

# Refresher Module

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## Economics

Money and Banking

Monetary Policy & Fiscal Policy



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# Definition of Money

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- Economists consider money to be any asset that people are generally willing to accept in exchange for goods and services or for payment of debts.

# The Functions of Money

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– Money must function as:

- › *a medium of exchange.*
- › *a store of value.*
- › *a unit of account.*

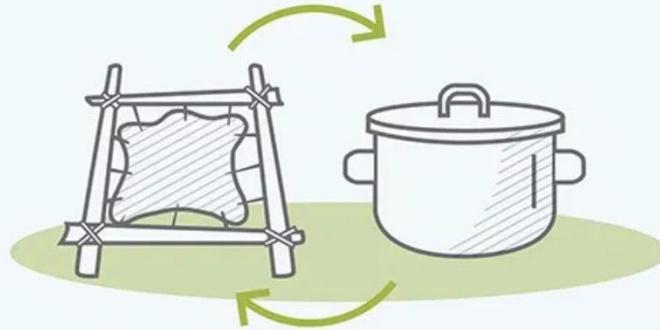


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## MEDIUM OF EXCHANGE

- ▶ Can be used to intermediate the exchange of goods and services.

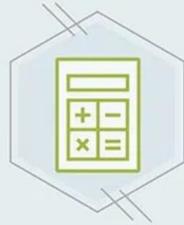


*A common ground for determining value*

**For Example:**  
A community uses beaver pelts as a medium to trade for other goods.

– Source:  
<http://money.visualcapitalist.com>

## UNIT OF ACCOUNT



- ▶ A standard numerical unit of measurement of market value for goods, services, and other transactions.

*Can be used to compare goods using a common system*

**For Example:**  
Housing prices in Japan can be compared using the yen as a unit of account.

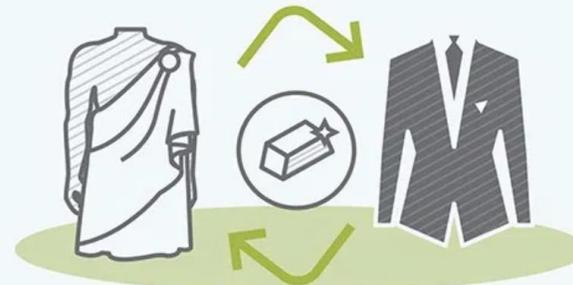


## STORE OF VALUE

- ▶ Maintains its value over time.

*Can be spent or exchanged at a later date without penalty*

**For Example:**  
An ounce of gold could buy a toga in Roman times, yet it can still buy a nice suit today.



# Types of Money

- For thousands of years, societies have used commodity money.
- **Commodity money:** a good used as a medium of exchange that has intrinsic value in other uses.



**Commodity-backed money:** a medium of exchange with no intrinsic value whose ultimate value is guaranteed by a promise that it can be converted into valuable goods.

Some prisons use cigars as currency. It has some alternative, non-monetary use.

*The island of Yap's currency*

**Fiat money:** money whose value derives entirely from its official status as a means of payment.

# Measuring the Money Supply

– **Monetary aggregate:** an overall measure of the money supply.

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1. **The monetary base (MB):** currency outstanding and total reserves at the Fed.
2. **M1:** currency outstanding and checkable deposits.
3. **M2:** M1 plus saving deposits, money market mutual funds, and small-time deposits.



# The role of Fed

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- The Fed has direct control *only over the monetary base.*
- The Fed can indirectly affect M1 and M2 by controlling the monetary base.*
- M1 and M2 can change independent of what the Fed does.*

# Required and Excess Reserves

The bank must keep *some* cash available for its depositors;

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**Actual Reserves**= *vault cash* + deposits with the Federal Reserve.

Banks in the U.S. are required to hold required reserves:

10 percent is the required reserve ratio (RR): the minimum fraction of deposits (D) banks are required by law to keep as reserves.

