# [MACROECONOMICS]

**United States 2001 recession and policy measures using the IS-LM model.**


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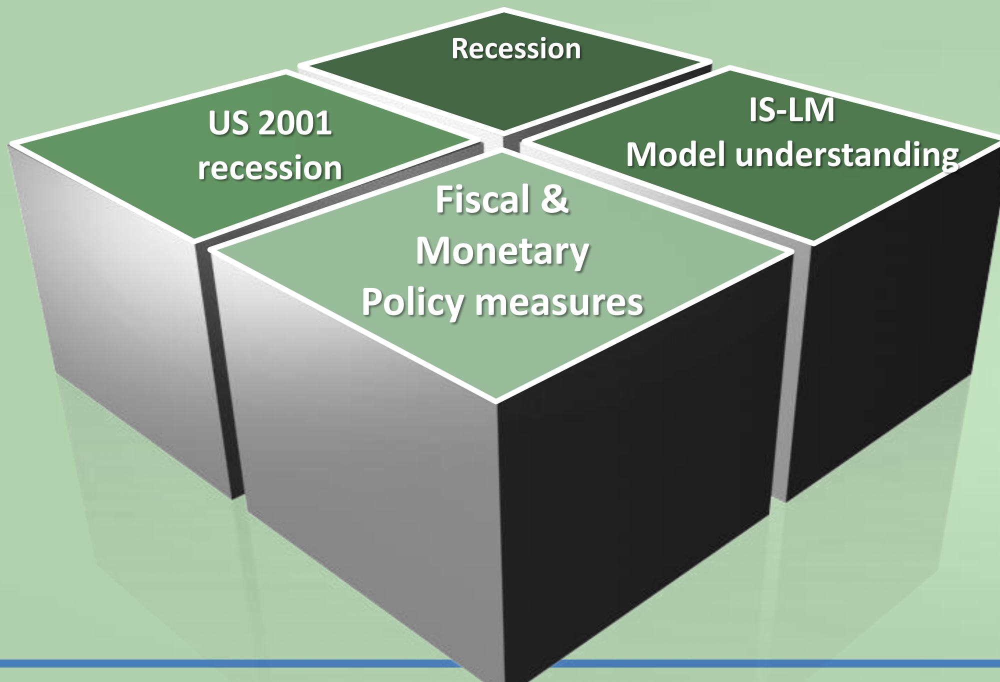
# AGENDA

**Recession** - defined

The **US 2001 recession**

Understanding the **IS-LM Model**

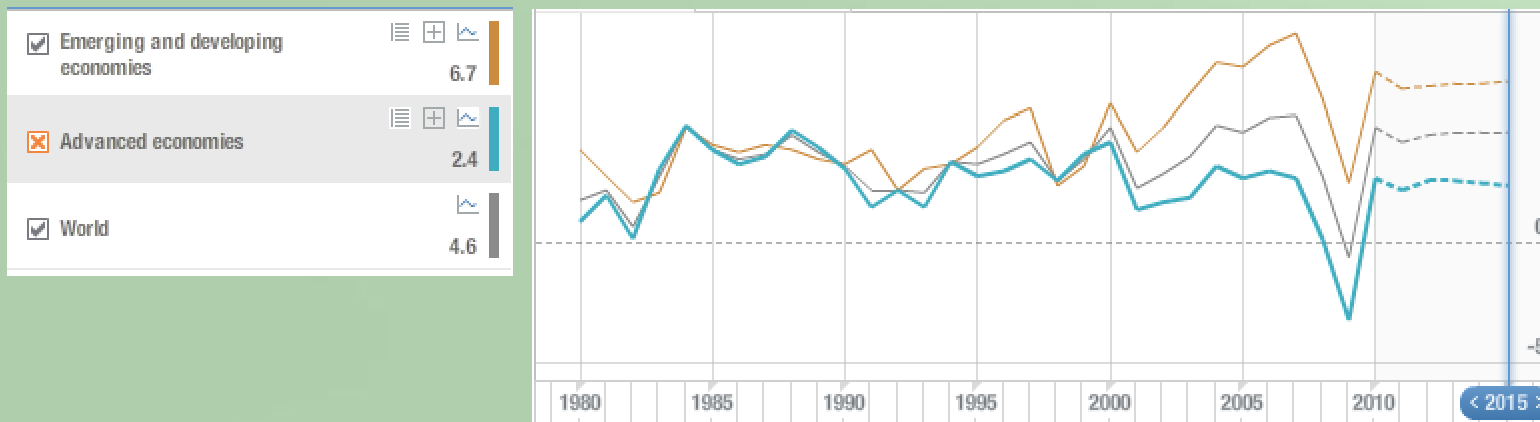
Application of the model – **Fiscal and Monetary Policy Measures**



# Recession Defined

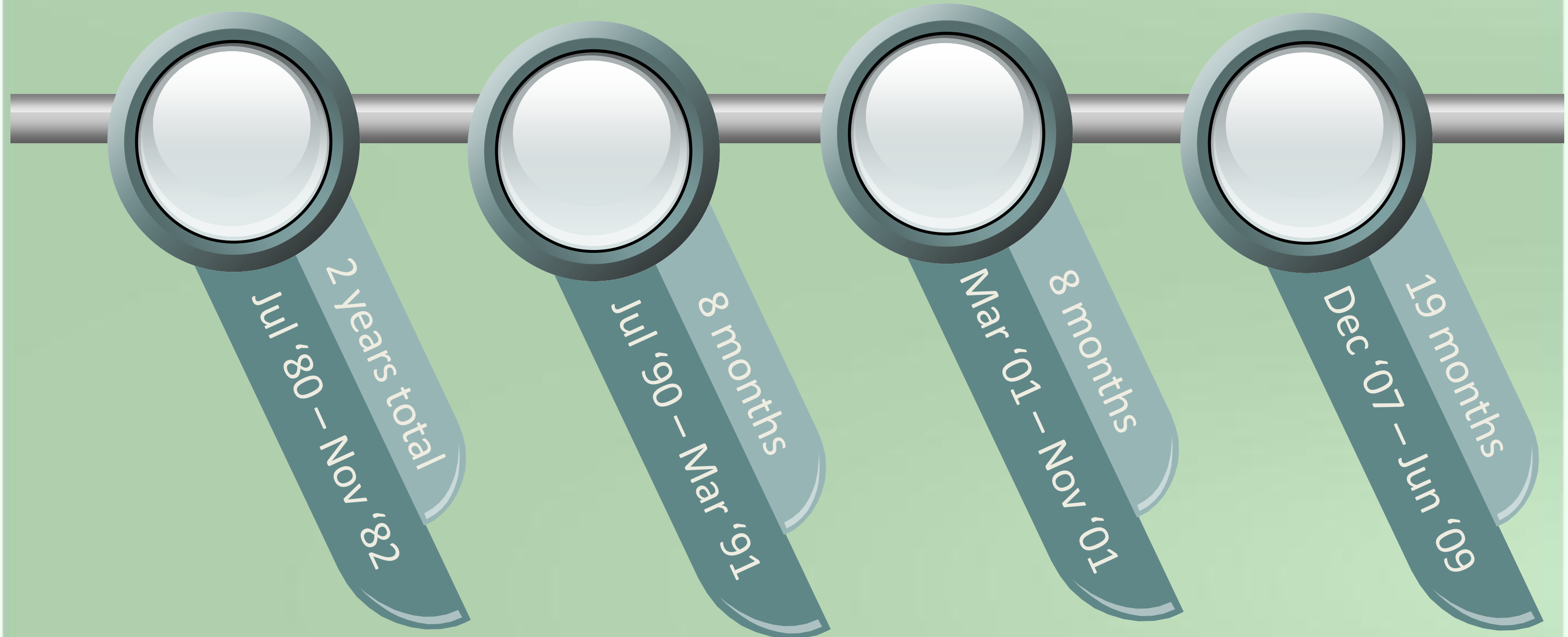
In macroeconomics, a recession is a decline in a country's gross domestic product(GDP), or negative real economic growth, for two or more successive quarters of a year

