

# Macro 4.7

Loanable Funds



# Presenter

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2021 Georgia Council for Economic  
Education Teacher of the Year

AP Macroeconomics reader



# AP Expectations:



## ENDURING UNDERSTANDING

### MKT-4

The interaction of borrowers, who demand loanable funds, and savers, who supply loanable funds, determines the equilibrium real interest rate.

## LEARNING OBJECTIVE

### MKT-4.A

- Define (using graphs as appropriate) the loanable funds market, demand for loanable funds, and supply of loanable funds.
- Explain (using graphs as appropriate) the relationship between the real interest rate and the quantity of loanable funds demanded (supplied).

### MKT-4.B

Define national savings in both a closed and an open economy.

## ESSENTIAL KNOWLEDGE

### MKT-4.A.1

The loanable funds market describes the behavior of savers and borrowers.

### MKT-4.A.2

The demand for loanable funds shows the inverse relationship between real interest rates and the quantity demanded of loanable funds.

### MKT-4.A.3

The supply of loanable funds shows the positive relationship between real interest rates and the quantity supplied of loanable funds.

### MKT-4.B.1

In the absence of international borrowing and lending, national savings is the sum of public savings and private savings.

### MKT-4.B.2

For an open economy, investment equals national savings plus net capital inflow.

# AP Expectations

## LEARNING OBJECTIVE

### MKT-4.C

Define (using graphs as appropriate) equilibrium in the loanable funds market.

### MKT-4.D

Explain (using graphs as appropriate) how real interest rates adjust to restore equilibrium in the loanable funds market.

### MKT-4.E

- Explain (using graphs as appropriate) the determinants of demand and supply in the loanable funds market.
- Explain (using graphs as appropriate) how changes in demand and supply in the loanable funds market affect the equilibrium real interest rate and equilibrium quantity of loanable funds.

## ESSENTIAL KNOWLEDGE

### MKT-4.C.1

In the loanable funds market, equilibrium is achieved when the real interest rate is such that the quantities demanded and supplied of loanable funds are equal.

### MKT-4.D.1

Disequilibrium real interest rates create surpluses and shortages in the loanable funds market. Market forces drive real interest rates toward equilibrium.

### MKT-4.E.1

The loanable funds market can be used to show the effects of government spending, taxes, and borrowing on interest rates.

### MKT-4.E.2

Factors that shift the demand (such as an investment tax credit) and supply (such as changes in saving behavior) of loanable funds change the equilibrium interest rate and the equilibrium quantity of funds.

# Loanable Funds Market



The loanable funds market exists to connect customers who wish to borrow with suppliers who wish to lend. Banks facilitate this market.

# Loanable Funds Market



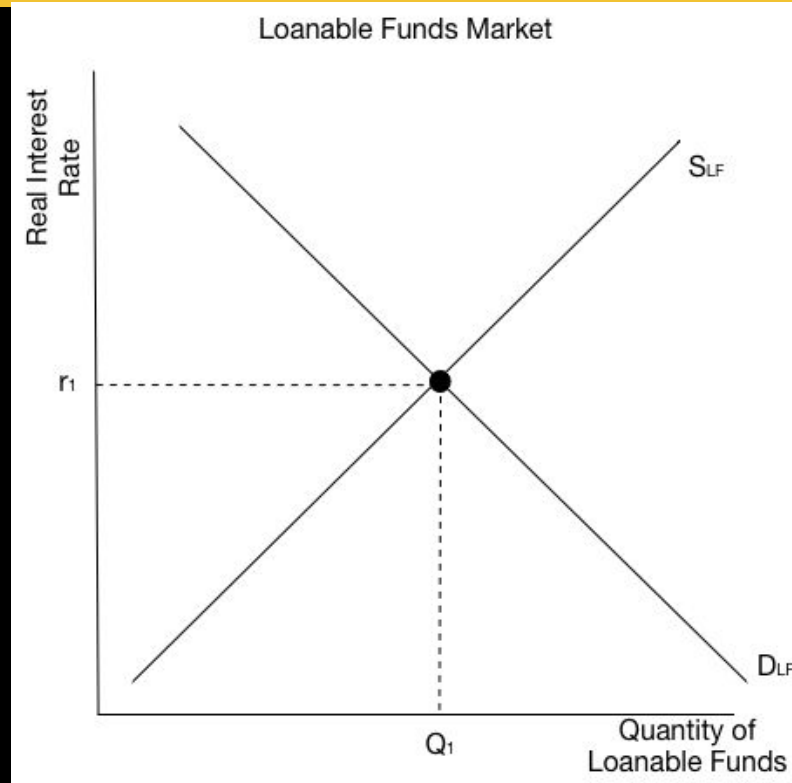
## Loanable Funds Market:

Who participates?

**Demanders** - businesses and individuals or governments who wish to borrow at interest.

**Suppliers** - businesses and individuals or governments who wish to earn interest by loaning their money out for interest.

