

# ECON 102 Tutorial: Week 25

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# Today's Outline

- We'll review the exam from Friday

Which of the following reasons can explain why people have preferences for holding money?

- a) It yields a high rate of return.
- b) It yields a low rate of return.
- c) It facilitates transaction activities and provides liquidity services.
- d) none of the above.

# A rise in the central bank refinance rate will:

- a) Increase the money supply.
- b) Reduce the money supply.
- c) Increase the cost of lending,
- d) Statements (b) and (c) are correct.

In the IS-LM model, a decrease in net exports (NX) will:

- a) Shift the IS curve to the right.
- b) Lower the interest rate.
- c) Increase the level of output.
- d) Shift the LM curve to the left.

Suppose the demand for money is given by:  $M^D = 100 - 8r$ , where  $r$  denotes the interest rate. The money supply ( $M^S$ ) is fixed at 60. What is the equilibrium interest rate?

- a)  $r=5$ .
- b)  $r=6$ .
- c)  $r=7$ .
- d)  $r=8$ .

In the IS-LM model: a simultaneous increase in government spending and lower money supply will:

- a) Lower the level of output.
- b) Increase the level of output.
- c) Lead to either an increase or decrease in the level of output.
- d) Lower the interest rate.

The “Crowding Out” effect following a rise in government expenditures (for example) is associated with:

- a) A lower interest rate.
- b) A higher Interest rate.
- c) Higher level of investments.
- d) None of the above.



# From Week 20:

- **Crowding-out effect**

- the tendency of an increase in government expenditure to increase the rate of interest, and reduce consumption and investment by the private sector

$$\uparrow G \rightarrow \uparrow Y \rightarrow \uparrow M^D \rightarrow \uparrow i \rightarrow \downarrow C, I \rightarrow \downarrow Y$$

# In a liquidity trap:

- a) Monetary policy is effective in stabilizing the economy.
- b) Fiscal Policy is effective in stabilizing the economy.
- c) Money demand is inelastic with respect to interest rate changes.
- d) Statements (b) and (c) are correct.

# Note from Roy on Q7:

Recall that the LM curve in the liquidity trap is completely horizontal as the public are willing to hold any amount of money at the prevailing rate of interest (see also page 664-665 in the book).

As explained in class, fiscal policy or positive changes to the IS curve (such as government spending (G)) can help boost the economy and allow it to escape the liquidity trap.

Notes on the other option choices:

Solution (a) is incorrect as monetary policy, or changes in the money supply, are **ineffective** in stabilizing the economy, hence the term a “liquidity trap”. LM curve is completely horizontal.

Solution (c) and therefore (d) are incorrect because money demand is *perfectly elastic* with respect to interest rate changes.

Many indeed answered (d) but (c) is incorrect in case of a liquidity trap.

# The IS curve depicts:

- a) A positive relationship between output and prices
- b) A negative relationship between output and interest rates.
- c) A positive relationship between output and interest rates.
- d) A negative relationship between money demand and interest rates.

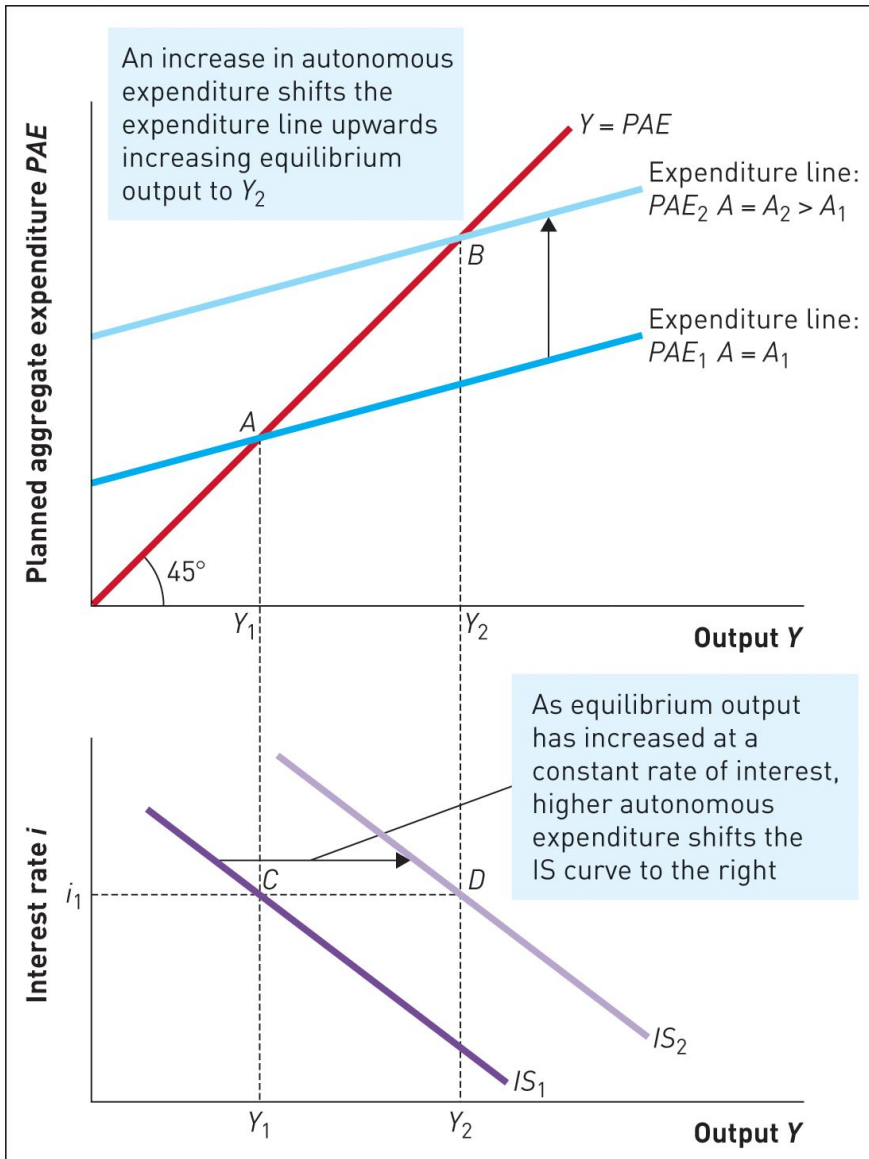
# Week 19: The IS Curve

## IS Curve Recap

- IS curve plots combinations of the rate of interest and the level of output for which the market for goods and services are in equilibrium.
- Changes in autonomous expenditures will cause the IS curve to shift.