# Current Contribution of US



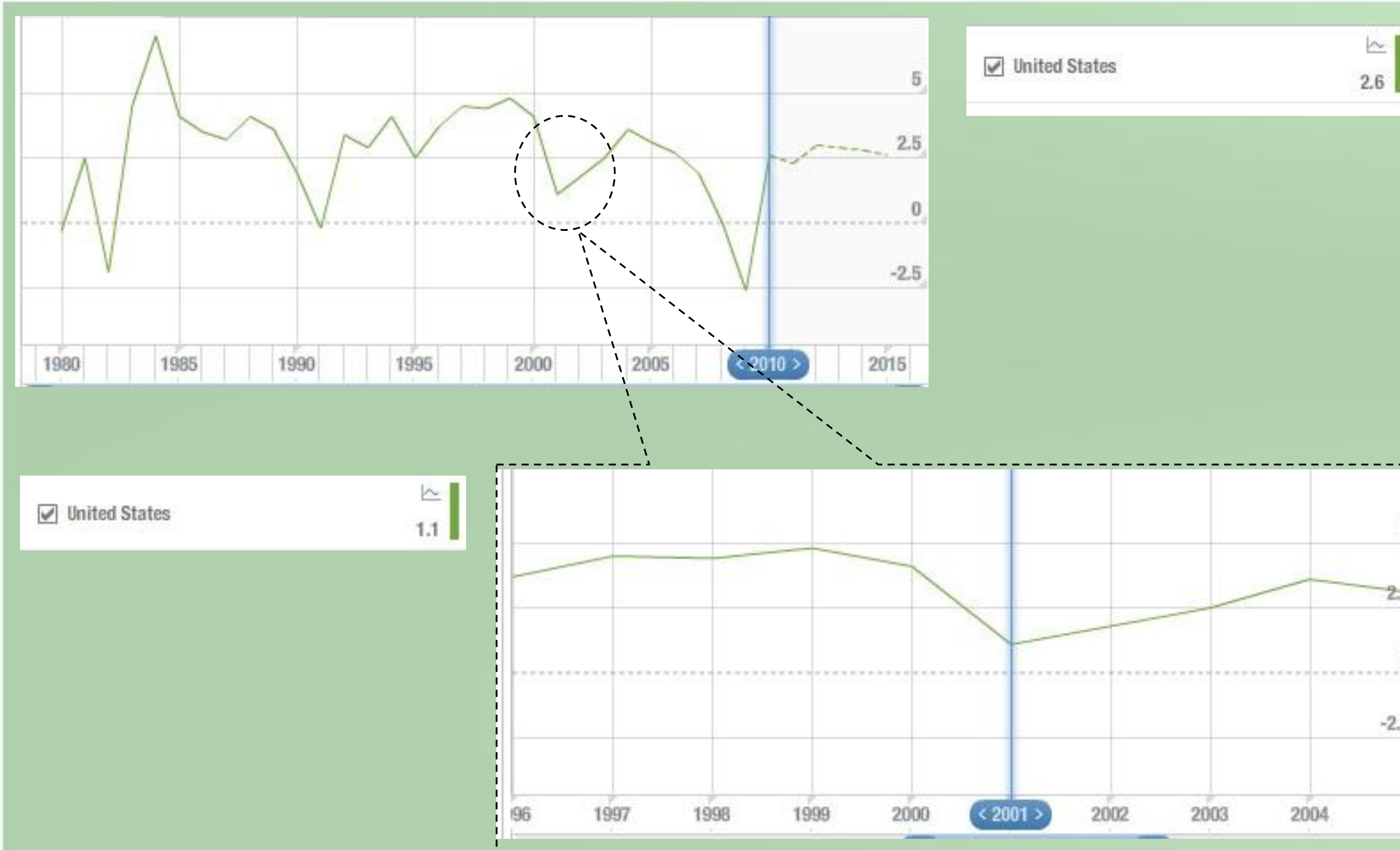


# History



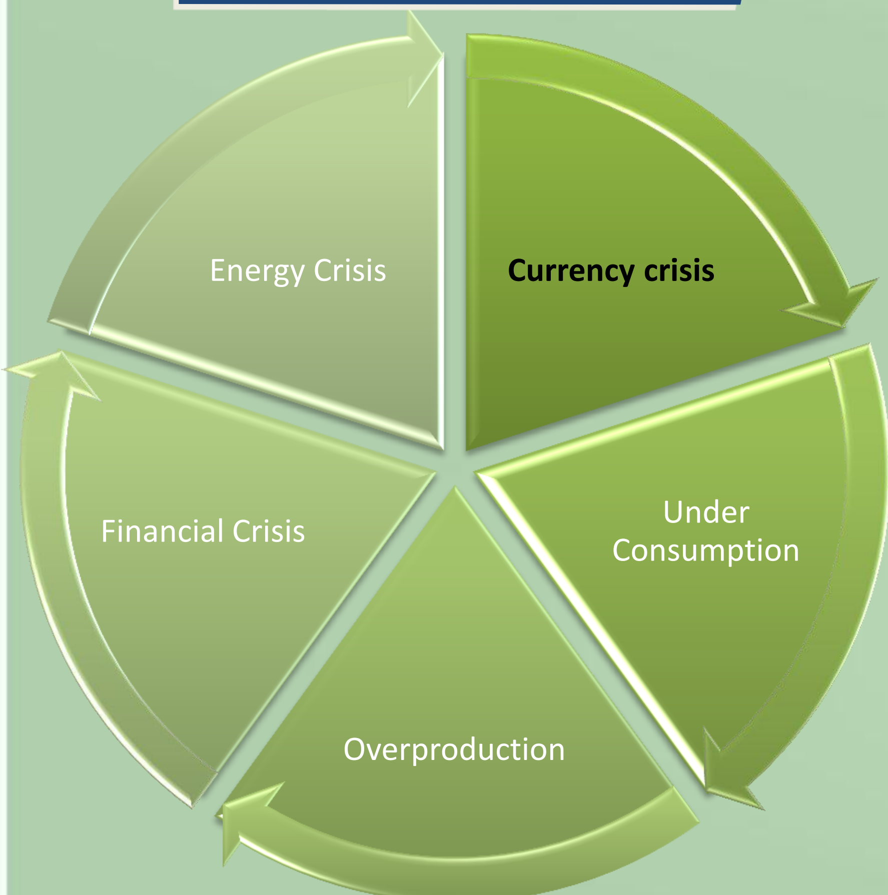
Jul '80 – Nov '82
2 years total
Jul '90 – Mar '91
8 months
Mar '01 – Nov '01
8 months
Dec '07 – Jun '09
19 months

# History


United States
2.6
5
2.5
0
-2.5
1980
1985
1990
1995
2000
2005
2010
2015
United States
1.1
96
1997
1998
1999
2000
2001
2002
2003
2004

# Causes of Recessions

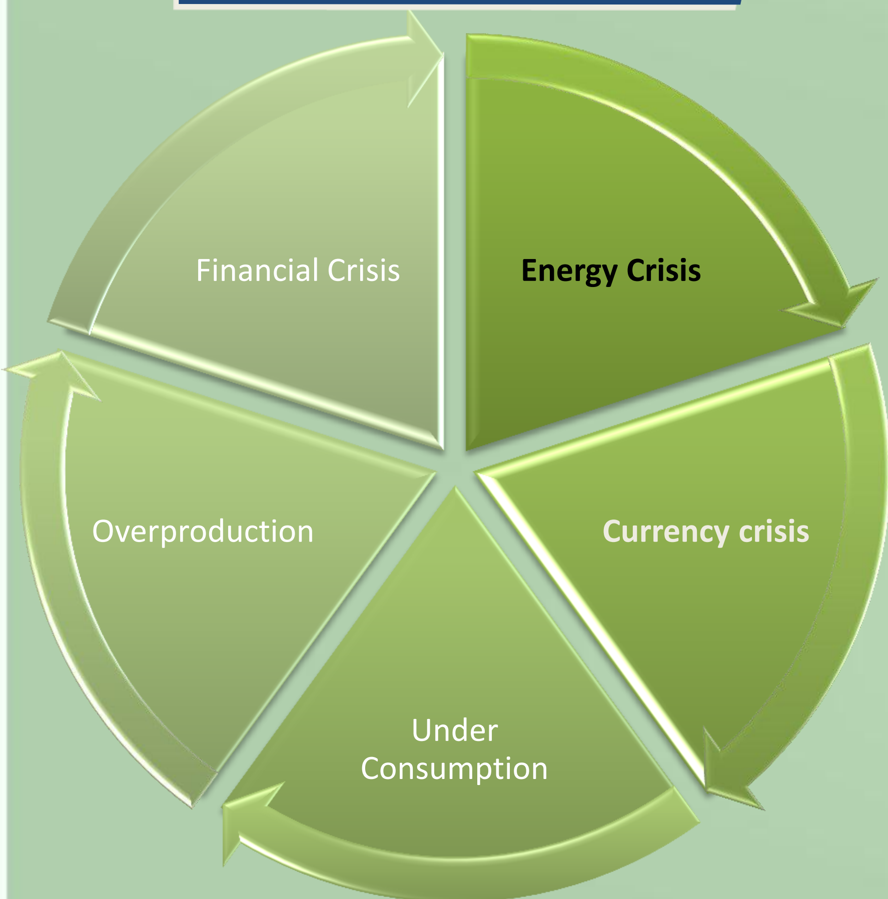
Currency Crisis




- A **currency crisis**, which is also called a **balance-of-payments crisis,** occurs when the value of a currency changes quickly, undermining its ability to serve as a medium of exchange or a store of value.
- It is a type of financial crisis and often associated with a real economic crisis.
- Asian crisis of 1997