# Loanable Funds Market



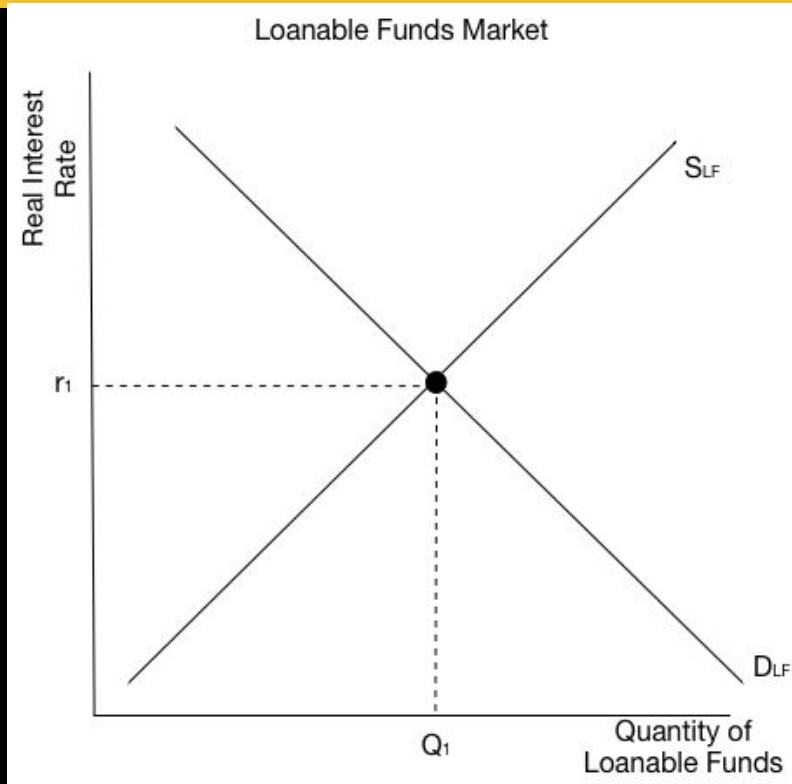
# Loanable Funds Market



## Graph labeling takeaways:

Real interest rates - I just got a raise at work ... 2%. How do I feel about this?

Lenders care about the *return* from their investment so they adjust for inflation.

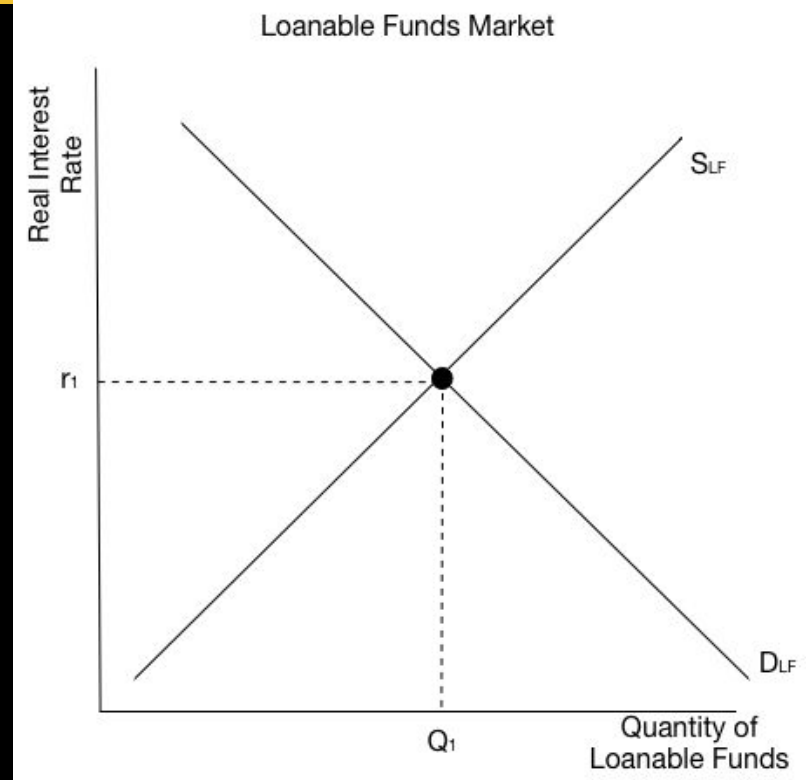


# Loanable Funds Market



## Graph labeling takeaways:

It is extremely important to note equilibrium on the axis. Students must label each axis, label each equilibrium point, and label each line.