However:

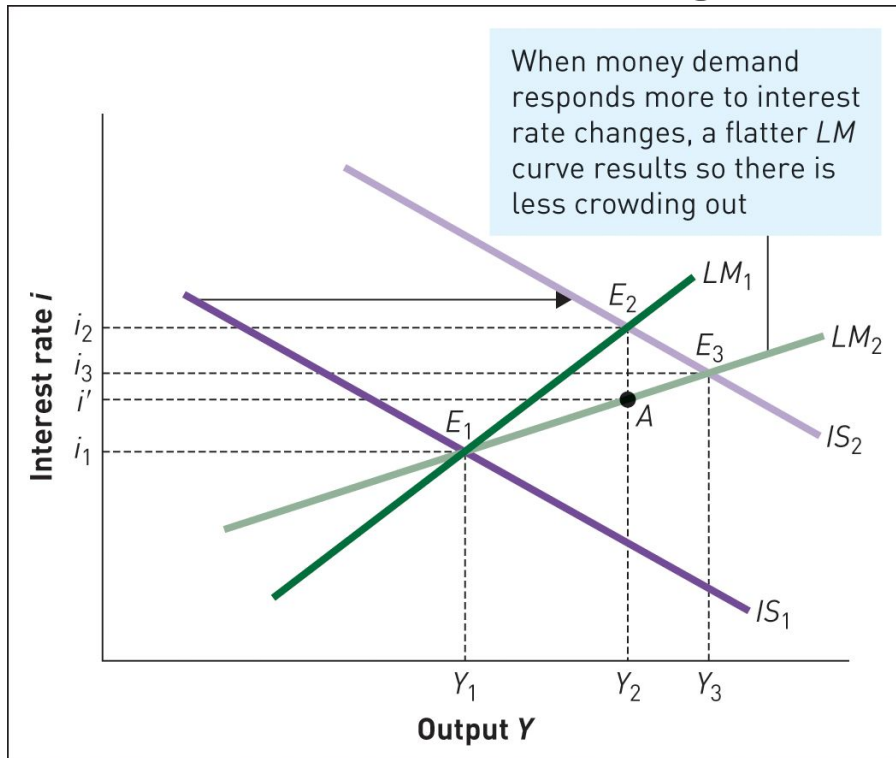
- An increase in income will increase the demand for money.
- Given the money supply will lead to an increase in the equilibrium rate of interest, which will lead to a fall in equilibrium income, we need to incorporate the LM curve.



If the demand for money becomes less responsive to changes in the rate of interest then:

- a) The LM curve becomes flatter.
- b) The IS curve becomes flatter.
- c) The LM curve becomes steeper.
- d) The IS curve becomes steeper.

# From Week 20:



The strength of the crowding-out effect depends on:

1. The responsiveness of consumption and investment to interest rate changes
2. The responsiveness of the demand for money to interest rate changes
3. The responsiveness of consumption and investment to interest rate changes  
For any given interest rate the crowding-out will be stronger the greater the resulting decline in consumption and investment.
4. The responsiveness of the demand for money to interest rate changes: The flatter (the steeper) the LM curve, the greater (the smaller) the responsiveness of the demand for money for interest changes, the weaker the crowding-out effect.

Assume consumption expenditures=2500, investment=2500, government purchases=1000, net exports=0. What is the gross domestic product (Y) and national savings (S)?

- a)  $Y=6000, S=2500$ .
- b)  $Y=6000, S=2000$ .
- c)  $Y=5000, S=1000$ .
- d) none of the above.



For an economy with a consumption function of:  $C=0.75 (Y-T)$ , where  $Y$  denotes output and  $T$  denotes taxes, what is the value of the marginal propensity to consume (MPC) and the income-expenditure multiplier (IEM) .

- a)  $MPC=0.75, IEM=6.$
- b)  $MPC=0.75, IEM=3.$
- c)  $MPC=0.75, IEM=5.$
- d)  $MPC=0.75, IEM=4.$

For an economy characterized by:  
 $C=1800+0.6(Y-T)$ ,  $I=900$ ,  $G=1500$ ,  
 $NX=100$ ,  $T=1500$  and  $Y^*=9000$ , what is  
the output gap?

- a) 9000.
- b) 8500.
- c) 500.
- d) 400.

A central bank can \_\_\_\_\_  
in order to prevent an increase in  
the equilibrium interest rate.

- a) Increase the money supply.
- b) Reduce the money supply.
- c) Keep the money supply unchanged.
- d) Central bank has no power to control the equilibrium interest rate.

# A fall in the interest rate,

- a) increases liquidity preference, as it encourages investment expenditure
- b) reduces liquidity preference, as it discourages investment expenditure
- c) reduces liquidity preference, as it encourages investment expenditure
- d) increases liquidity preference, as it discourages investment expenditure

# A rise in real income,

- a) increases liquidity preference, as it reduces saving
- b) decreases liquidity preference, as it increases saving
- c) decreases liquidity preference, as it reduces saving
- d) increases liquidity preference, as it increases saving

# A Keynesian 'fixed price' macroeconomic model assumes:

- a) inflation is 'always a monetary phenomenon'
- b) monetary expansion raises bond prices only
- c) inflation is 'demand pull'
- d) 'cost push' inflation is only possible in a recession

## ISLM

## Hicks-Hansen Model



Sir John Hicks  
(1904-1989)



Alvin Hansen  
(1887-1975)

*e.g., money financed  
fiscal expansion ... full  
employment without  
inflation!*

Keynesian ‘fixed price’ models assume:

monetary expansion raises bonds only

inflation is ‘cost push’