# Causes of Recessions

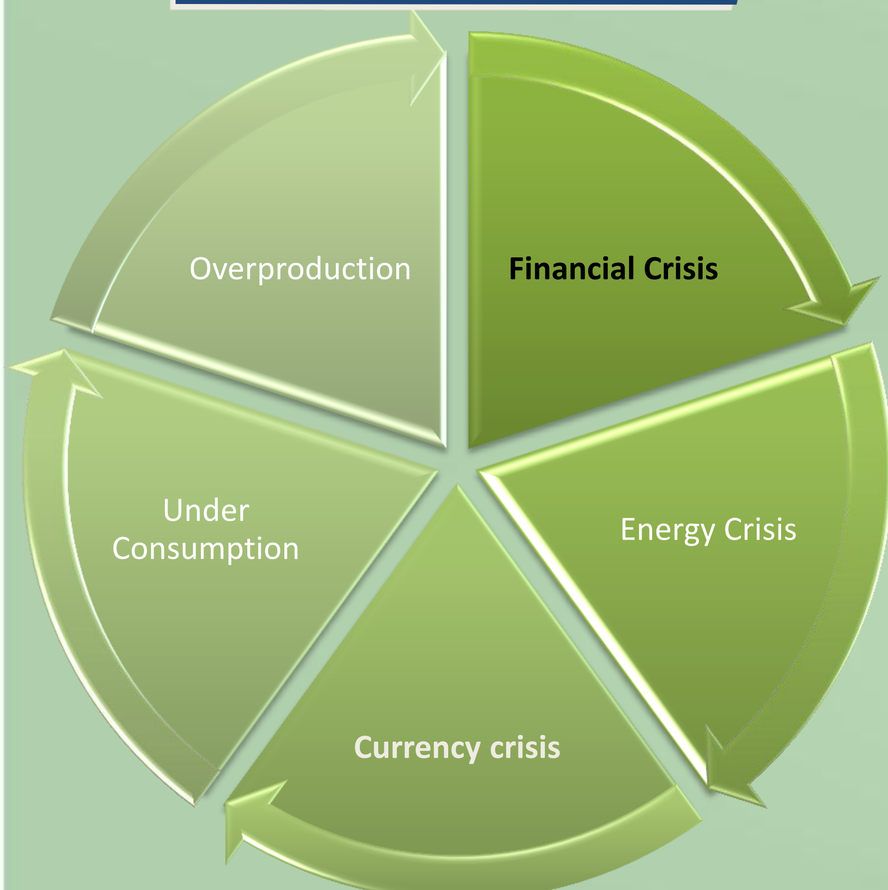
Energy Crisis




- An **energy crisis**, is any great bottleneck in the supply of energy resources to economy. It usually refers to the shortage of oil and additionally to electricity or other natural resources.
- An energy crisis may be referred to as an **oil crisis, petroleum crisis, energy shortage, electricity shortage or electricity crisis**
- 1973 oil crisis

# Causes of Recessions

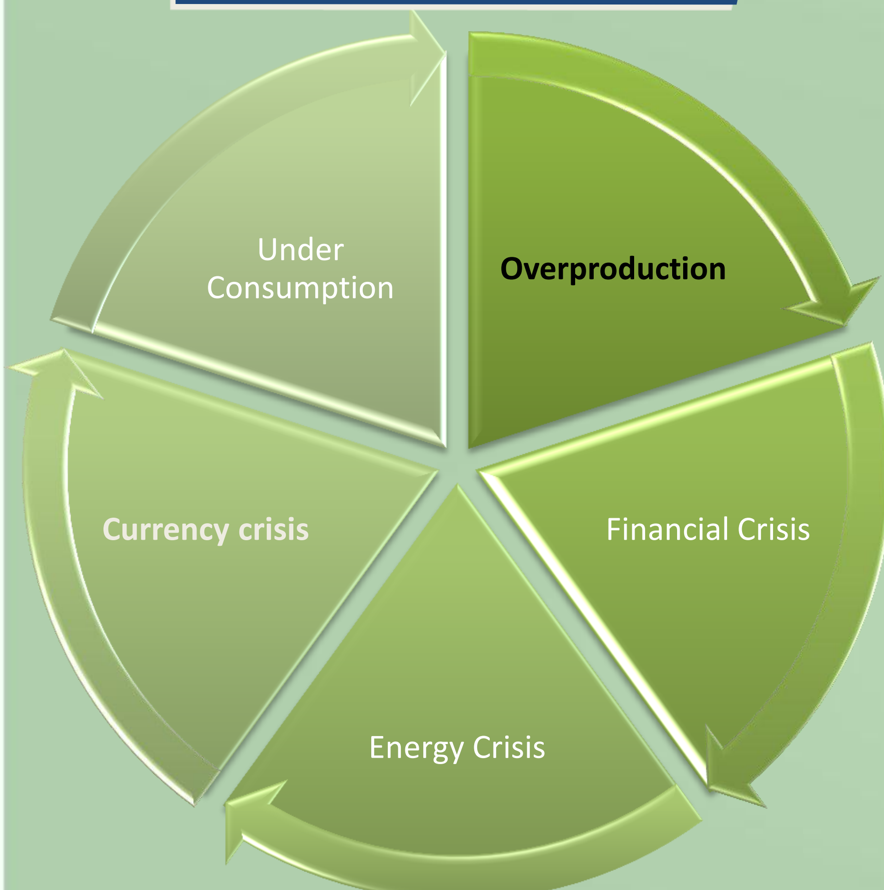
Financial Crisis




- The term **financial crisis** is applied broadly to a variety of situations in which some financial institutions or assets suddenly lose a large part of their value.
- Subprime crisis of 2007

# Causes of Recessions

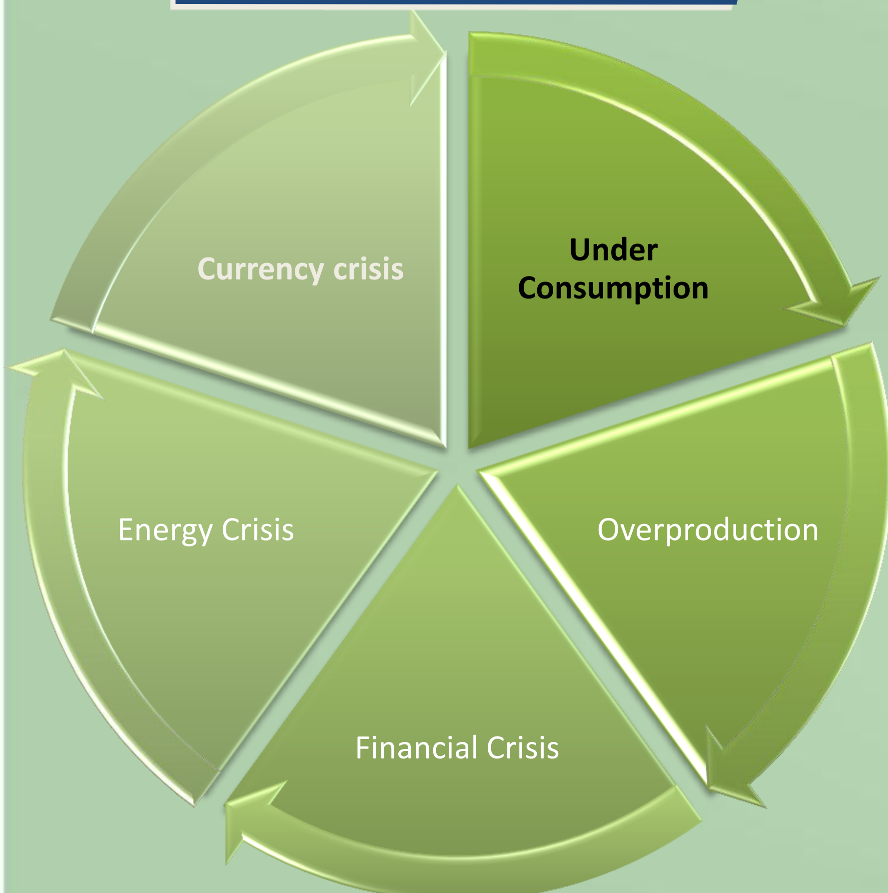
Overproduction




- In economics, **overproduction** refers to excess of supply over demand of products being offered to the market.
- This leads to lower prices and/or unsold goods
- Canadian crisis of 1920s

# Causes of Recessions

## Under consumption

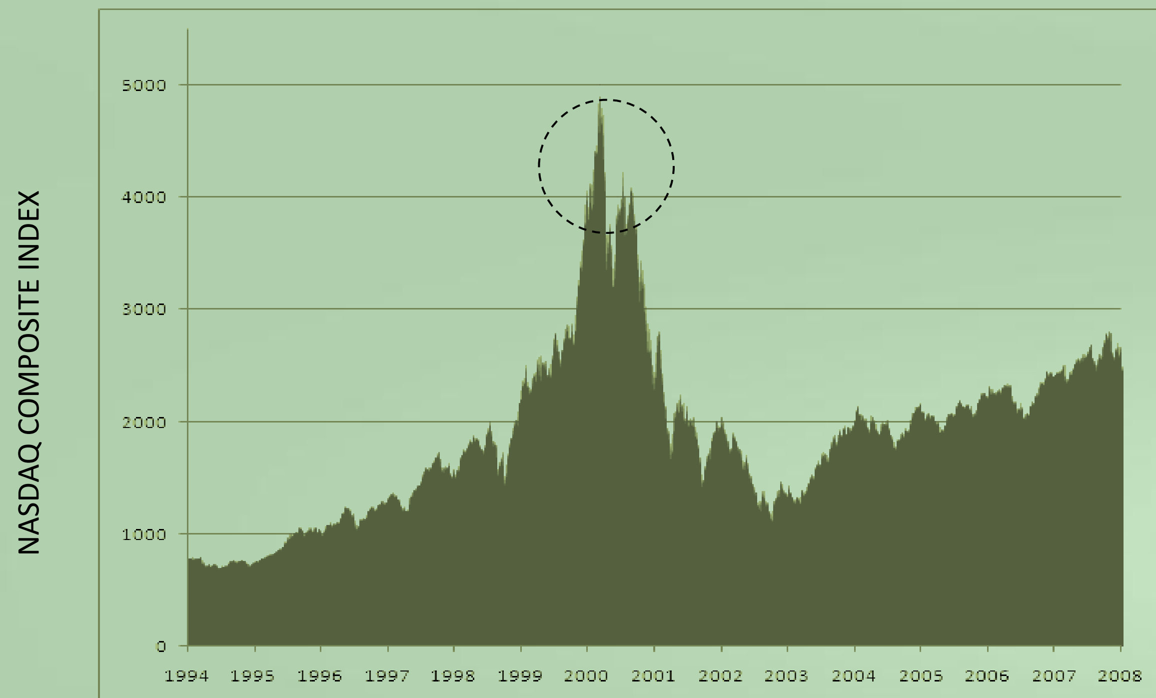



- In **under consumption,** recessions and stagnation arise due to inadequate consumer demand relative to the amount produced
- 1930s US crisis

# US ECONOMIC RECESSION 2001

What led to it??