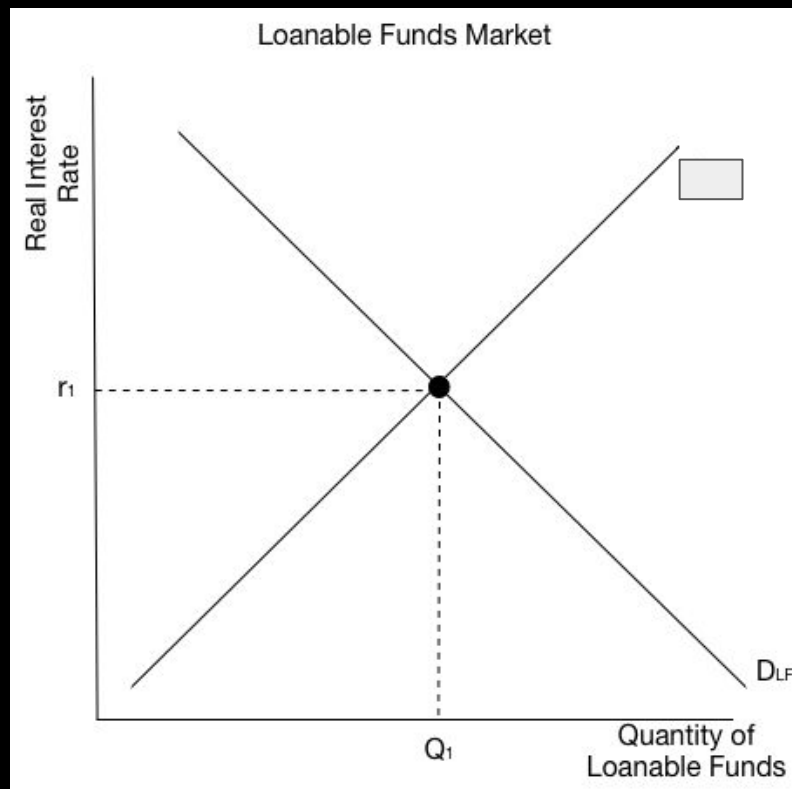
# Loanable Funds Market



Graph labeling takeaways:

Why can't I give this graph credit?

If there is no Supply label, there is no Market. I can't give credit.



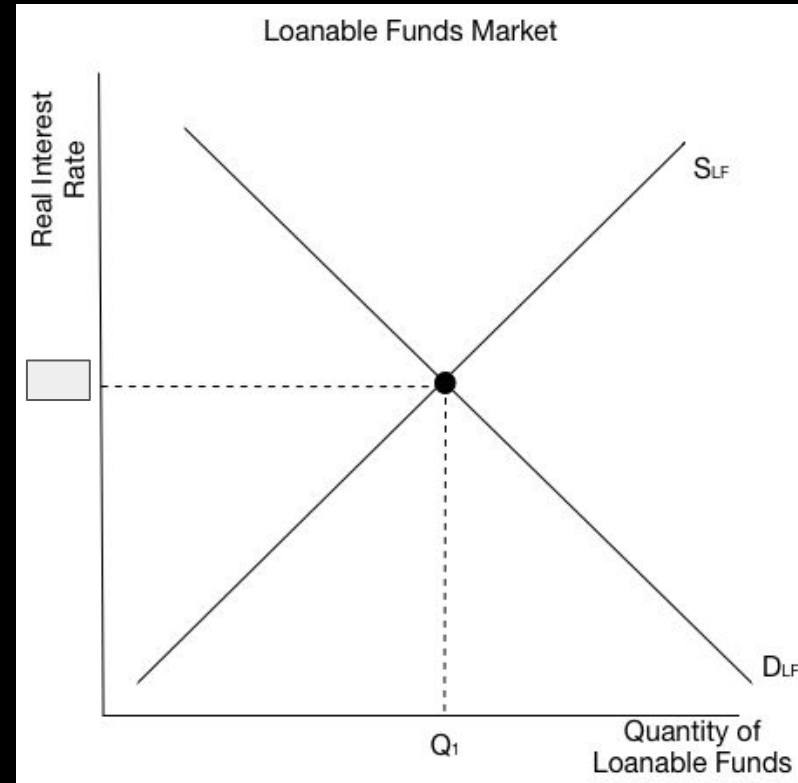
# Loanable Funds Market



Graph labeling takeaways:

Why can't I give this graph credit?

If there is no label for interest rates, I can't give credit.



# Loanable Funds Market



Graph labeling takeaways:

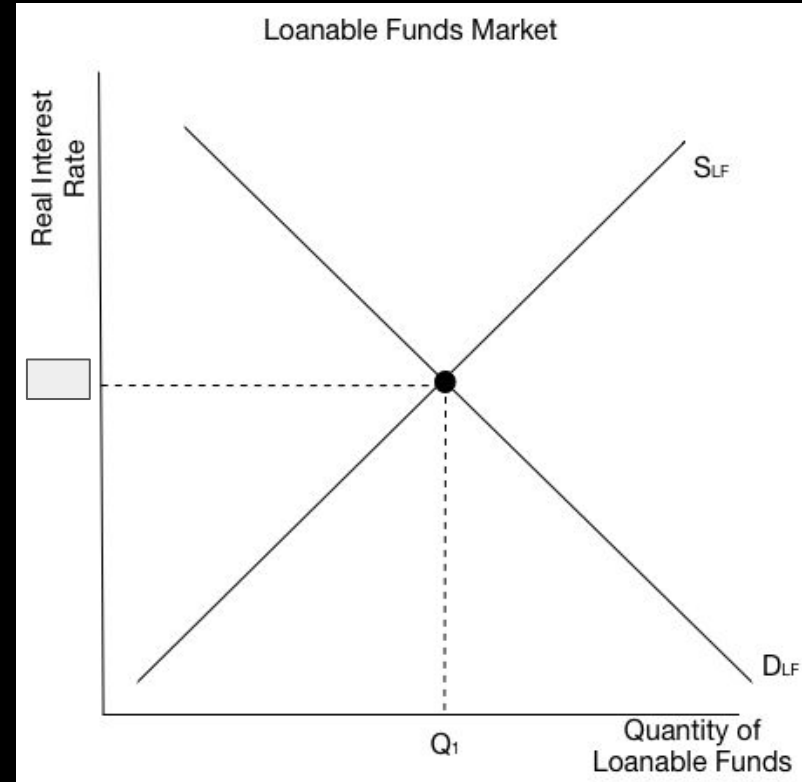
Incorrect labels -

This is not the money market.

Quantity of Money

Nominal Interest rate

All of these lose credit.



# Loanable Funds Market



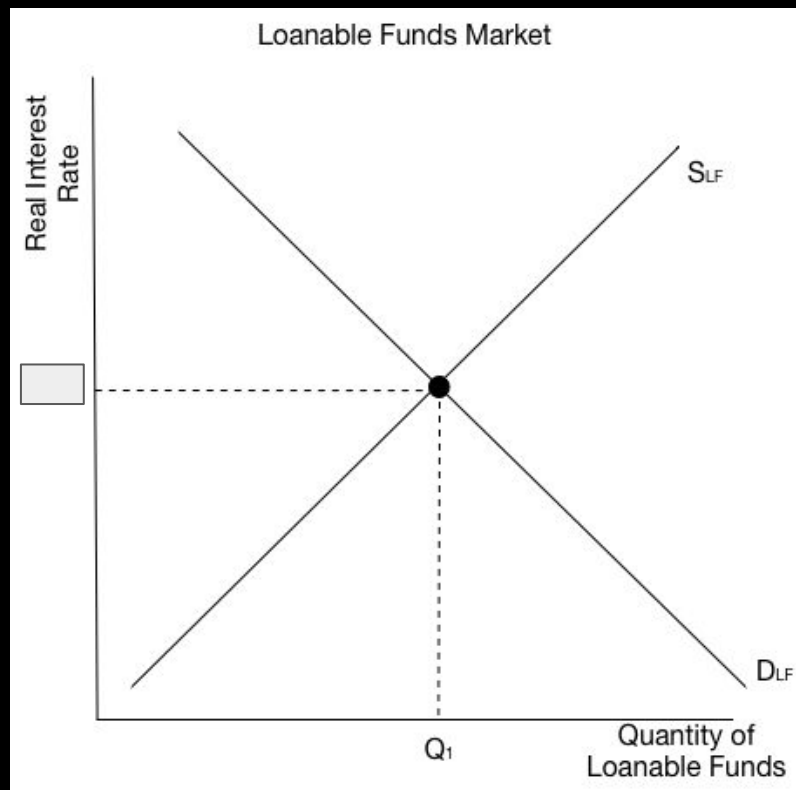
Graph labeling takeaways:

Neutral labels-

The student must place themselves in the loanable funds market.

So they could say  $P/Q/S/D$  with a title and be ok, but it is better to have them label correctly and completely.

Draw a graph the size of your palm!





Terms to know:

Remember National Income, for the purposes of our course is GDP or  
 $Y = C + I + G + NX$

National Savings = Private Savings + Public Savings

Private savings =  $Y - T - C$  (National Income - Taxes - Consumption)

Public Savings =  $T - G$  (Taxes - Government Spending)

# Loanable Funds - Demand

## Demand shifters:

- Consumer behavior

Are consumers borrowing more?

How do you buy your groceries?

Homes? cars?



## Lending levels

Monitoring overall activity helps us identify new developments in financial markets. These interactive graphs show the number and aggregate dollar volume of new auto loans opened each month. Aggregated monthly originations are displayed along with a seasonally adjusted series, which adjust for expected seasonal variation in lending activity.

### Number of loans originated

Select time range

1y

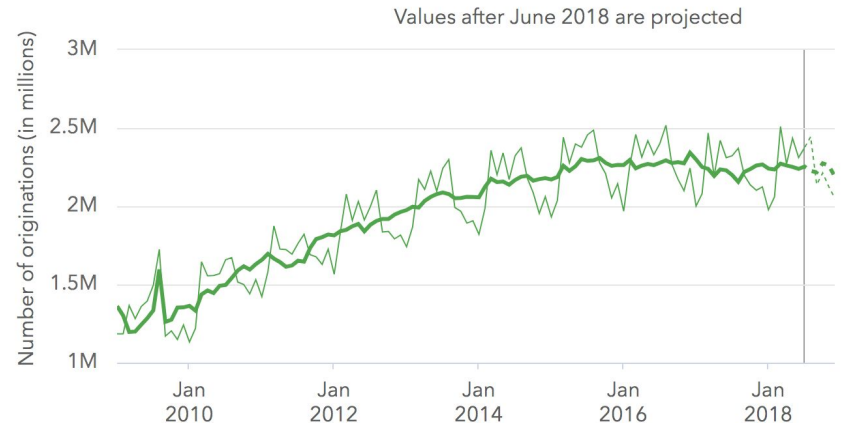
3y

5y

All

— Seasonally adjusted

— Unadjusted



# Loanable Funds - Demand



## Demand Shifters

- Business borrowing

### Why do Businesses borrow?

 CBS News

#### [OneWeb Florida factory to produce space-based internet satellites](#)

OneWeb officially opened a high-tech factory near the Kennedy Space ... a third company, OneWeb Satellites, that will build the new spacecraft.