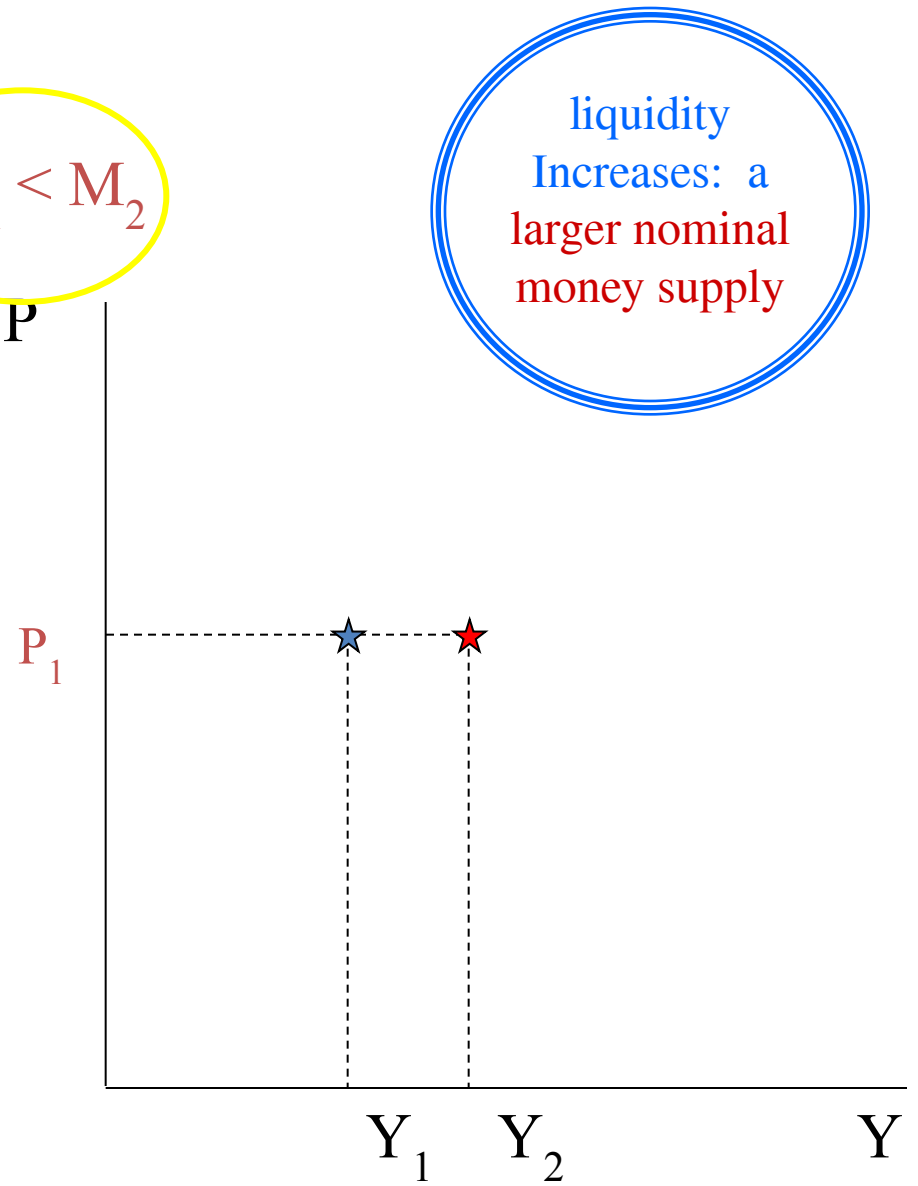
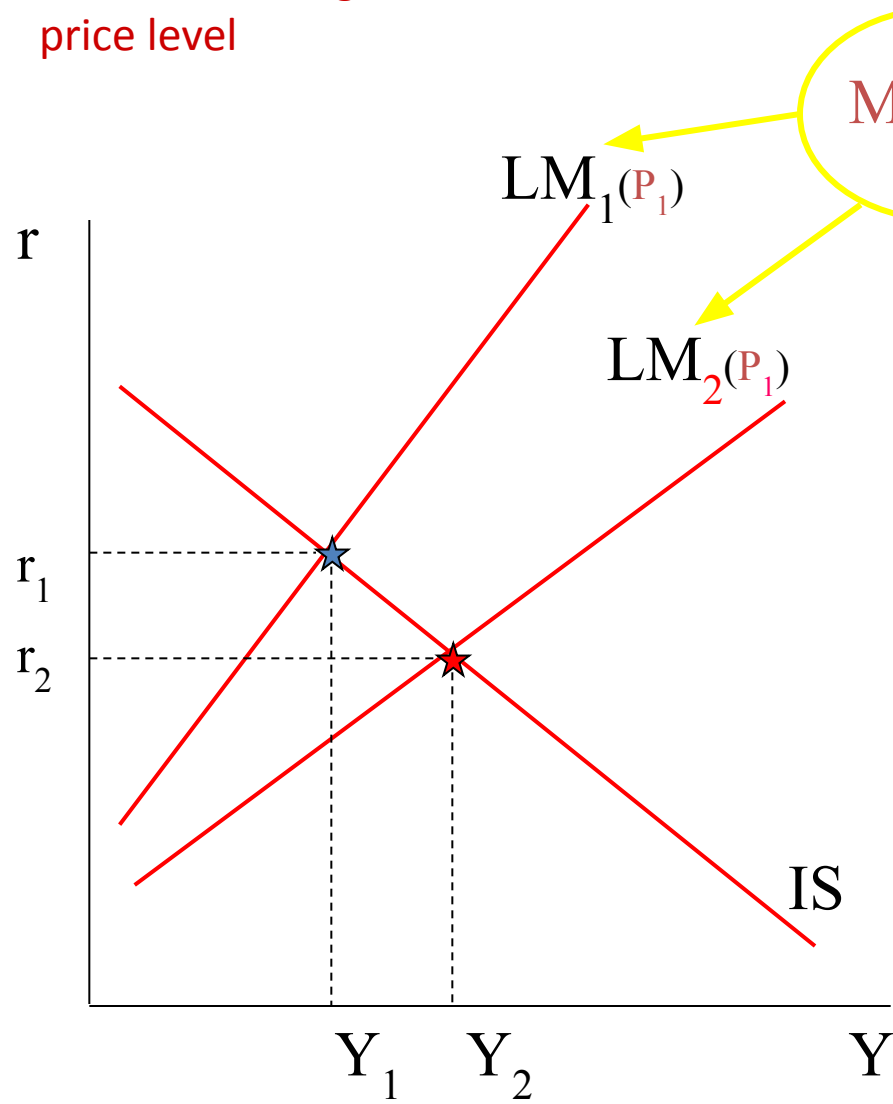
‘cost push’ inflation is only possible at full employment