Y2K SCARE | THE DOT COM BUBBLE



# US ECONOMIC RECESSION 2001

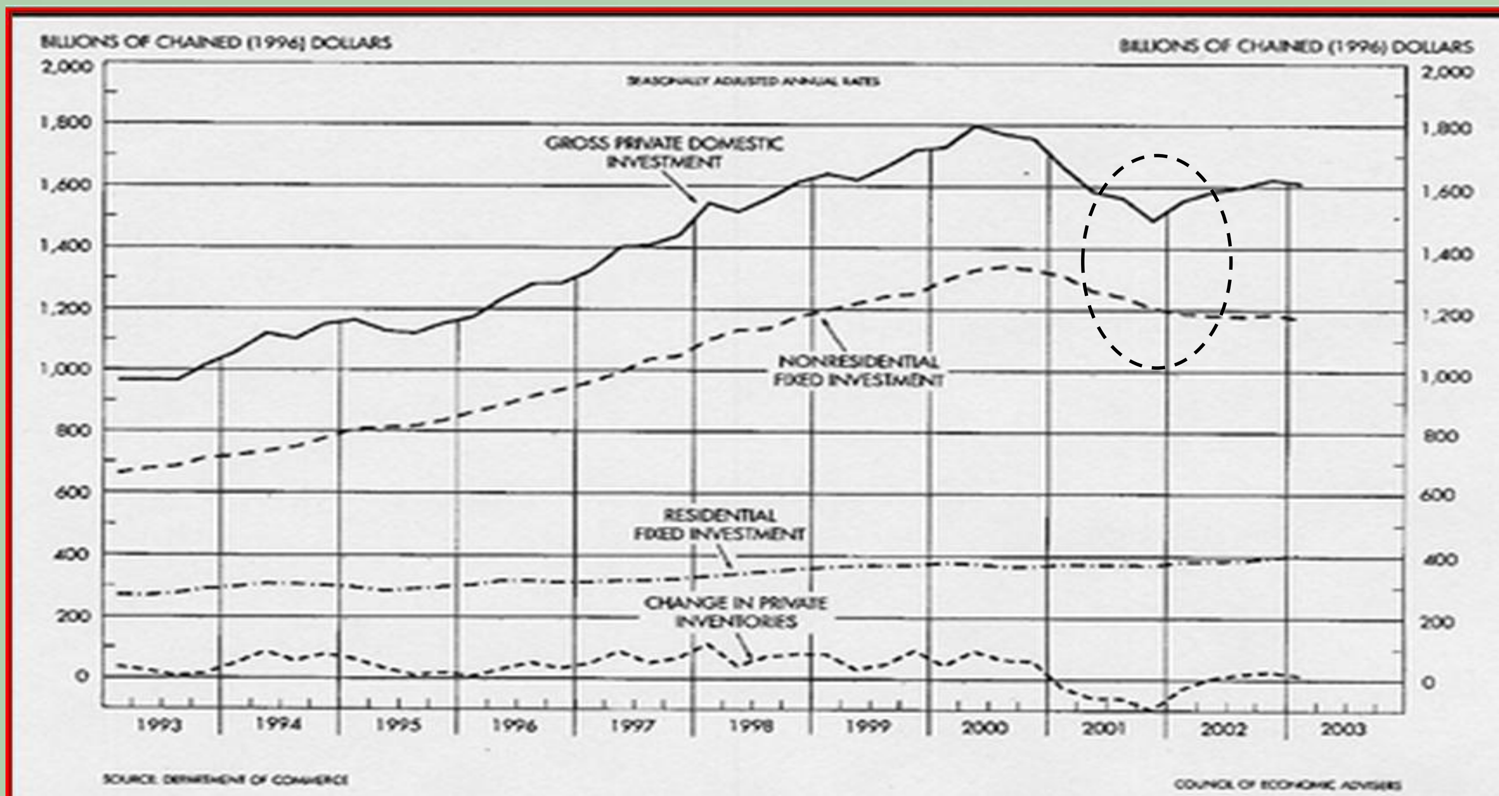
## Y2K SCARE!...THE DOT COM BUBBLE

Steep rise in the stock market in 2000 followed by a steep decline leading to a recessionary impact

High interest rate by the Federal Reserve limiting liquidity available for investments and procuring cheap business loans and mortgages

# US ECONOMIC RECESSION 2001

High Deflationary Impact leading to decline in Investments



# US ECONOMIC RECESSION 2001

CORPORATE SCANDALS

What led to it?

- The company which was No 7 on the Fortune 500's list worth more than 60 billion $ filed for bankruptcy in December 2001

# US ECONOMIC RECESSION 2001

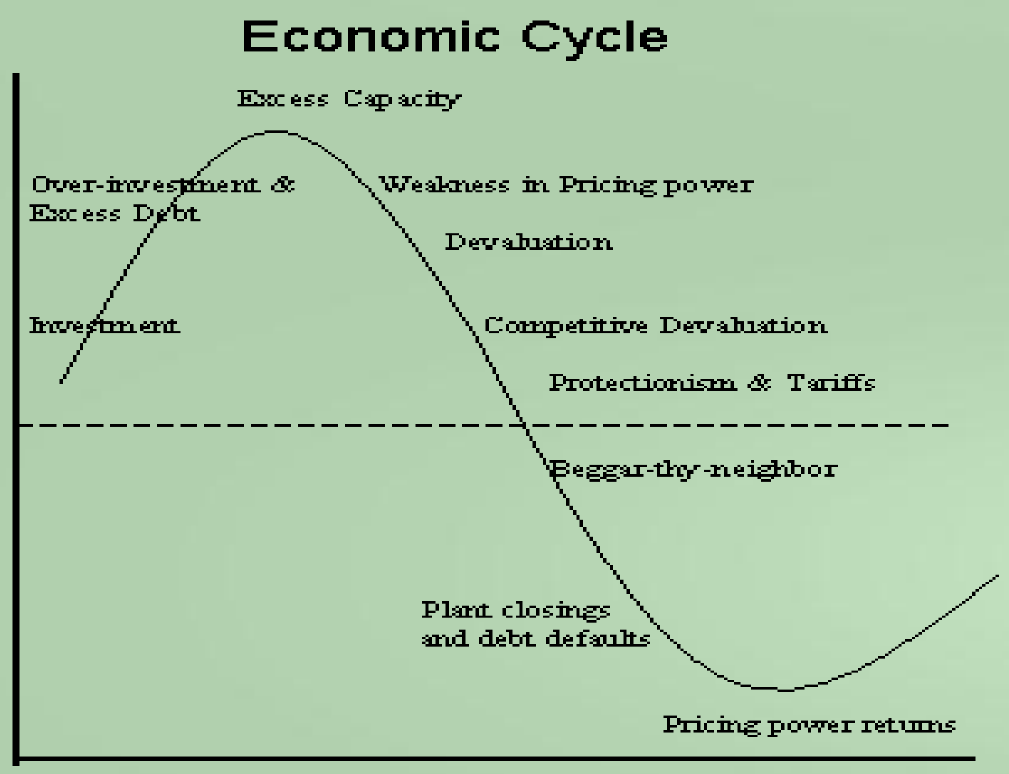
What led to it??

