed wishes to expand M, it must have the market be the seller with the Fed BUYING bonds.

## RELATED LOANDABLE FUNDS MARKET GRAPHS

Loanable Funds Mkt



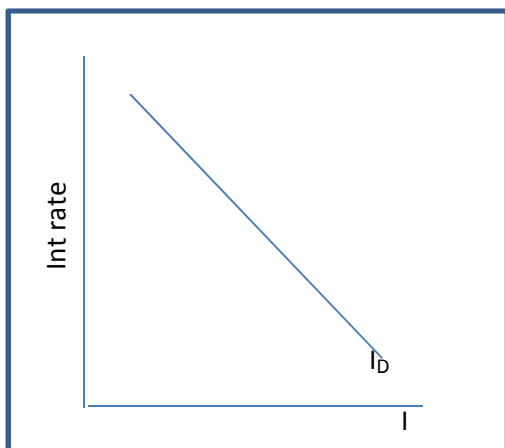
Loanable Funds Mkt



Important observations:

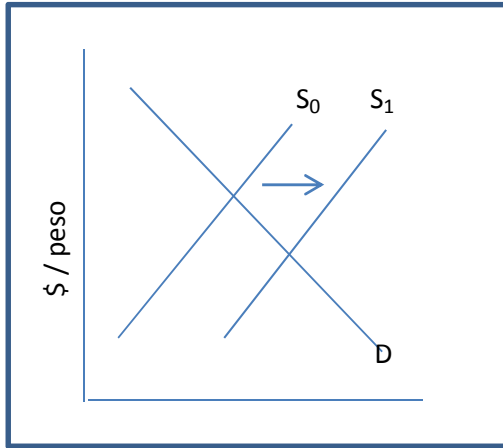
1. The supply of funds in the loanable funds market is positively sloped. Contrast that to the Federal Funds Market for Treasurys.
2. What does that imply about the relationship between the interest rate and the supply of loanable funds?
3. The Loanable Funds Market is used to show the effect of changes in interest rates in the private markets. The other graphs, the Federal Funds Market, shows the actions in the market for bonds in which the Federal Reserve actively buys and sells bonds to determine the interest rate.

Investment Demand

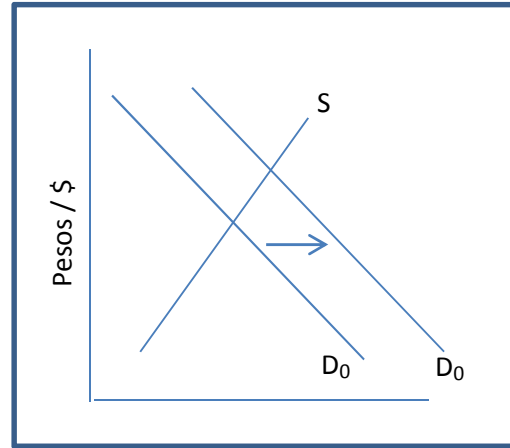


This graph typically is used in CONJUNCTION with either (or both) the Federal Funds Graph or the Loanable Funds Graph to show the effect of a change in interest rates on the level of private investment. This is useful for crowding out in which an increase in  $G$  reduces  $NS$  (national savings), driving up the interest rate to discourage private investment.

Market for Pesos



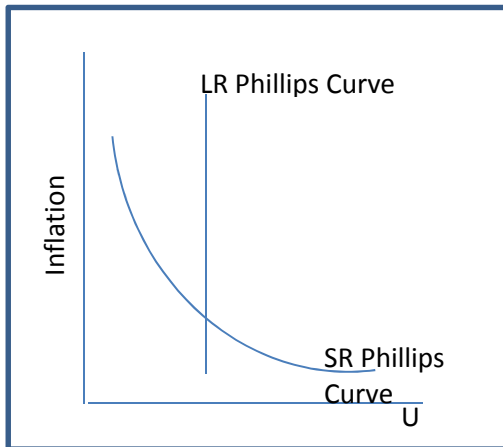
Market for Dollars



ForEx (foreign exchange graphs):

Assuming that the summer Olympics will be held in the US, and that that Mexicans decide to attend the Olympics instead of vacationing elsewhere –  
 Mexicans dump their pesos in the peso market                      and buy dollars in the dollar market

Phillips Curve



The Phillips Curve shows the relationship between Inflation and Unemployment. Inflation goes on the y-axis (not too different than p-level for the AD/AS graphs), with Unemployment on the x-axis. REMEMBER, Unemployment increases along the x-axis (to the right). Low values of U near the origin correspond to higher levels of rGDP.

NOTE: Know the difference between the short-run and long-run Phillips' Curves and how the differences determine the effect of attempts to stimulate the economy to decrease U. Be able to explain expectations –adjusted Phillips' Curve.

## KEY INFORMATION:

1.  $AD = C + I + G + (X - IM)$   
Always evaluate policies in regards to the terms of this equation. Which terms are affected by the proposed or assumed policy?
2. Fiscal Multiplier
  - a. Identify or determine MPC or MPS
  - b. Calculate the multiplier:  $1 / (1 - MPC)$   
which coincidentally equals  $1 / (MPS)$
  - c. To determine the TOTAL expansion of AD, multiply the injection (increase in investment or increase in G) by the multiplier
3. Tax Multiplier  
This is the same as the Fiscal Multiplier EXCEPT that the numerator is the MPC instead of 1 (and the expression has a negative sign, that is, an increase in T results in a decrease in GDP).
4. Money Multiplier  
The Money Multiplier determines the expansion of deposits in the banking system, given an initial injection of a new deposit. Mathematically, it is analogous to the Fiscal Multiplier with the denominator being the amount that is NOT used.  
  
Money Multiplier =  $1 / RR$ , where RR = the required reserves that are NOT to be used for loans. RR is set by the Federal Reserve bank and should be given in any question on the AP.
5. Banking System Terminology (Fractional Reserves)
  - a. Deposits are liabilities
  - b. Loans (receivable) are assets
  - c. Reserves represent cash and are classified in two ways:
    - i. Required reserves – NOT available for loans
    - ii. Free or excess reserves – AVAILABLE to be loaned out
  - d. Every new loan generates a deposit of equal value, but only a percentage of that new deposit (the amount left after deducting the required reserves) can be used to make additional loans.
6. Equation of exchange:  $MV = PQ$  (or  $PY$ )  
Know this equation, what it means, and how it is applied to policy.
7. Demand for Money – reasons:
  - a. Transactions
  - b. Speculative
  - c. Precautionary
8. Tools of the Federal Reserve System
  - a. Required reserve ratio
  - b. Discount rate (to member banks)
  - c. OMO (open market operations)

9. Money – Definitions and Characteristics

- a. Medium of exchange
- b. Store of value
- c. Unit of account

10. Inflation – Two types:

- a. Demand-pull
- b. Cost-push

11. Trade Terms

- a. Balance of Trade
- b. Current Account
- c. Capital Account

12. Comparative Advantage

We will review this topic in May that we covered in the 1<sup>st</sup> semester, but you should be able to recall it now.