To derive aggregate demand from ISLM, it is necessary to relax the assumption of

- a) money illusion
- b) economic recession
- c) fixed prices
- d) government intervention

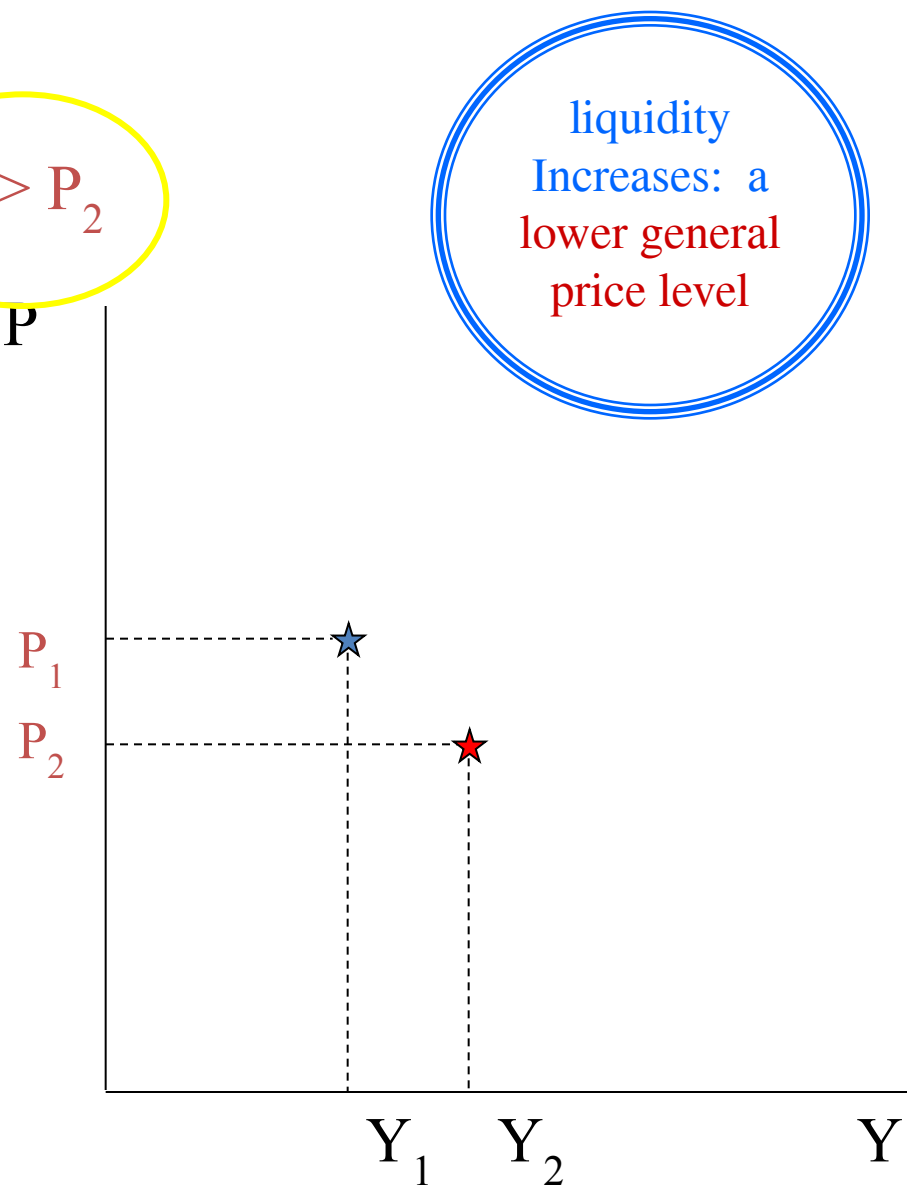
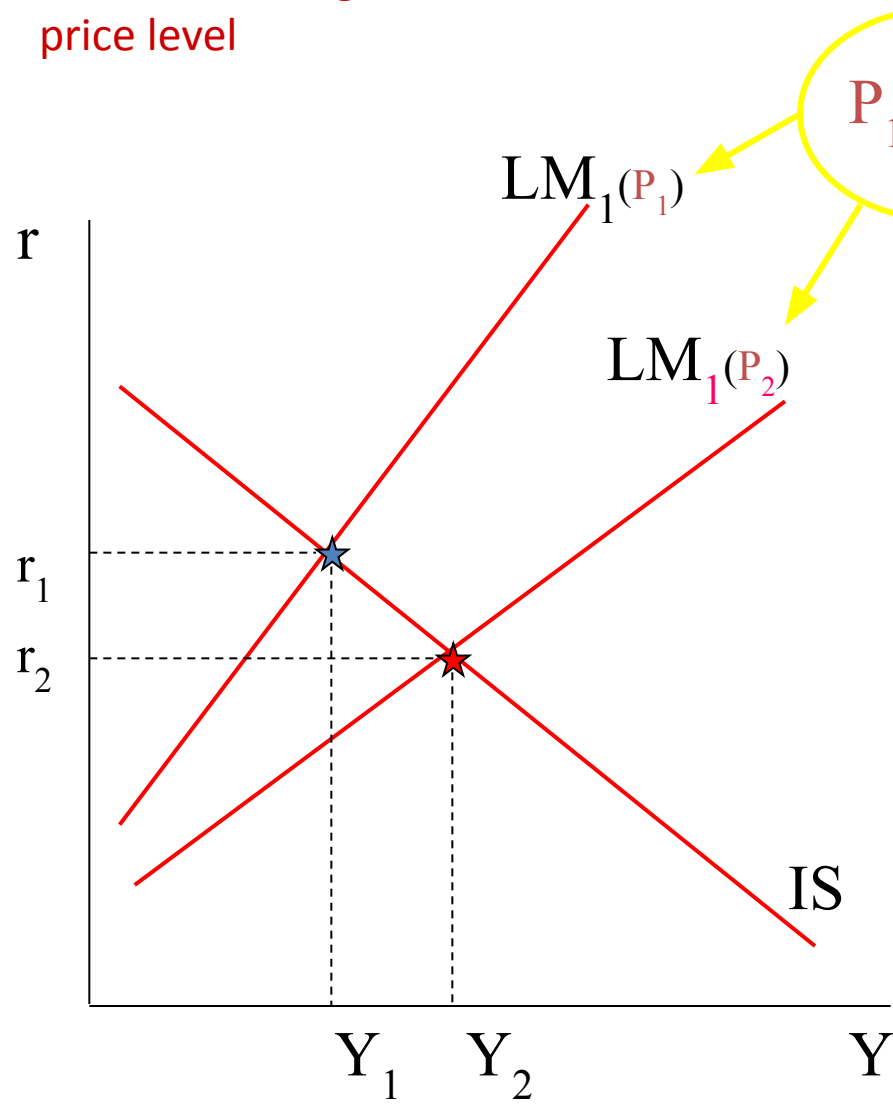