22 mins ago

# Loanable Funds Market



## Demand Shifters:

Changes in government borrowing - Deficit Spending

 Newsweek

### Stimulus Check Update: Is White House Looking to Send More Money?

Multiple news outlets on Friday reported that the Biden administration has recently mulled over a new stimulus plan of sending Americans...

3 days ago

# Loanable Funds Market



## Supply Shifters:

Changes in Private Savings behavior

Changes in public savings behavior

Changes in foreign investment

Changes in Government borrowing

# Crowding out - Who would you lend to?



Treasury - They don't care about interest rates. Can borrow as much as market will allow.

Money is worthless if they default.

Average Consumer:

\$92,000 in debt - credit cards, cars, homes



# Crowding out



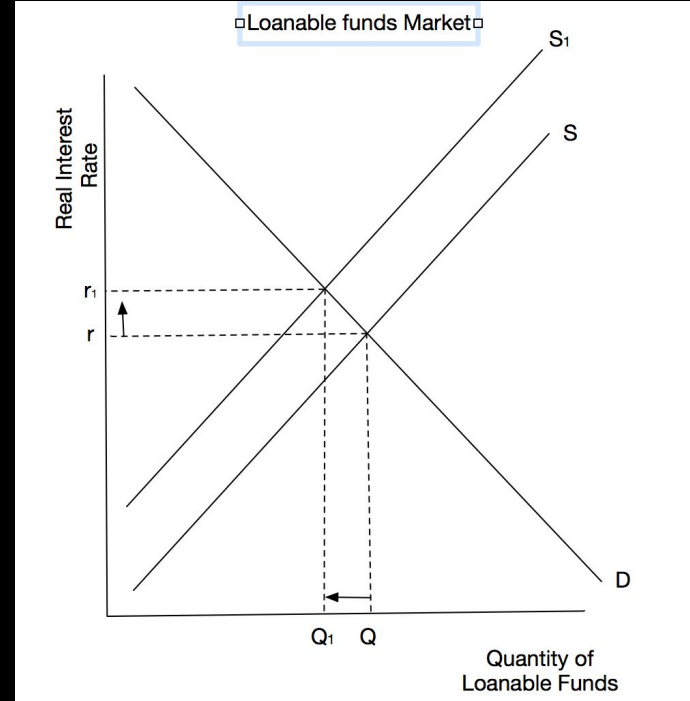
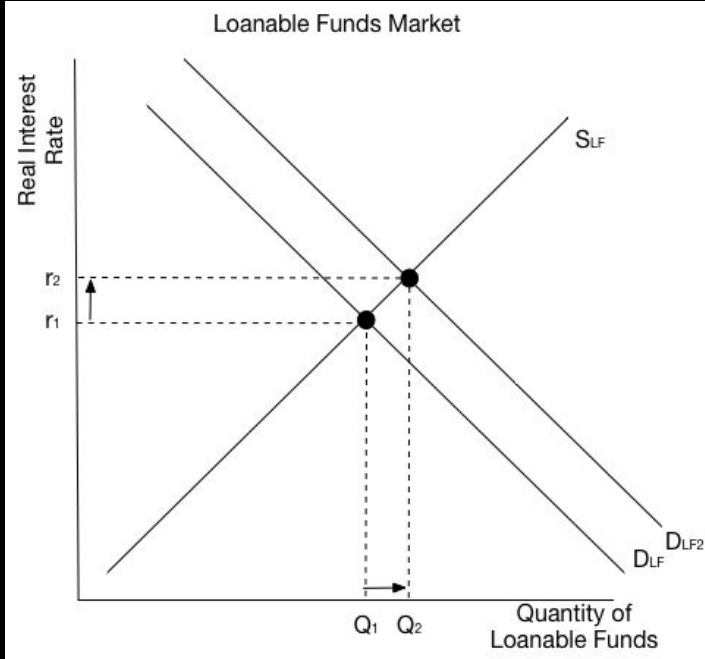
When the government borrows, it is not sensitive to interest rates, so you can look at it two ways:

The government gets in the front of the line, taking low cost loans that should go to consumers.

The supply of funds to businesses and consumers is depleted because the government is getting so many funds before they arrive at the market.



# Crowding out - Graphically



# Crowding Out



Either way - the real interest rate increases. Both are correct, but I use Supply as it shows the quantity available to businesses and consumers has decreased.

# Crowding out



Crowding out implies a reduction in capital investment.