Required Reserves=  $RR * D$

- Banks might choose to hold excess reserves: reserves over the legal requirement.
- Excess Reserves= Actual Reserves-Required Reserves

# Instrument vs. tool

- Monetary policy instrument
- Target level of federal funds rate

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- Target level of monetary aggregate
- Target level of inflation
  
- Monetary Policy tools
- Open Market Operations.
- Discount Rate
- Required reserve ratio
- Interest on Bank Reserves



# The Federal Funds Rate (FFR)

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- Federal funds market is an overnight market.
  - Interbank market: Banks borrow and lend reserves in this market to meet the reserve requirement
  - Targeted federal funds rate: Fed's policy instrument
  - Raise the target: contractionary
  - Lower the target: expansionary
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# Reserve Requirement ratio

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- Raising the reserve requirement limit the lending capacity of the banks (excess reserves fall)
  - Lowering the reserve requirement implies loose limits for the amount of lending by banks (excess reserves rise)
  - Money multiplier and money creating falls with increasing reserve requirement.
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# Open Market Operations (OMOs)

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- **Most flexible and frequently used**
- **The goal is to have an impact on reserve balances**
- **Decided at the Federal Open Market Committee (FOMC) Meetings**
- **When the Fed buys anything (even socks), Bank reserves increase.**
- **Fed chooses government bonds to buy and sell daily.**
- **Open market purchase: expansionary**
- **Open market sale: contractionary**

# Monetary Policy implementation

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- Fed will first look at the output and inflation gap data
  - Then, decide to implement whether an expansionary or a contractionary policy
  - Then, change the policy instrument (i.e. lower the target FFR for expansionary policies, vice versa)
  - Then, conduct a corresponding OMOs to support the new target.
  - Then, interest rate and money supply will change in the money market after the OMOs.
  - As a result, the gap will be closed in the goods market.



# Target Federal funds rate

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- To boost the money supply (expansionary monetary policy), the Fed needs to lower the target federal funds rate below the market rate in the federal funds market.
- To contract the money supply (contractionary monetary policy), the Fed needs to raise the target federal funds rate above the market rate in the federal funds market.

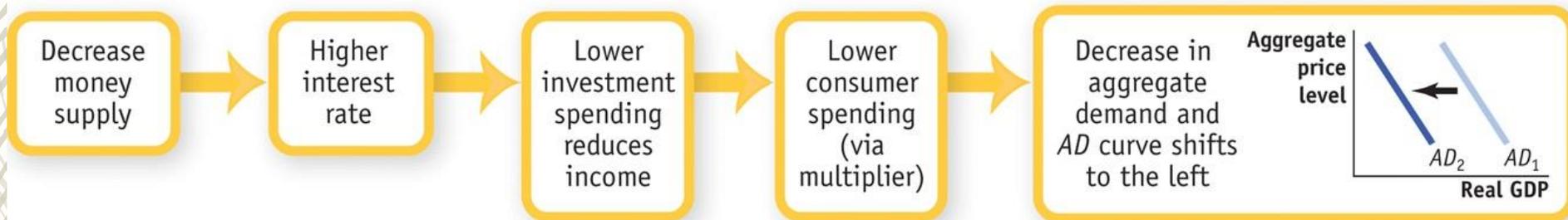
**Monetary Base** = Bank Reserves + Currency in Circulation

## T-chart for the Fed

<b>Assets</b>	<b>Liabilities</b>
Other assets	Currency (C)
T-bills	Bank Reserves
Foreign Currency or other stuff	

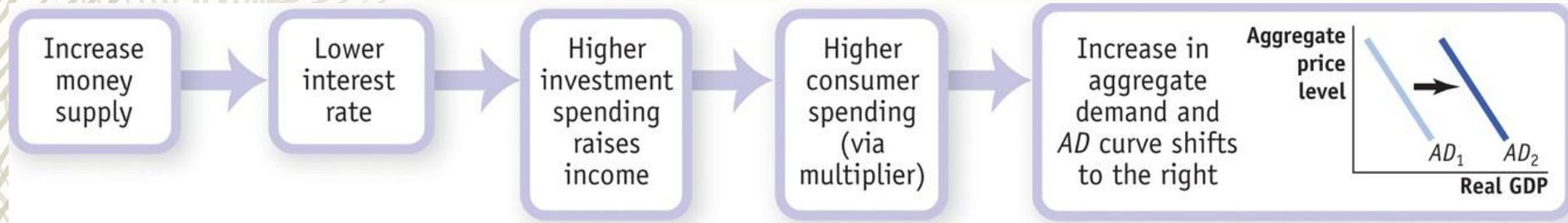
# Monetary Policy and Aggregate Demand

- How the contractionary monetary policy cycle works:



# Monetary Policy and Aggregate Demand

How the expansionary monetary policy cycle works:



# Fiscal Policy

The spending and taxing policies used by Congress and the president

## WHO?



Congress



President

# Monetary Policy

The tools used by the Federal Open Market Committee to influence the availability of credit and the money supply

## WHO?



-  7-Nonvoting members
-  4-Rotating votes-district presidents
-  1-New York Fed President
-  7-Board of Governors

# Fiscal Policy Tools

Changes in government spending



Tax policy: Changes in tax rates and rules



# Monetary Policy Tools

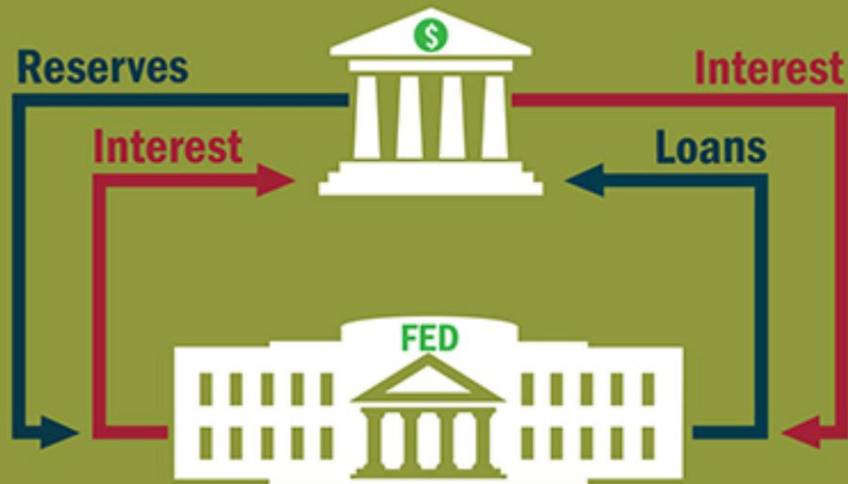
Open market operations    Reserve requirement