From Week 21 Slidesc  
Accommodating a variable  
price level



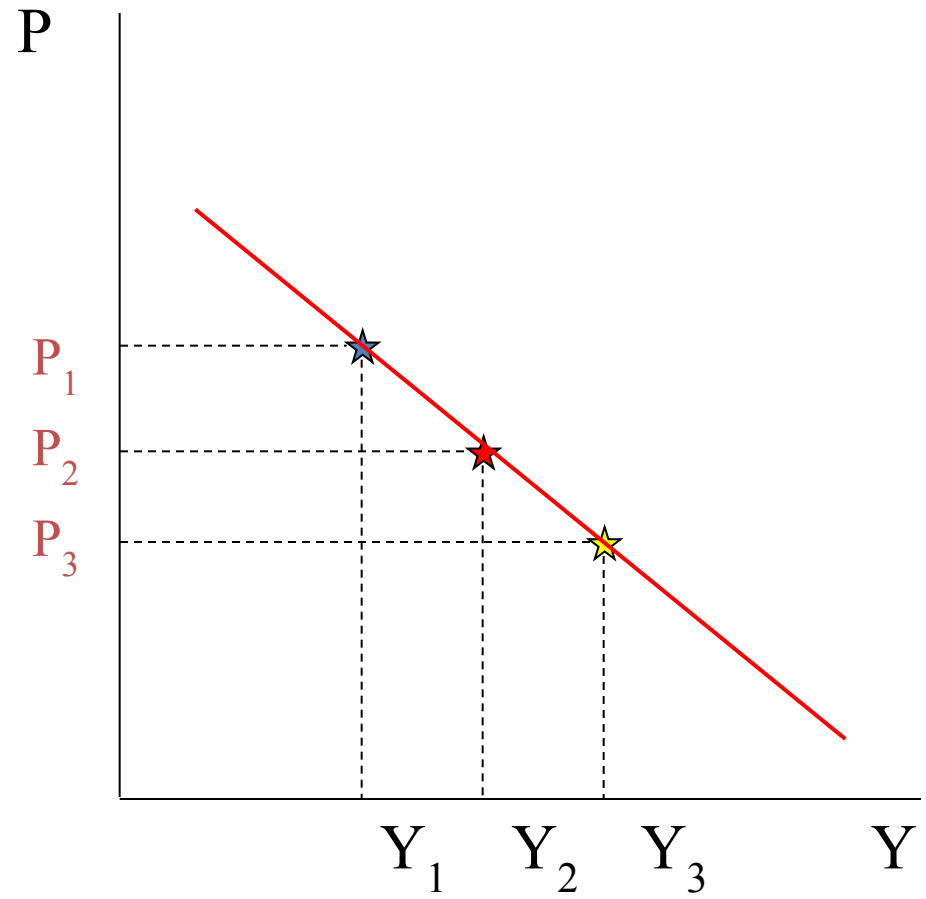
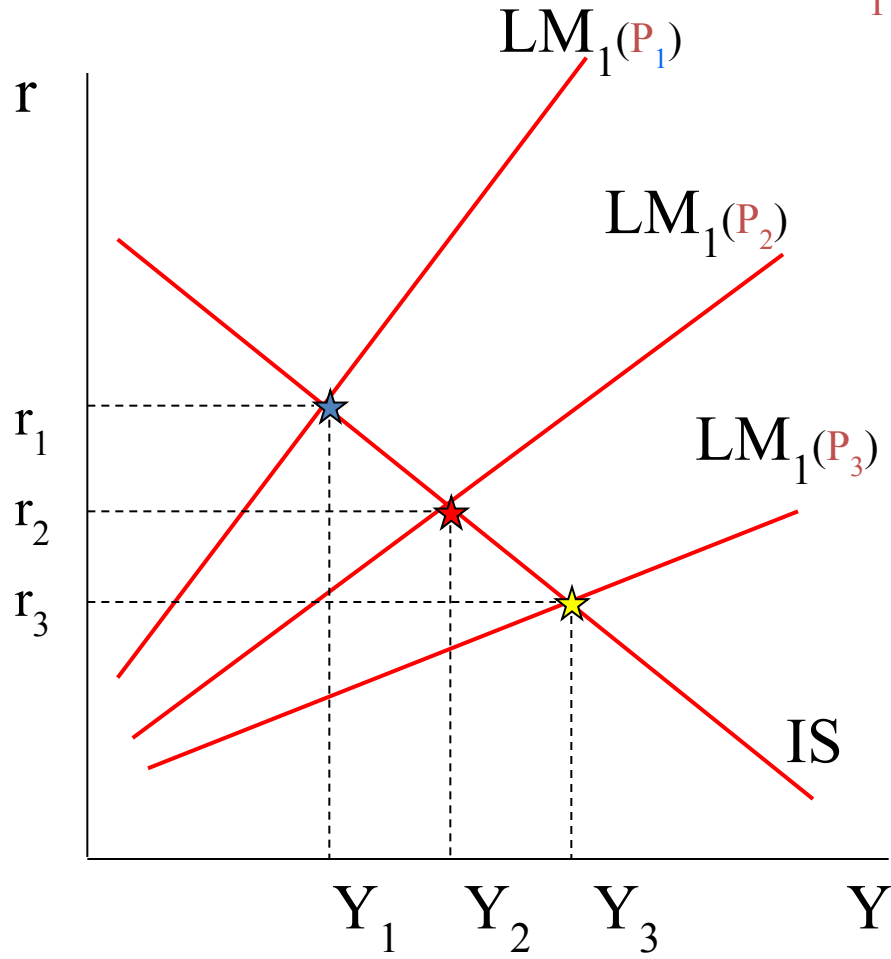
liquidity  
Increases: a  
larger nominal  
money supply