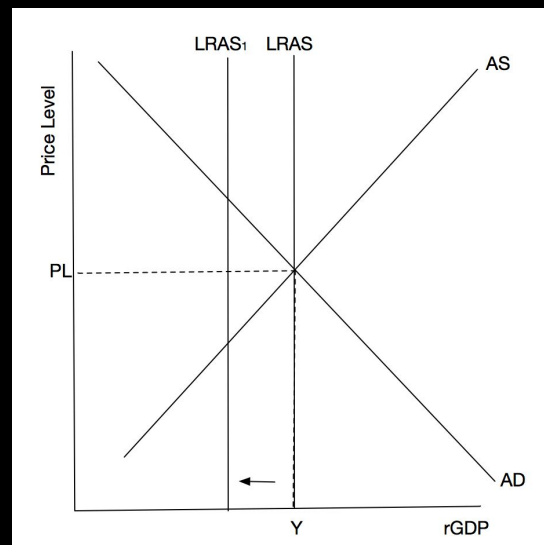
What does this mean for LRAS and the PPC?

# Crowding out



Crowding out implies a reduction in capital investment.

What does this mean for LRAS and the PPC over the long run?





Practice!

Graph recovery from recession and inflationary periods using fiscal policy.

# How will loanable funds be affected when:

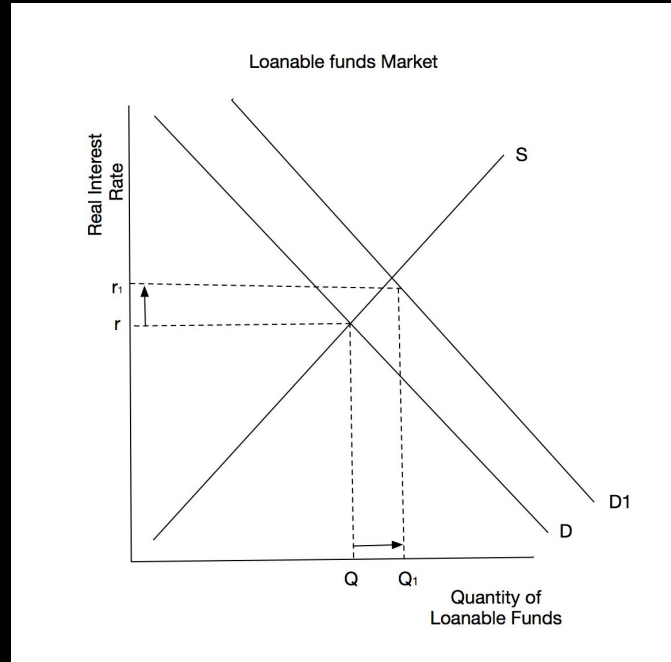


1. Citizens begin to use credit cards rather than debit cards.
2. US approves a \$100 billion dollar spending bill financed by borrowing.
3. A recession slows lending activity.
4. Businesses begin to finance capital stock projects.
5. Uncertain of the future, consumers begin to save more.

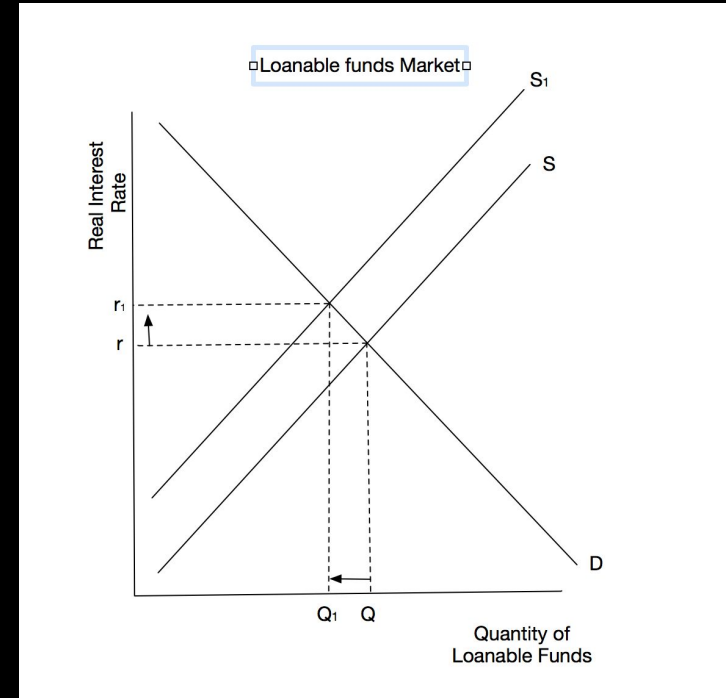
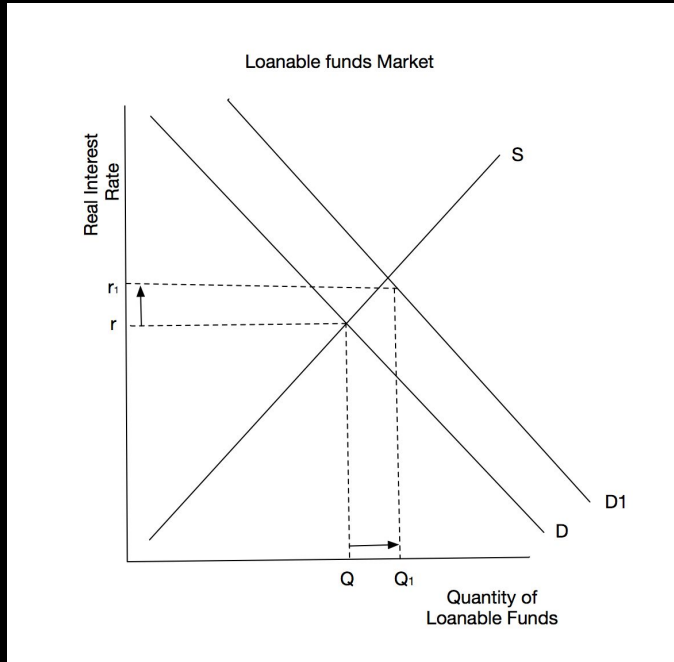
Future question:

6. US interest rates are higher relative to their neighbors in Canada. (What does this mean for investors? For savers?)

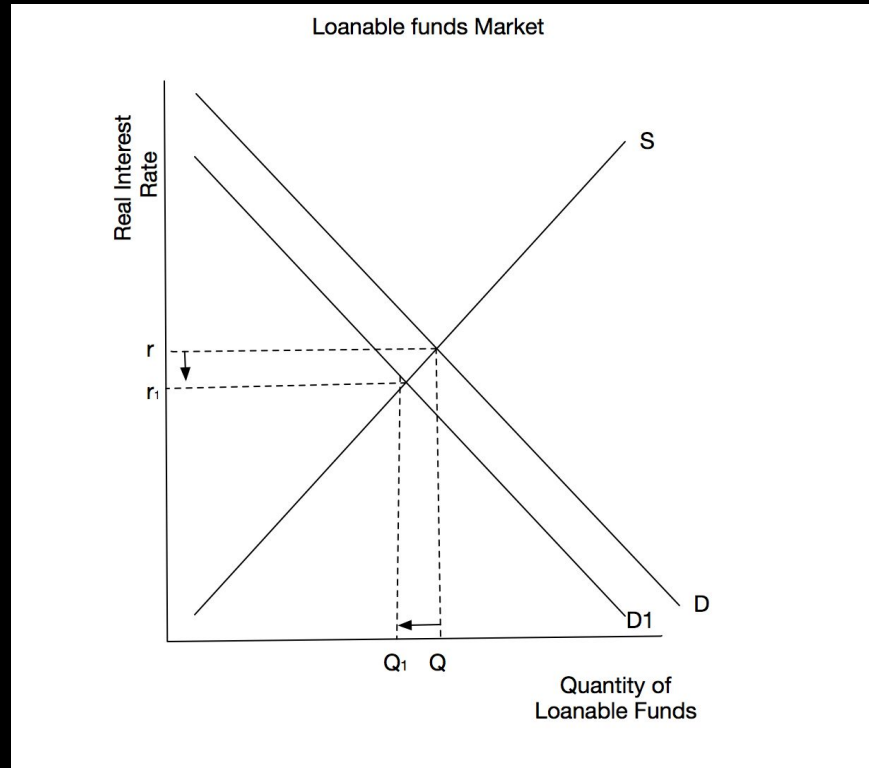
# I. Citizens prefer credit to debit.