9/11

# US ECONOMIC RECESSION 2001

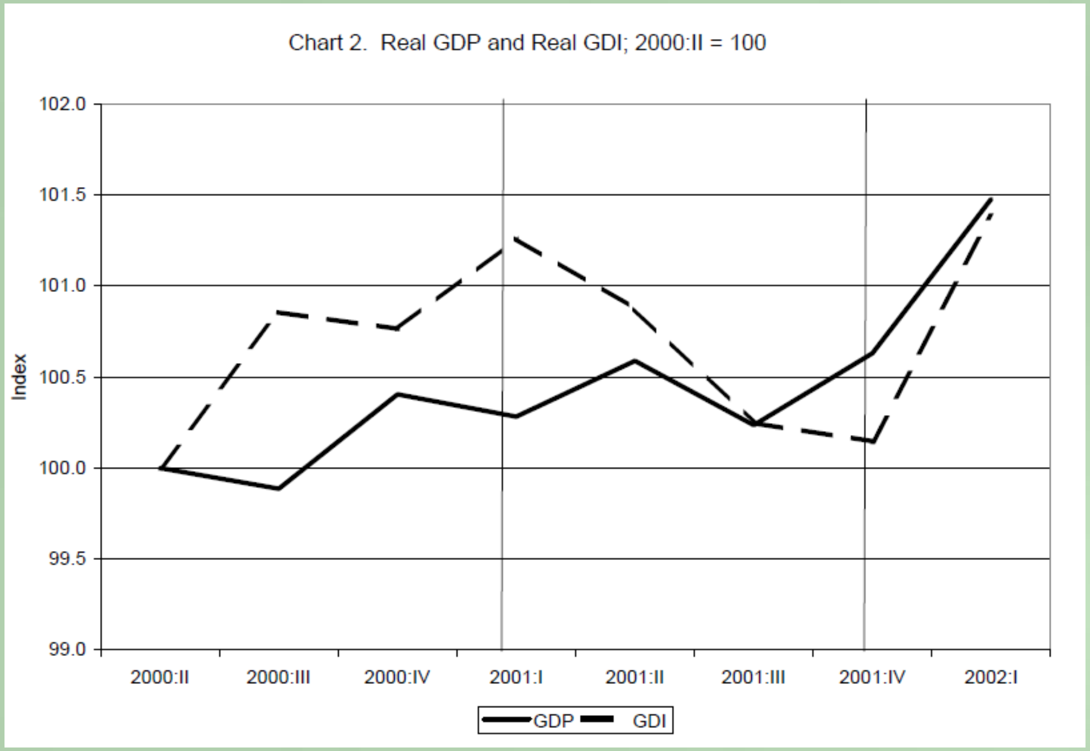
NATURAL END TO ECONOMIC CYCLE.

What led to it?



# US ECONOMIC RECESSION 2001

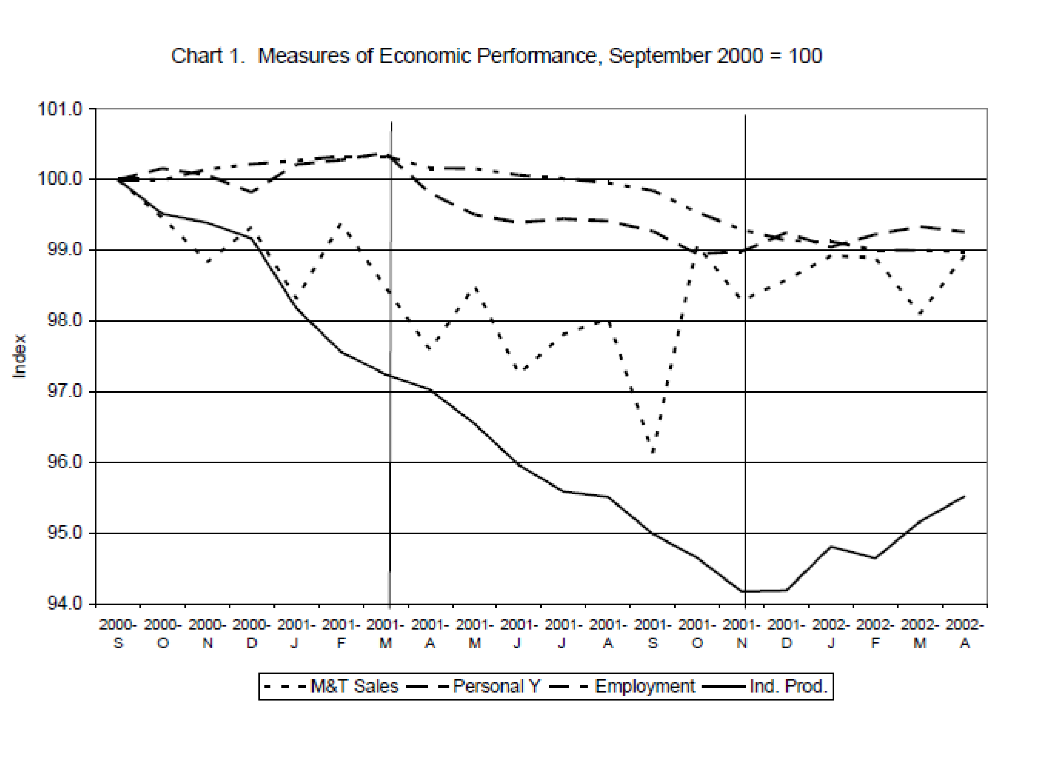
## Impact on the US Economy




*Source: US Bureau of Economic Analysis*

# US ECONOMIC RECESSION 2001

## Impact on the US Economy




*Source: US Bureau of Economic Analysis*

# US ECONOMIC RECESSION 2001

Pressure on national currency

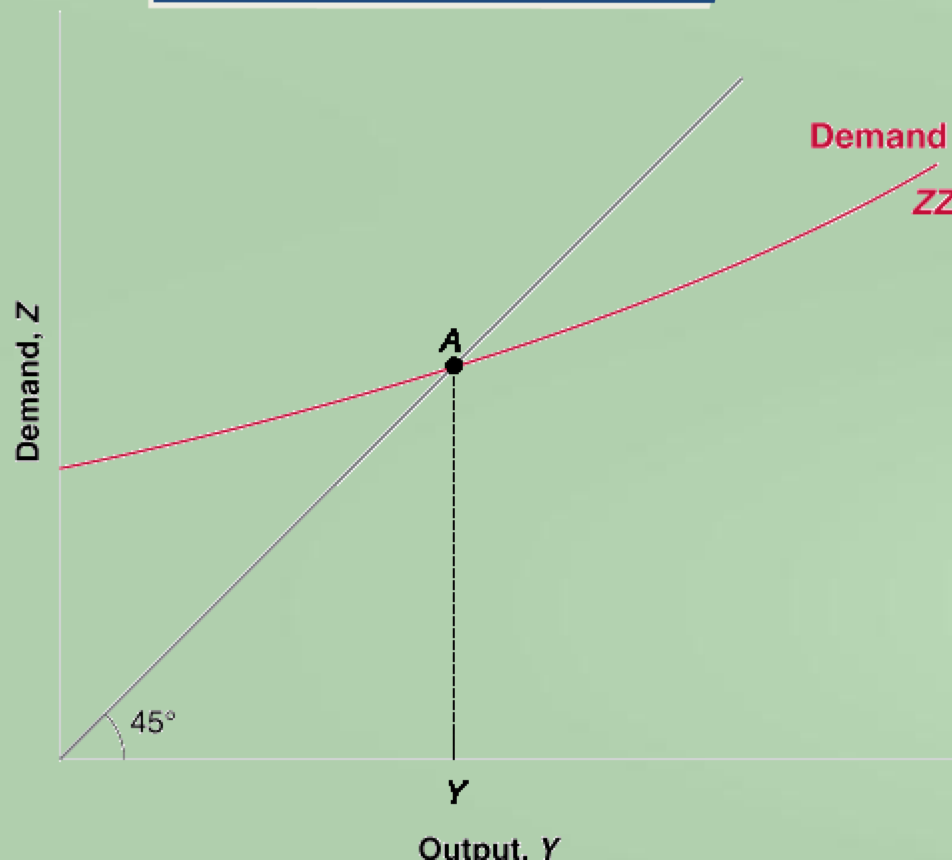
More than 40% of U.S households have less than $1000 in liquid assets and more than 65% have less than $5000 in liquid assets