Buy or sell



3% or 10% of demand deposits

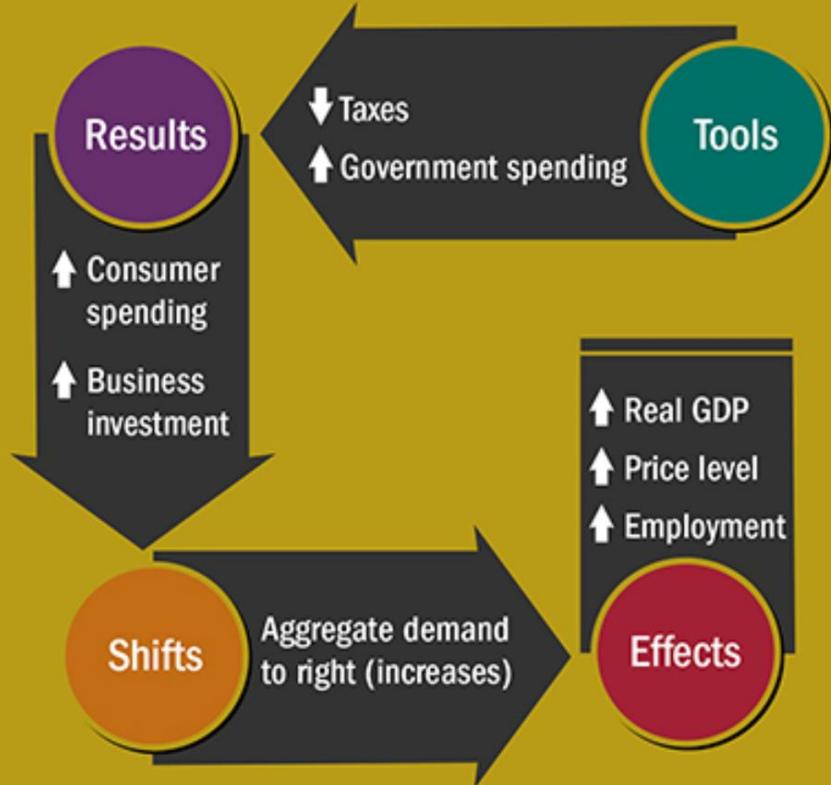


Interest on required and excess reserves

Discount rate

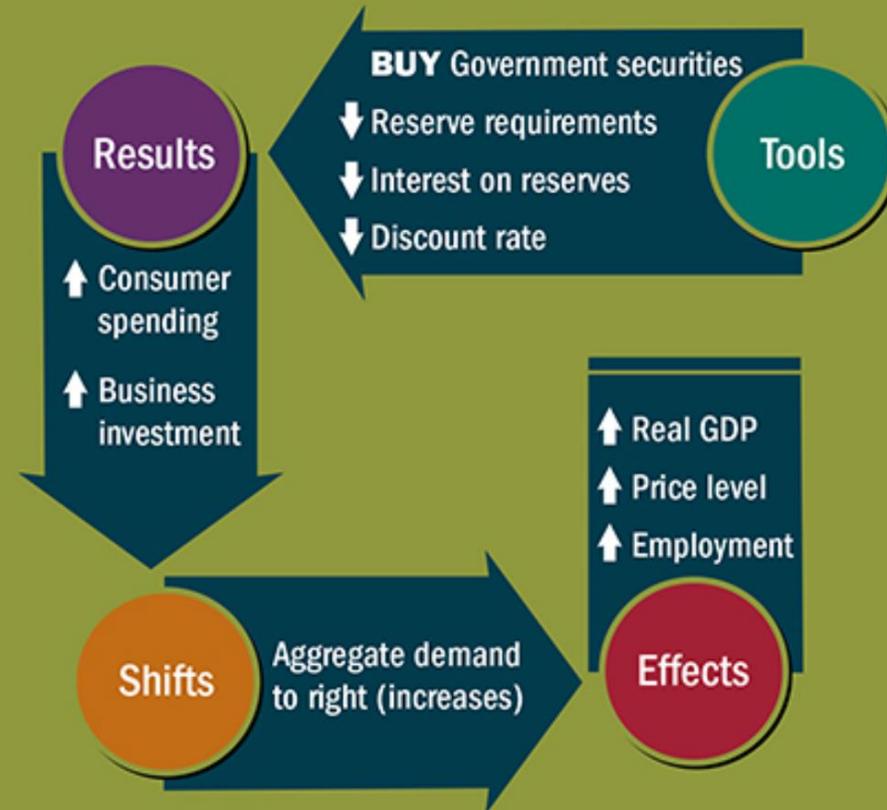
# Expansionary Fiscal Policy

Tools used to stimulate the economy during a recession: Lowering taxes or increasing government spending.