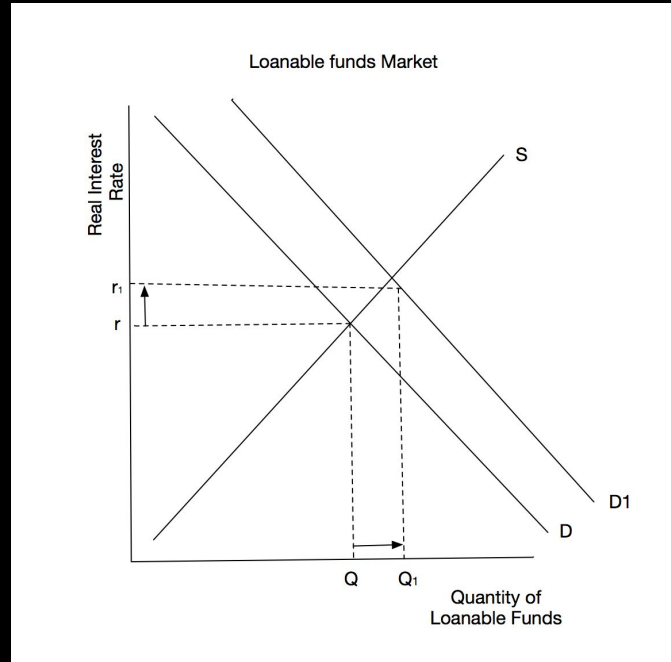
## 2. Spending bill - Crowding out



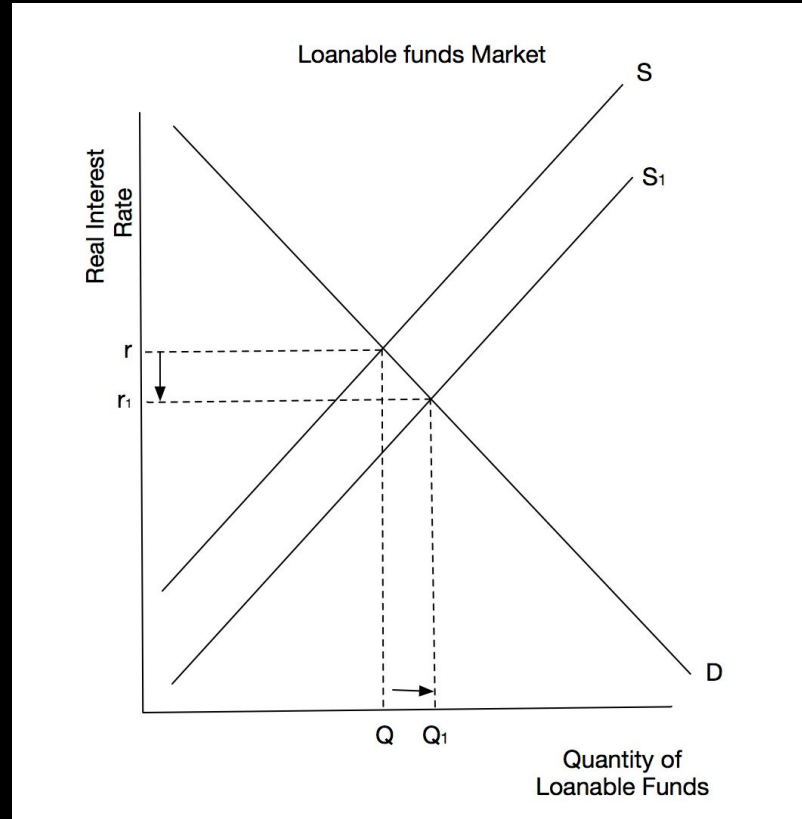
### 3. Recession slows lending



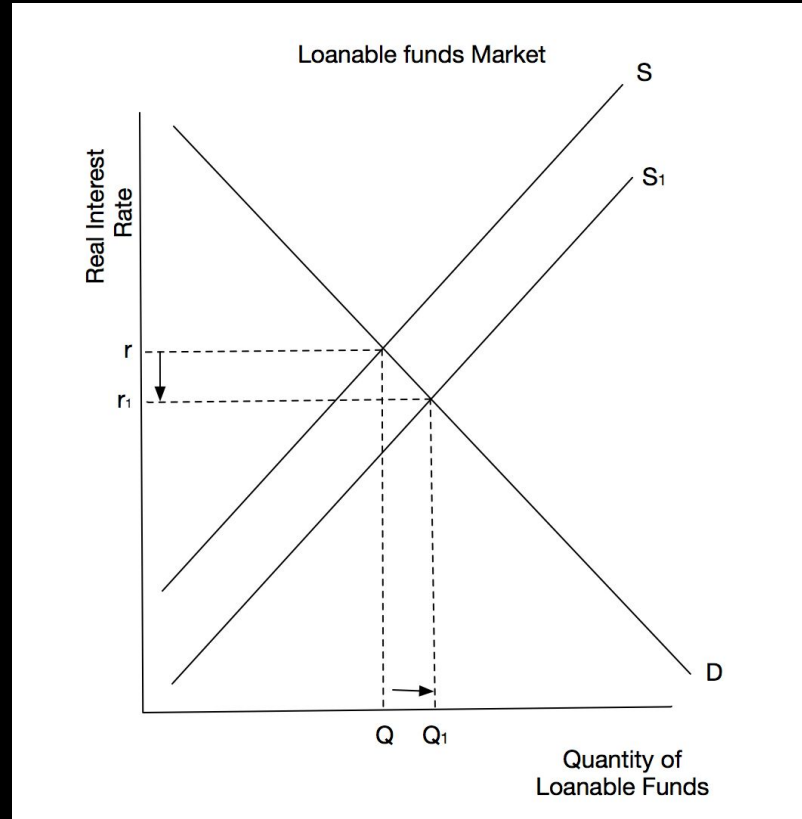
# 4. Businesses finance capital projects



## 5. Consumers save more.



## 6. Rates are higher in US than Canada.



## Key takeaways from the AP reading:



Prompt: As a result of the interest rate shown in the loanable funds graph, will LRAS shift left, right, or stay the same in the long run? Explain.

“Long run Aggregate supply will shift left due to crowding out.”

Incorrect.

Must explain fully: Increased government borrowing will increase interest rates. This will decrease investment spending and decrease **capital formation** in the long run.

## Key takeaways from the AP reading:



Prompt: How will an increase in interest rates in the loanable funds market affect the AS/AD model?

“Aggregate Demand will shift left due to less consumption due to high interest rates.”

Incorrect.

Interest rates affect two types of spending - investment and *interest sensitive* consumption.