From Week 21 Slides  
Accommodating a variable  
price level



From Week 21 Slides  
Accommodating a variable  
price level

$$P_1 > P_2 > P_3$$



The aggregate supply curve is drawn under the assumption that

- a) prices are constant
- b) employment is constant
- c) real wages are constant
- d) money wages are constant

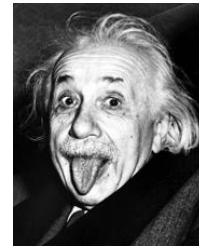
The exogenous force that drives the original Phillips curve is

- a) the business cycle
- b) monetary policy
- c) trade unions
- d) inflation

## **Job search and the reservation wage**

**‘In Phillips’ original treatment, variations in unemployment lead to variations in the rate of inflation. In Friedman’s view such a relationship is not only transient; the direction of causation flows the other way. In his analysis, unanticipated variations in the rate of inflation cause fluctuations in the level of unemployment (in the short run).**

**Burton, J., 1982, ‘The Varieties of Monetarism and their Policy Implications’, *The Three Banks Review*, pp. 13-31**



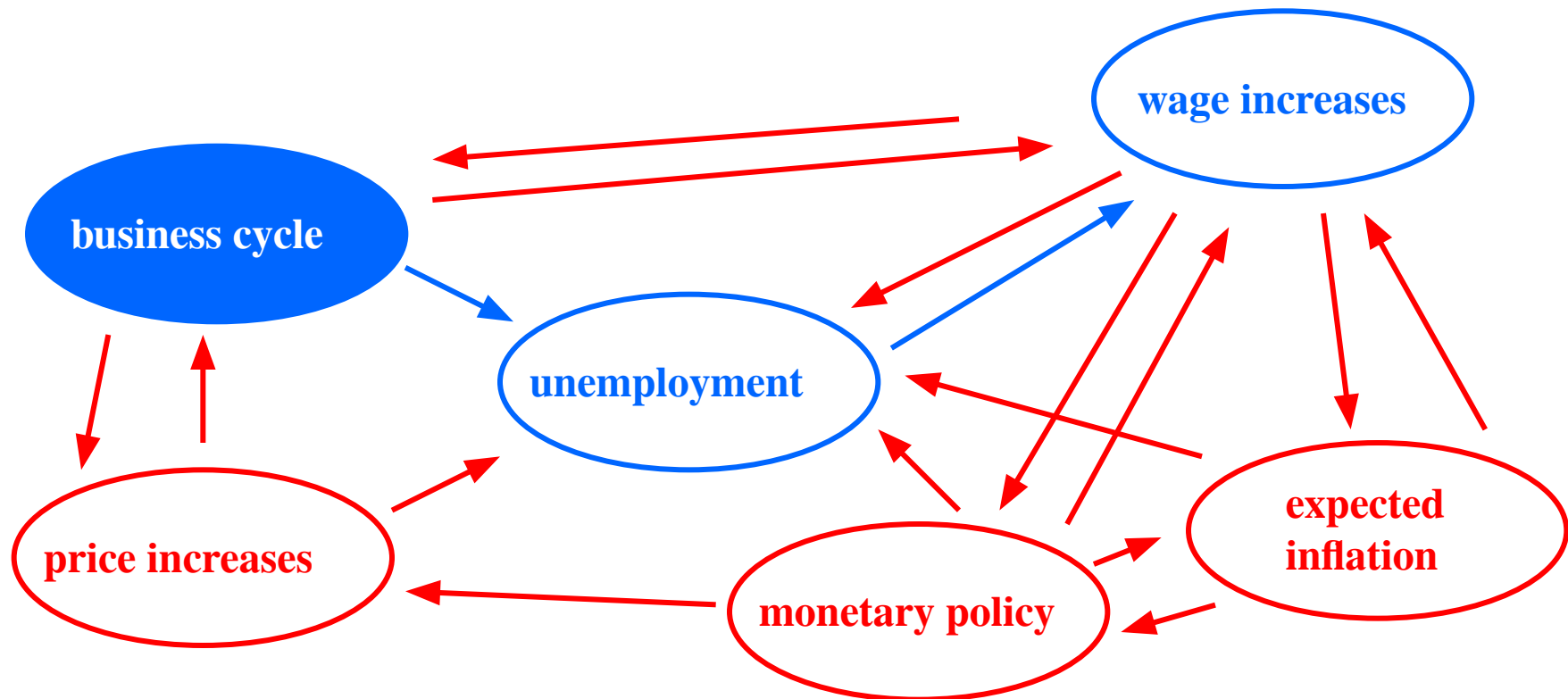
**‘Not everything that can be counted counts, and not everything that counts can be counted.’**

**(Albert Einstein)**

## Note bene:

### statistical correlations

- only interesting when there is a plausible causal explanation
- do not establish causal relationships



# Monetarism vs Keynesianism

## **A.W Phillip: original hypothesis**

variations in the business cycle *cause* wage variations

## **Friedman/Phelps: new hypothesis**

variations in monetary policy *cause* business cycle variations



The exogenous force that drives the price-expectations augmented Phillips curve is

