Money and the Federal Reserve
(Mishkin ch.3 & ch.13)

What is MONEY?
**Theoretical Answer**

- Medium of exchange
- Unit of account
- Store of value

=> Money is whatever serves these functions

**Practical Answer**

- M1 = Currency + Checking Dep.
- M2 = M1 + …. 
- M… = Sum of monetary aggregates

=> List of items that serve as money at a particular time

- Measurement of money should change when payment habits change.
Money in the U.S. today
(Memorize!)

<table>
<thead>
<tr>
<th>Measures of the Monetary Aggregates</th>
<th>Value as of August 18, 2014, ($ billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1 = Currency</td>
<td>1,206.1</td>
</tr>
<tr>
<td>+ Traveler’s checks</td>
<td>3.3</td>
</tr>
<tr>
<td>+ Demand deposits</td>
<td>1,089.9</td>
</tr>
<tr>
<td>+ Other checkable deposits</td>
<td>477.4</td>
</tr>
<tr>
<td>Total M1</td>
<td>2,776.7</td>
</tr>
<tr>
<td>M2 = M1</td>
<td></td>
</tr>
<tr>
<td>+ Small-denomination time deposits</td>
<td>533.0</td>
</tr>
<tr>
<td>+ Savings deposits and money market</td>
<td>7,338.2</td>
</tr>
<tr>
<td>deposit accounts</td>
<td></td>
</tr>
<tr>
<td>+ Money market mutual fund shares</td>
<td>642.5</td>
</tr>
<tr>
<td>(retail)</td>
<td></td>
</tr>
<tr>
<td>Total M2</td>
<td>11,290.4</td>
</tr>
</tbody>
</table>

Questions about Money

1. Basic: Why do we care about M? (And if so, which M?)
   - Classic answer based on Quantity Theory (see later: ch.19):
     \[ M \times V = P \times Y \] (Money * Velocity = Price level * Real output)
   - If velocity V is stable, M controls nominal output PY.
   - If Y is given, M determines prices P => Money growth is inflationary.
   => If the Fed controls M, it can control the inflation rate!

2. Follow-up: Can the Fed control M?
   - M1 or M2: only indirectly (see later: ch.14)
   - Related measures: Bank reserves; Monetary base = Currency + Reserves

3. Which M?
   - Unclear: most controllable (reserves, ,monetary base, or M1) vs. measure with most stable velocity (M2) => Follow multiple measures.
   - Does the choice matter? See…
Growth Rates of M1 and M2

Similar in the long run – major differences in the short run.

[Notes on Mishkin Ch.3 - P.5]
The Federal Reserve System
(Mishkin ch.13)

Questions:

• **What are the Fed’s objectives?**
  1. Price stability. Practical target: inflation rate ~ 1.5%-2% range.
  2. High employment. Practical target: unemployment rate ~ “natural rate”
     Additional goals in practice: Financial stability. Low interest rate volatility.

• **Why is the Fed important?**
  - Manages important policy tools (preview: next slide).

• **How is the Fed organized?**
  - Origin and formal structure, vs. informal structure. *Main item for this class.*

• **Central bank independence:** How much? Good or bad?
Federal Reserve Policy Tools

- **Open Market Operations** = Purchase or sale of Treasury securities.
  - Impact on interest rates and on bank reserves. Measure: Fed funds rate.

- **Lending operations**: Targeted. Serves “Lender-of-Last Resort” function.
  - Traditional: *Discount loans* extended to *depository institutions* at the *discount rate*. Secured loans – several types, mostly 1-day maturity.

- **Reserve requirements**: 10% on checkable deposits. Rarely changed.
  - Creates demand for bank reserves. Also: contractual reserves.
  - New since 2008: Reserves pay interest. Before: effectively a tax on banks.

- Economic analysis later (see ch.15).
Formal Structure: Decentralized - 12 Districts

1 Federal Reserve districts
* Board of Governors of the Federal Reserve System
* Federal Reserve bank cities
* Federal Reserve branch cities
- Boundaries of Federal Reserve districts (Alaska and Hawaii are in District 12)
Decision Making the Federal Reserve System

**Board of Governors**
Seven members, including the chairman, appointed by the president of the United States and confirmed by the Senate.

**Federal Open Market Committee (FOMC)**
Seven members of Board of Governors plus presidents of FRB of New York and four other FRBs.

**Eleven Federal Reserve Banks (FRBs)**
Each with nine directors who appoint president and other officers of the FRB.

**Member Banks**
Around 2,900 member commercial banks.

**Reserve requirements**
Reviews and determines.

**Open market operations**
Directs.

**Discount rate**
Establishes.

[Notes on Mishkin Ch.13 - P.4]
Actual Operation

• **Federal open market committee (FOMC):** Center of decision-making
  
  See Minnesota Fed article (recommended; still good).

• **Role of the Chairman: Does s/he run the show?**
  
  Currently: Janet Yellen.
  
  
    Alan Greenspan (1987-2006)
  
    Ben Bernanke (2006-2014)
Central Bank Independence

- Foundations of Fed independence: Governors have long 14-year terms. FRB Presidents have votes in FOMC. Independent budget and revenues.


- Economic argument for independence: Credibility in promising low inflation.

- International trend toward independent central banks.

- Open question:
  - How much public disclosure is desirable? How much secrecy?
  - How much “emergency” power is desirable?
  - Are “emergency” lending operations consistent with central bank independence? [Requires close coordination with governments, involves discretion, creates identifiable profits/losses]