The average U.S. household has $8000 in credit card debt

2.1mn people lost jobs as unemployment rose from 3.9% to 5.8%

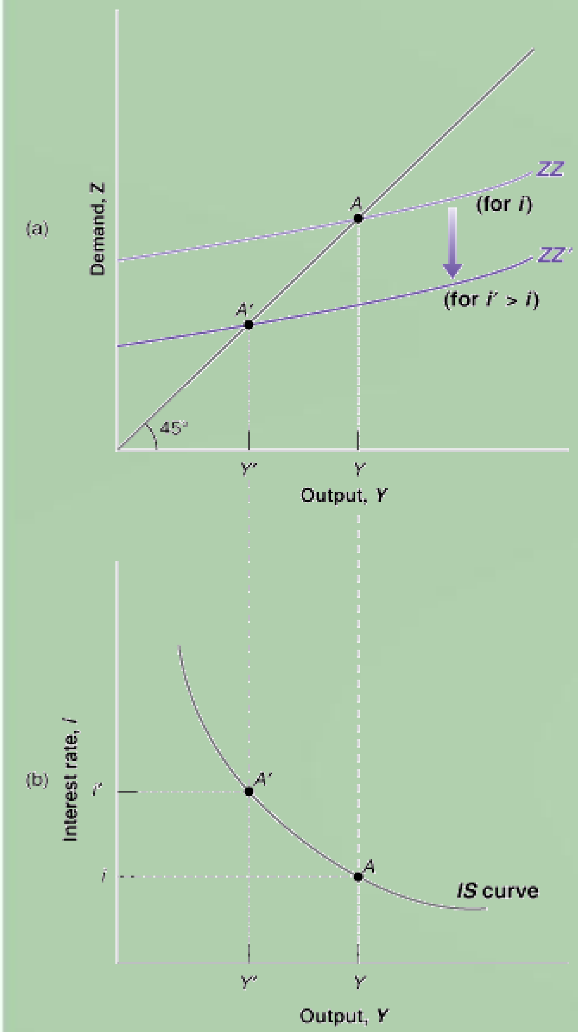
# The Goods Market

$$Y = C(Y - T) + \bar{I} + G$$



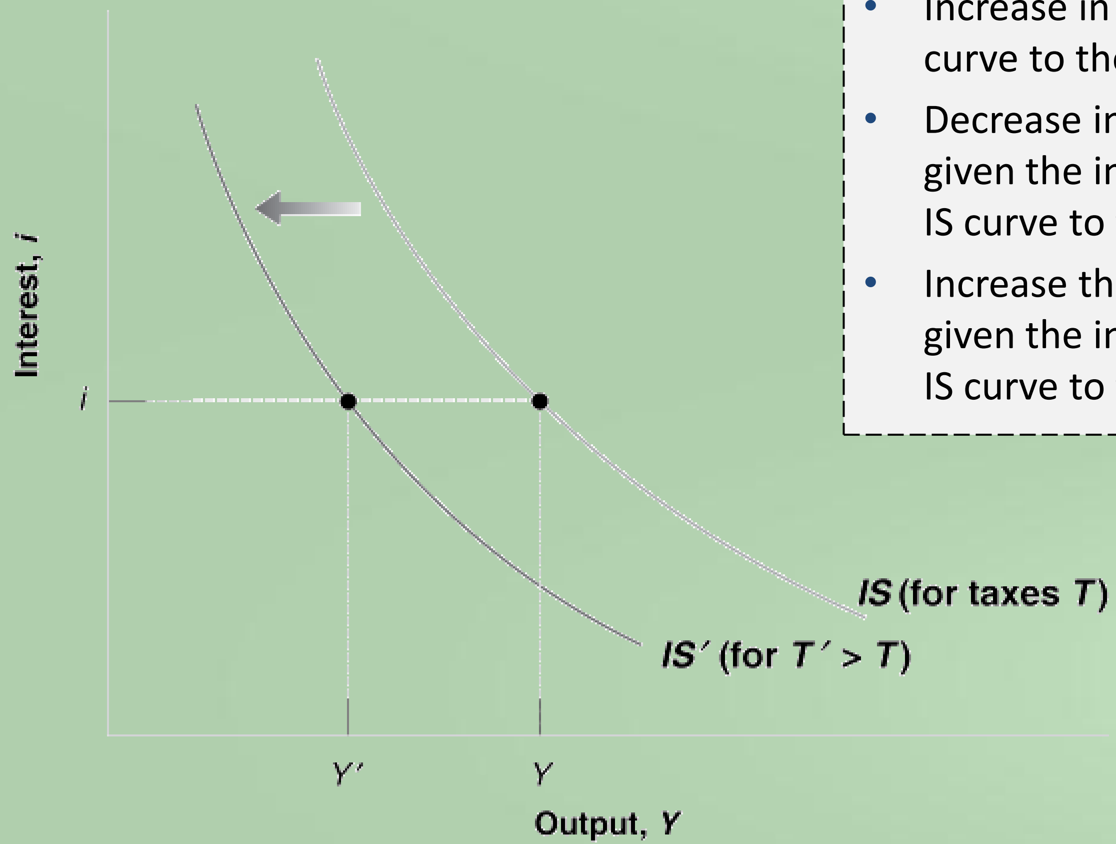

- Demand is an increasing function of output
- An increase in output leads to an increase in income and also to an increase in disposable income.
- An increase in output also leads to an increase in investment.

# IS Relation




- The higher interest rate ‘i’ implies a lower level of output
- The IS curve is downward sloping.
- Relation between the interest rate and output is represented by the downward sloping curve

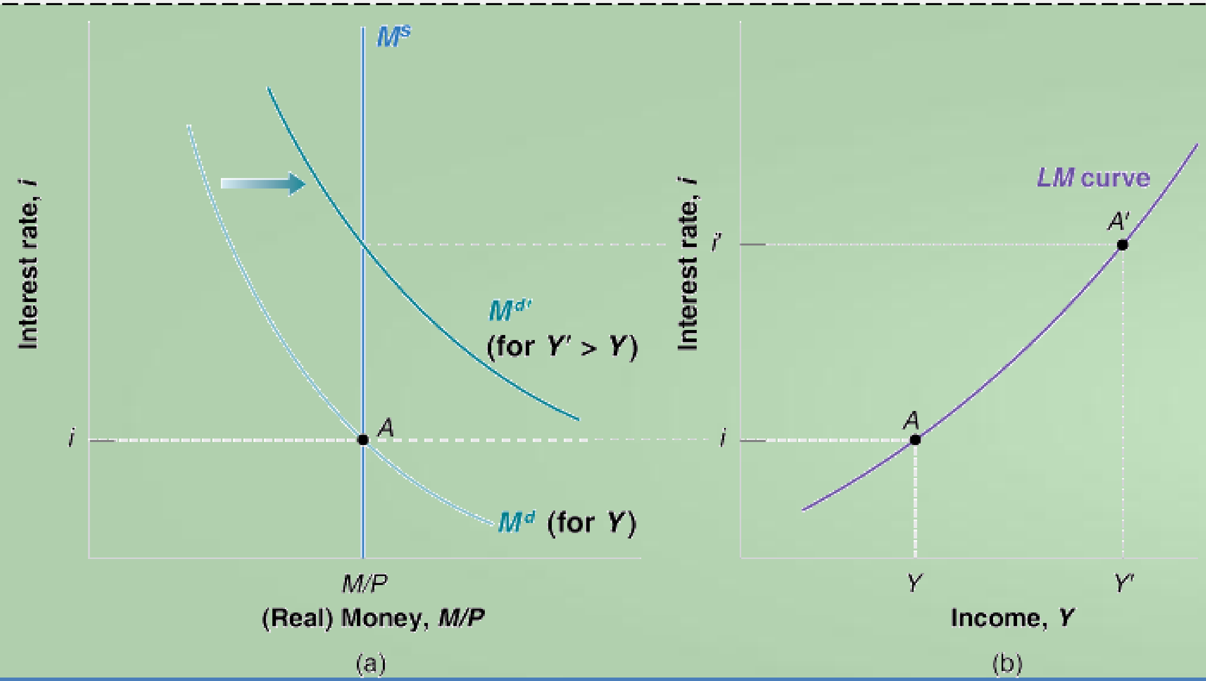
# Shifts of the IS Curve




- Increase in taxes shifts the IS curve to the left
- Decrease in demand for goods, given the interest rate, shift the IS curve to the left
- Increase the demand for goods, given the interest rate, shift the IS curve to the right.

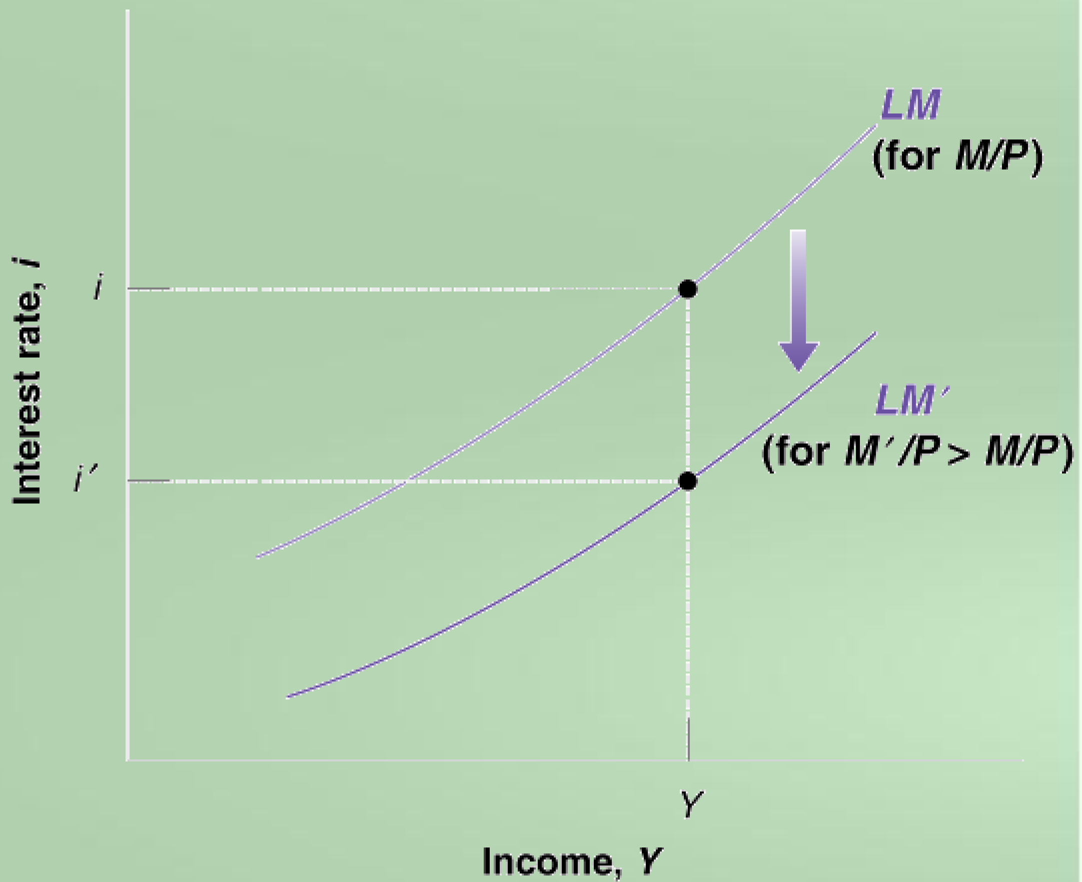
# Deriving the LM Curve

- An increase in income leads, at a given interest rate, to an increase in the demand for money. Given the money supply, this increase in the demand for money leads to an increase in the equilibrium interest rate.
- increase in income leads to an increase in the interest rate.
- In equilibrium, the real money supply is equal to the real money demand, which depends on real income, Y, and the interest rate, i $\frac{M}{P} = YL(i)$