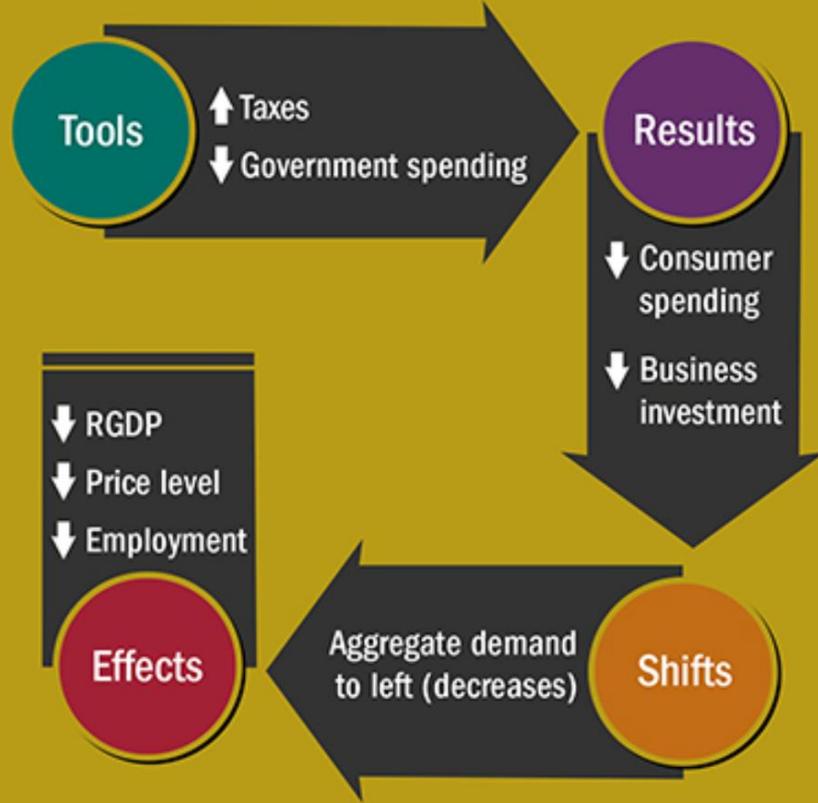
# Expansionary Monetary Policy

Tools used to stimulate the economy during a recession: Buying government securities. Lowering the reserve requirement. Lowering the discount rate. Lowering interest paid on required and excess reserves.



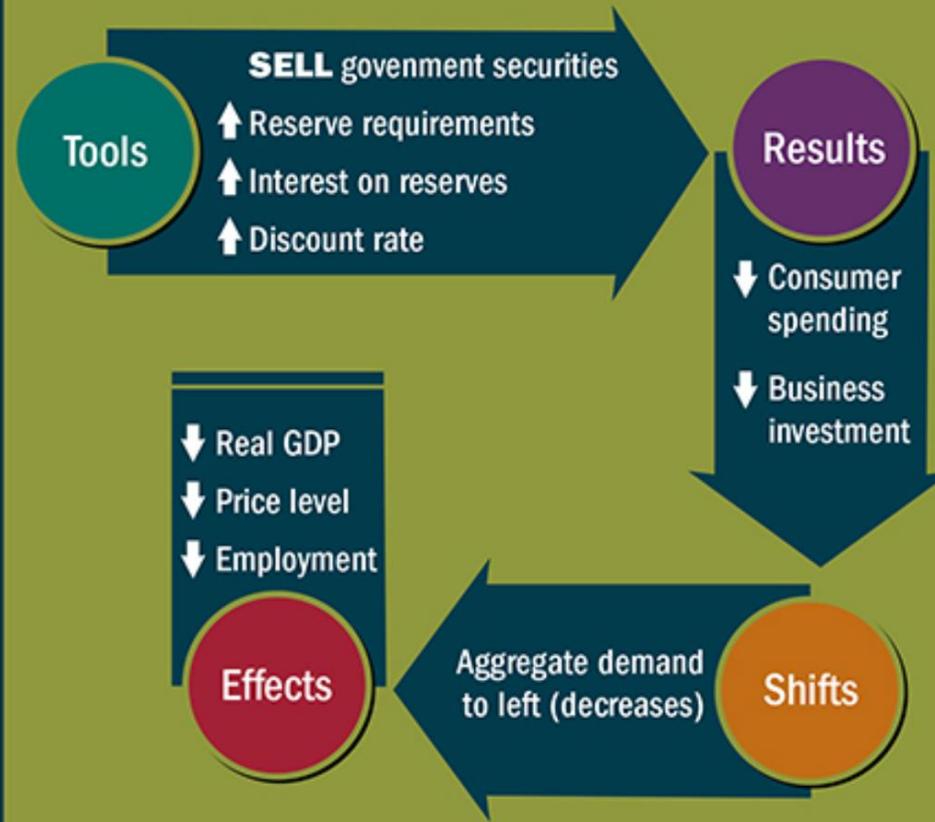
# Contractionary Fiscal Policy

Tools used to stabilize the economy in times of inflation: Increasing taxes or lowering spending.



# Contractionary Monetary Policy

Tools used to stabilize the economy in times of inflation: Selling government securities. Increasing reserve requirements. Increasing the discount rate. Increasing the interest paid on required and excess reserves.



# Fiscal and Monetary Policy Goals

Influence and stabilize the economy. Promote price stability.  
Promote maximum sustainable employment.