- a) the business cycle
- b) monetary policy
- c) trade unions
- d) inflation

## **Job search and the reservation wage**

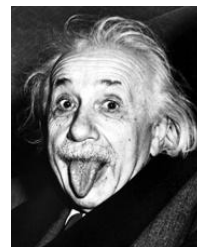
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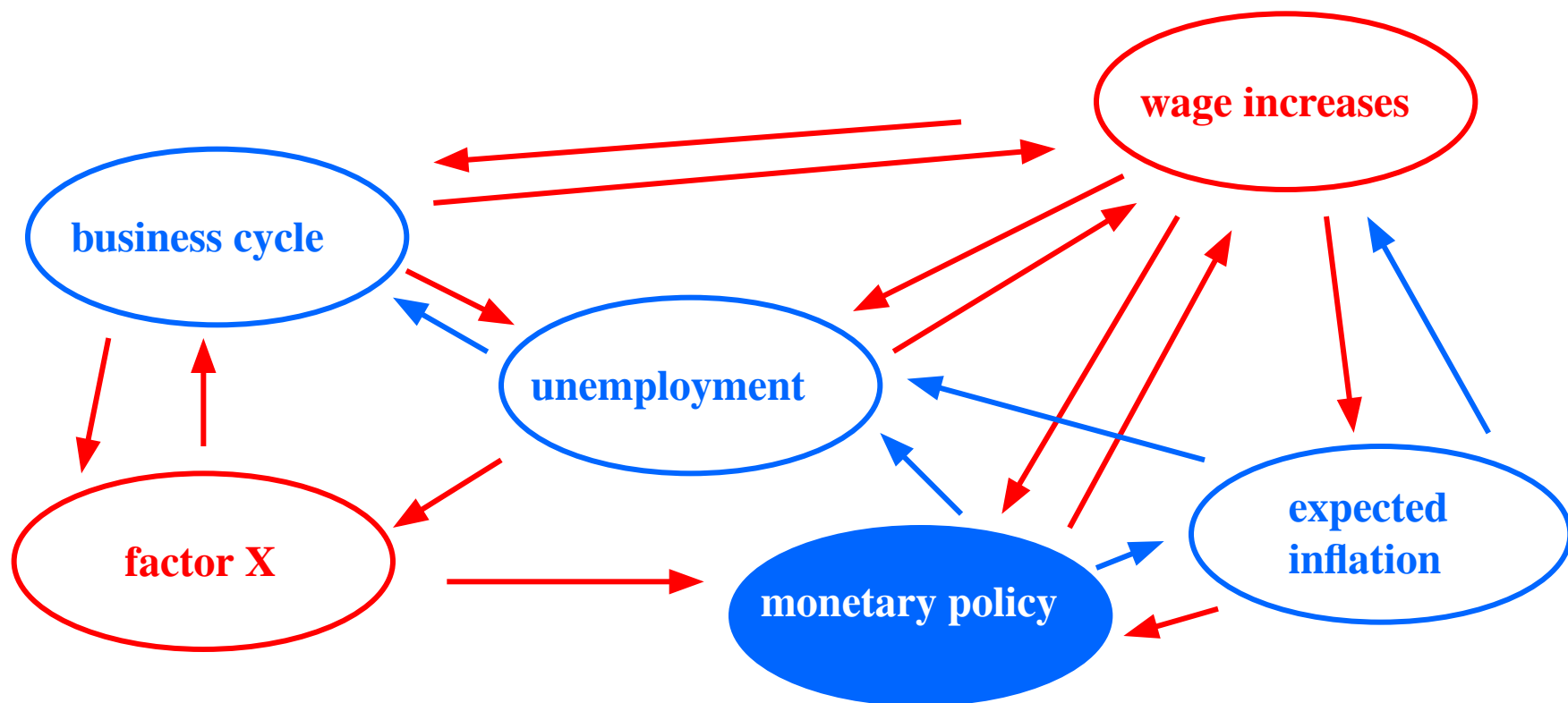
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# Monetarism vs Keynesianism

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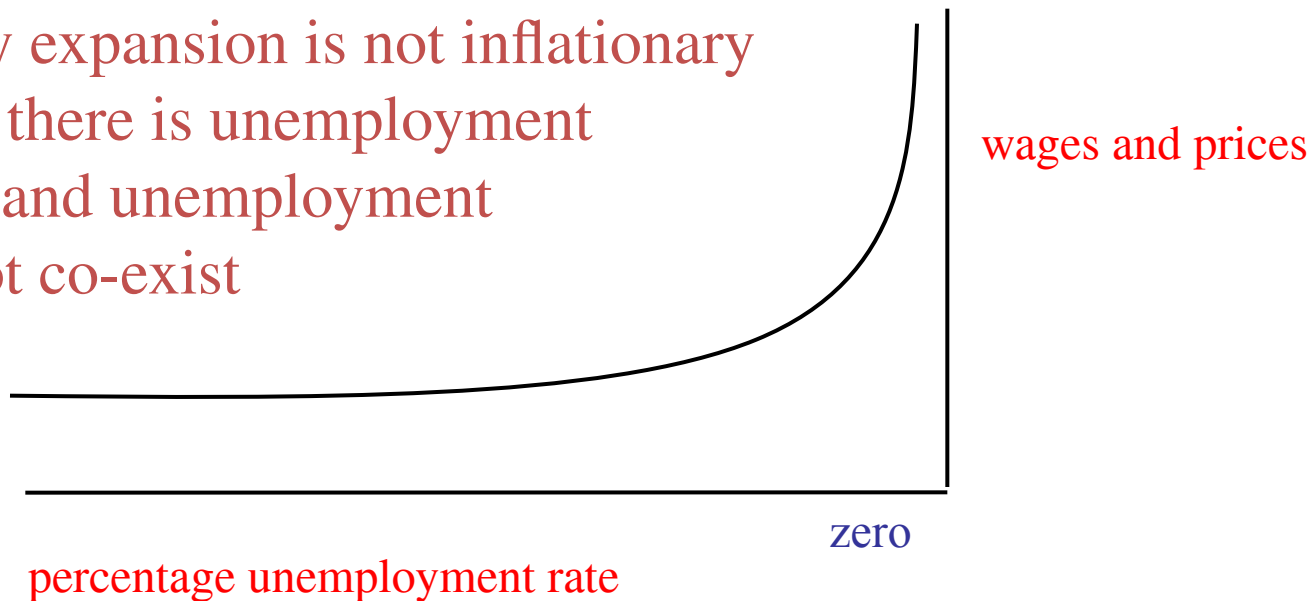
variations in monetary policy *cause* business cycle variations