# Shifts of the LM Curve

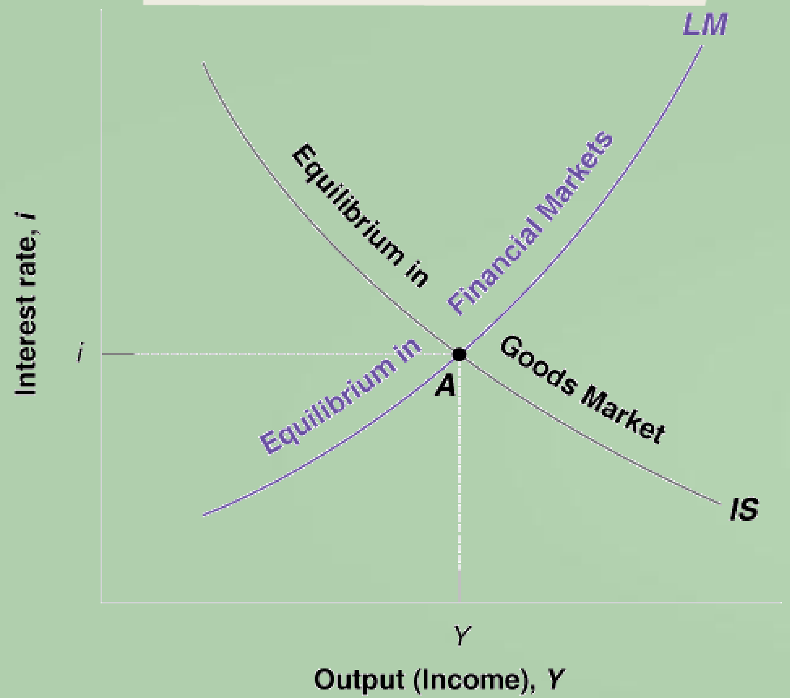
- An increase in the level of income, leads to an increase in the interest rate.
- This relation is represented by the upward-sloping LM curve.
- An increase in the money supply shifts the LM curve down;
- A decrease in the money supply shifts the LM curve up.



# IS-LM Model

$$IS\ relation:\ Y = C(Y - T) + I(Y, i) + G$$

$$LM\ relation:\ \frac{M}{P} = YL(i)$$




- Only at point A, which is on both curves, are both goods and financial markets in equilibrium.

# IS-LM Model

IS-LM.flv

# Fiscal Policy

Fiscal Policy changes are effected through:

- Change in Government Spending
- Change in tax rates

# Fiscal Policy

## Change in Government Spending

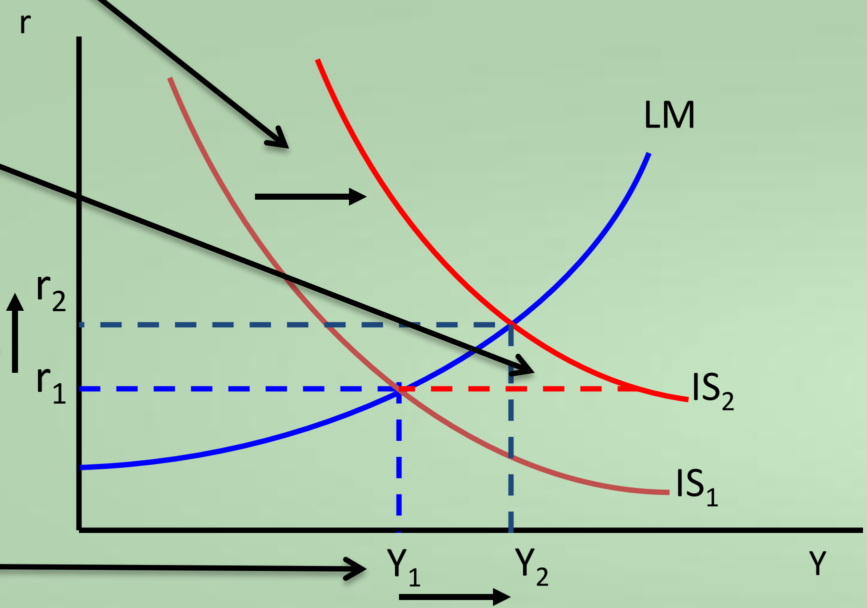
An **increase** in government purchases shifts the IS curve to the right.

The IS curve shifts to the right by

$$\frac{\Delta G}{(1-MPC)}$$

Which raises the interest rate…

And the income



# Fiscal Policy

## Change in Tax Rates

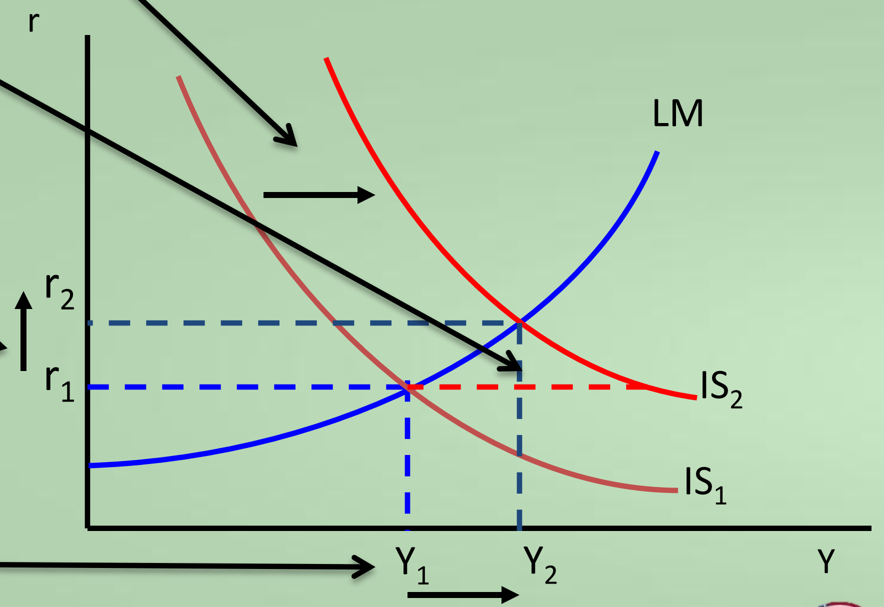
A **decrease** in tax rates shifts the IS curve to the right

The IS curve shifts to the right by

$$\frac{MPC * \Delta T}{(1-MPC)}$$

Which raises the interest rate…

And the income



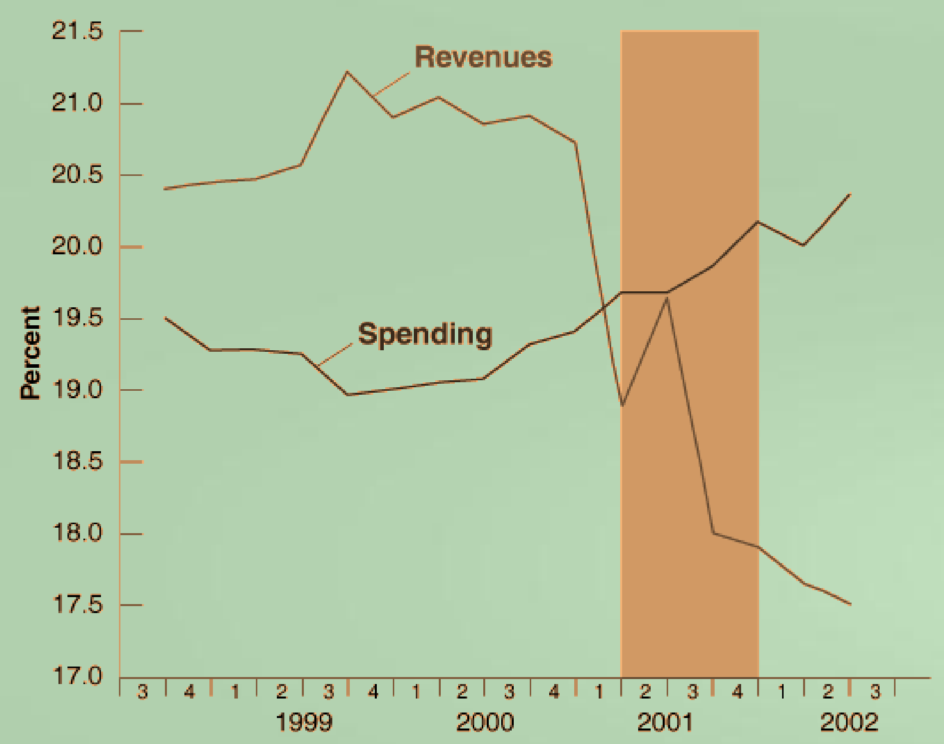
# Fiscal Policy Measures

## Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA)

- Designed to expire in 2011
- Reduced income tax rates for most taxpayers by a few points
- Created a new 10% tax bracket for incomes below $34,550.
- Doubled the child tax credit from $500 to $1,000.
- Eliminated the “marriage penalty” by making exemptions for married couples equivalent to what they would have had if they were single.
- Provided greater tax deductions for education expenses and savings.
- Increased the amount of tax-deductible contributions taxpayers could make to their IRA accounts.
- Saved taxpayers $1.35 trillion over that 10-year period

# Fiscal Policy Measures

Increased spending



# Monetary Policy

Monetary policy aims to shorten recessions by encouraging

Consumer Spending

Investment

# Monetary Expansion Policy

Purchase of government bonds by central banks through Open Market Operations (OMO)

- Injects more money into the economy

Reducing banks' reserve requirements (CRR & SLR)

- Gives banks more money to lend
- Increased borrowing stimulates business expansion

Lowering short-term interest rates

- Reducing the cost of borrowing
- Reducing rates on home mortgages, giving households additional disposable income

# Monetary Policy Measures

Measures taken in 1999 resulted in rapid growth

Economy ran out of steam by 2001

Systematic monetary expansion policy introduced

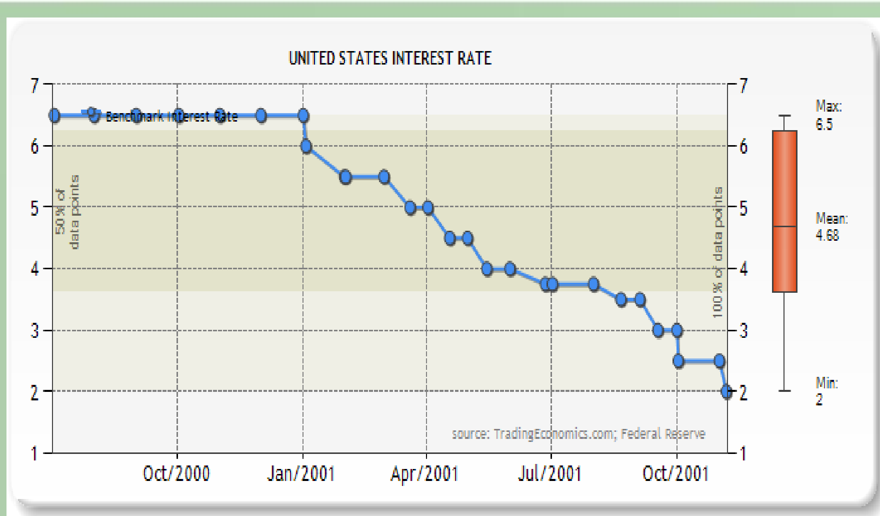
Series of reductions in the federal funds rate

- 6.5% to 1.75% in just 12 months
- To 1% over 30 months

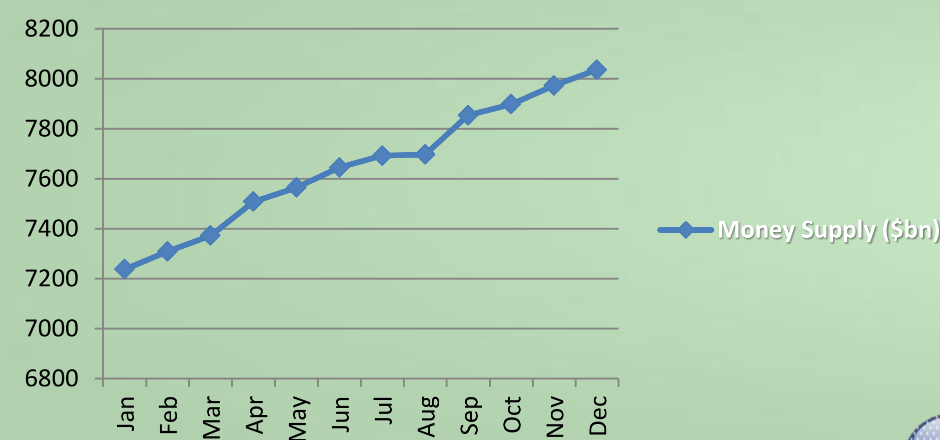
Uncontrolled rate cuts led to a steep decline in the interest rates

- Rate at the end of 2001 dropped to 1.75%
- In late 2002 the rate was cut to 1.25%
- Mid-2003 it was cut to 1.0%

# Effects of Monetary Policy



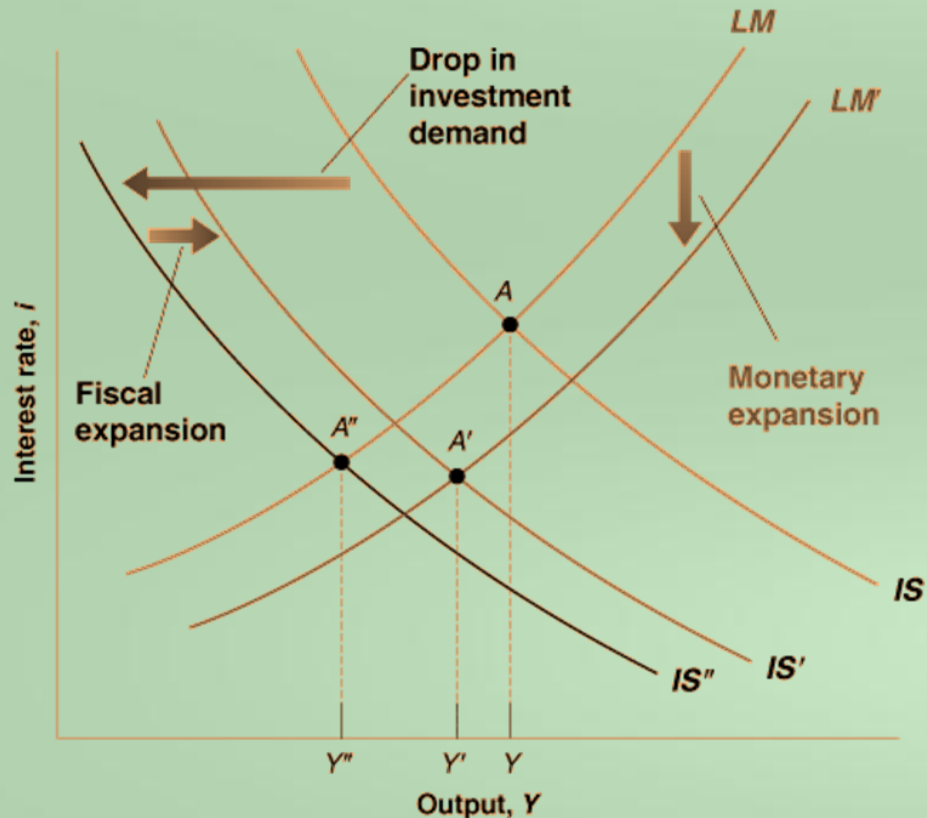

## Money Supply ($Bn) in year 2001




Source : www. tradingeconomics.com

# What happened in 2001

- Decrease in investment demand led to a sharp shift of the IS curve to the left, from IS to IS’’
- Increase in the money supply led to a downward shift of the LM curve, from LM to LM’
- The decrease in tax rates and the increase in spending both led to a shift of the IS curve to the right, from IS’’ to IS’.



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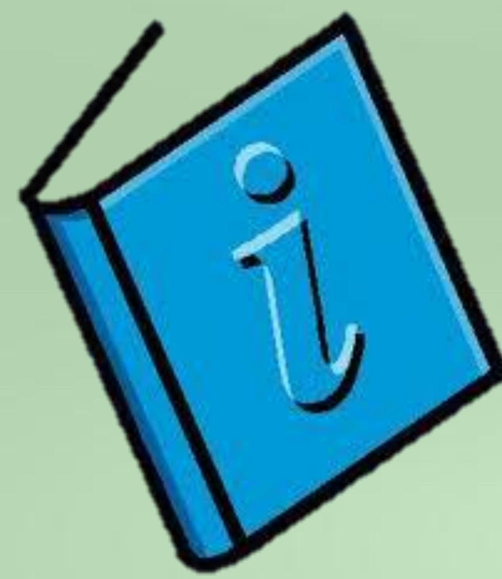

# Q & A

*“The recession started upon my arrival. It could have been—some say February, some say March, some speculate maybe earlier it started—but nevertheless, it happened as we showed up here. The attacks on our country affected our economy. Corporate scandals affected the confidence of people and therefore affected the economy. My decision on Iraq, this kind of march to war, affected the economy.”*

George W. Bush