# Keynesian cost-push inflation occurs

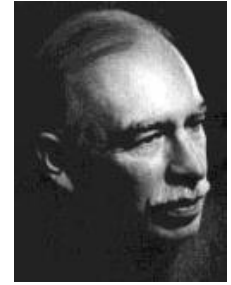
- a) when trade unions go on strike
- b) when money supply exceeds money demand
- c) as full employment is approached
- d) with a deficit in the trade balance

Keynes, J.M. (1936) 'an increase in the quantity of money will have *no effect whatever on prices, so long as there is any unemployment*, ... whilst as soon as full employment is reached, it will thenceforward be ... the wage-unit and prices which will increase' (*The General Theory*, p. 295)

- monetary expansion is not inflationary when there is unemployment
- inflation and unemployment cannot co-exist



# Monetarism vs Keynesianism



**Keynes, J.M. (1936)**

*Cost push: inflation is caused by rising unit costs as full employment is approached*

**Friedman, M. (1956)**

*Demand pull: 'inflation is always and everywhere a monetary phenomenon'*



*.. if the amount of money in circulation becomes excessive, expenditure increases and this increased demand for goods and services drives up prices*

# Classical demand-pull inflation occurs

- a) when trade unions go on strike
- b) when money supply exceeds money demand
- c) as full employment is approached
- d) with a deficit in the trade balance



# Monetarism vs Keynesianism

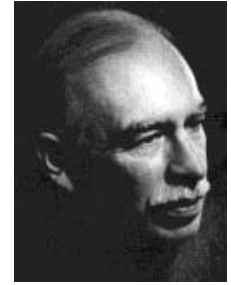
**Keynes, J.M. (1936)**

*Cost push: inflation is caused by rising unit costs as full employment is approached*

**Friedman, M. (1956)**

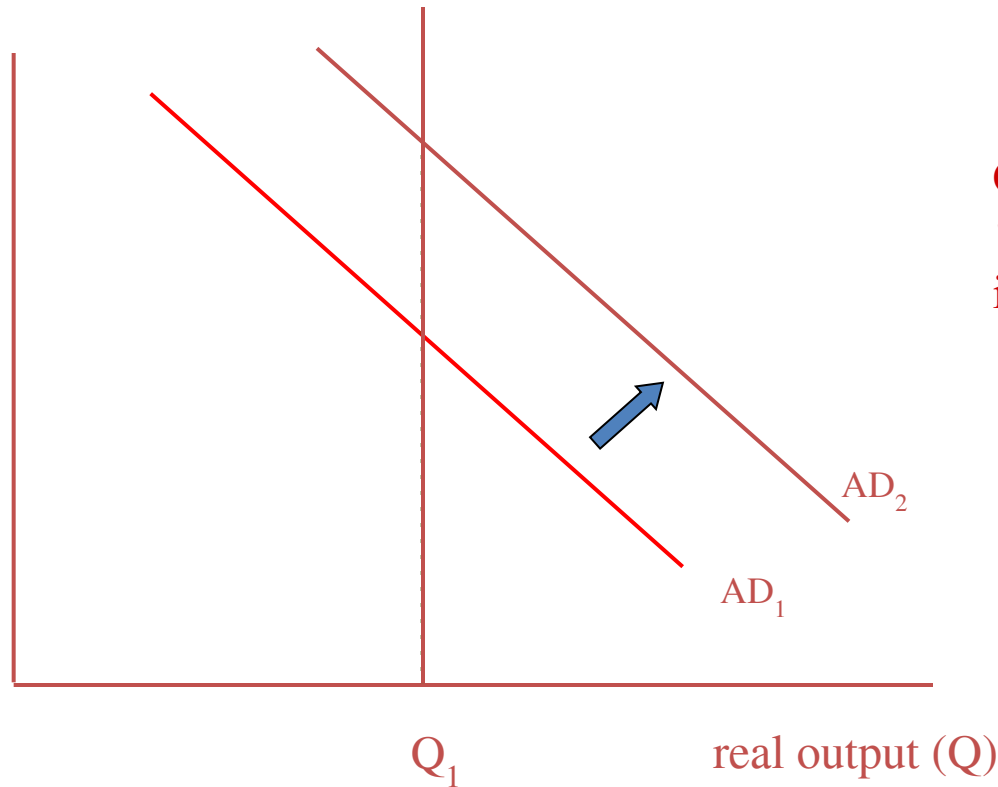
*Demand pull: 'inflation is always and everywhere a monetary phenomenon'*

*.. if the amount of money in circulation becomes excessive, expenditure increases and this increased demand for goods and services drives up prices*



# Classical Demand Pull Inflation

the price level (P)



Classical:  
'demand pull'  
inflation

With monetary expansion (to finance new state spending) there is  
an *excess supply of money*  
an *excess demand for goods and services*  
demand pull inflation

# Monetarism argues for a stable relationship between

- a) real balances and the transactions demand for money
- b) inflation and unemployment
- c) nominal money supply and nominal income
- d) government expenditure and the general level of prices

Within the UK account of international payments, the 'balance for official financing' shows the level of official currency transactions that are necessary to achieve

- a) a surplus on capital account
- b) a capital account equilibrium
- c) a fixed exchange rate target
- d) sovereign debt equilibrium

## Balance of International Payments Accounts

*The general structure:*

$$\text{BoP} \equiv X - M + \text{IOU (loan/credit)} \equiv 0$$

$$\text{BoP} \equiv \text{current account} + \text{capital account} \equiv 0$$

$$\text{BoP} \equiv X - M + \text{'invisibles'} + \Delta\text{LT} + \Delta\text{ST} + \Delta\text{forex} \equiv 0$$

$$\text{BoP} \equiv \{ \text{balance for official financing} \} + \Delta\text{forex} \equiv 0$$

*(exports of gold  
and/or forex to  
support £)*

*balance for official financing: the amount taken from (or absorbed by) official forex reserves in order to stabilise the international value of domestic currency without support for £ depreciates with commensurate adjustments to foreign price conversions*

With increased saving and a fall in the rate of interest, there is

- a) relatively greater incentive to long-term real capital investment
- b) relatively greater incentive to short-term real capital investment
- c) a tendency for the prices of consumer goods to rise
- d) a tendency for the prices of consumer goods to fall

# Last Class!

- Good luck on the Final Exam.
- Have a great summer.