

Problem Set #1

Due in lecture on **Monday, September 25th**. No late submissions will be accepted. Make sure your name is on your problem set, as well as the name of your (*official*) TA. The numbering system for the questions is in this case identical between the 7th and 8th editions (7/e and 8/e, respectively).

1. Was money a better store of value in the 1975-1979 or 1995-1999? You may wish to consult this database to answer this question.

<http://research.stlouisfed.org/fred2/series/CPIAUCSL?&cid=9>

Be sure to explain how you obtained your answer.

2. Chapter 3, #12. For Question #12, calculate the annualized month-on-month percentage changes in order to answer the question. You can access the data online at:

<http://www.federalreserve.gov/releases/H6/hist/h6hist1.txt>

[For those who have the 7/e, you do not need to calculate the growth rates for *M3*]

3. Chapter 4, #4. Show your algebraic work, “boxing-in” your answers.

4. What is the yield to maturity of a \$1000 face value discount bond maturing in one year that sells for \$900? Show your algebraic work, “boxing-in” your answers.

5. Calculation of real interest rates.

Take the 3 month interest rates for the U.S., the Euro area, and Japan reported in the tables below (drawn from the Sept. 16th – 22nd issue of the *Economist*). Calculate the real interest rate, assuming that the expected (annualized) inflation rate for the next 3 months equals the most recently recorded inflation rate. [For future reference: These data are updated weekly, and are available at: <http://www.economist.com>, and are also reported in the hard copy version of the magazine.]

	Money supply*			Interest rates % p.a. (Sep 13th 2006)					
	% change on year ago			3-mth money market		2-year gov't bonds	10-year gov't bonds		corporate bonds
	narrow	broad		latest	year ago		latest	year ago	
Australia	+ 9.4	+10.4	Jul	6.22	5.62	5.86	5.60	5.15	6.82
Britain	+ 5.4	+13.1	Jul	4.95	4.56	4.92	4.56	4.17	5.65
Canada	+15.5	+ 6.5	Jul	4.15	2.74	4.02	4.12	3.86	5.36
Denmark	+10.3	+ 7.4	Jul	3.30	2.20	3.69	3.78	3.02	5.14 [‡]
Japan	+ 2.3	+ 0.5	Aug	0.34	0.02	0.61	1.65	1.35	1.87
Sweden	+ 0.5	+11.0	Jul	2.56	1.47	3.33	3.69	2.94	3.84
Switzerland	- 1.3	+ 0.8	Jul	1.71	0.76	2.02	2.43	1.80	2.53
United States	+ 0.2	+ 4.9	Jul	5.26	3.84	4.81	4.76	4.16	5.74
Euro area[†]	+ 7.4	+ 7.8	Jul	3.32	2.14	3.65	3.76	3.06	4.40

*Narrow: M1 except Britain notes and coin and Sweden M0, broad: M2 or M3 except Britain M4. [†]Germany for bonds. [‡]New series. Benchmarks: US 30-year 4.89%, Japan No. 282 1.67%. Central bank rates: US fed funds 5.25%, ECB refinancing 3.00%, BOJ overnight call 0.25%, BOE repo 4.75%. Sources: Bank of Canada, Commerzbank, Danske Bank, Global Insight, JPMorgan Chase, Lehman Brothers, Stockholmsbörsen, UBS, Westpac, Thomson Datastream. Rates cannot be construed as banks' offers.

% change on year ago

	Consumer prices		The Economist poll consumer prices forecast		Producer prices		Wages/earnings				
	latest	year ago	2006	2007	latest	year ago	latest	year ago			
Australia	+ 4.0	Q2	+ 2.5	+ 3.2	+ 2.7	+ 9.9	Q2	+ 6.9	+ 4.7	Q2	+ 5.8
Austria	+ 1.5	Jul	+ 2.3	+ 1.9	+ 1.8	+ 3.9	Aug	+ 0.9	+ 2.7	Jul	+ 2.3
Belgium	+ 1.6	Aug	+ 3.1	+ 2.1	+ 1.9	+ 6.3	Jul	+ 1.9	+ 2.3	Apr	+ 2.6
Britain	+ 2.5	Aug*	+ 2.4	+ 2.2	+ 2.1	+ 2.8	Jul	+ 3.1	+ 4.4	Jul†	+ 4.2
Canada	+ 2.4	Jul	+ 2.0	+ 2.3	+ 2.1	+ 4.3	Jul	- 0.3	+ 0.3	May	+ 1.0
Denmark	+ 2.0	Aug	+ 2.2	+ 2.0	+ 2.0	+ 4.6	Jul	+ 4.7	+ 3.2	Q2	+ 2.9
France	+ 1.9	Aug	+ 1.8	+ 2.0	+ 1.7	+ 3.9	Jun	+ 2.9	+ 3.1	Q2	+ 3.0
Germany	+ 1.7	Aug	+ 1.9	+ 1.8	+ 2.3	+ 5.3	Aug	+ 1.9	+ 1.0	Jun	+ 0.9
Italy	+ 2.2	Aug	+ 2.0	+ 2.2	+ 1.9	+ 6.9	Jul	+ 3.6	+ 3.0	Jul	+ 2.8
Japan	+ 0.3	Jul	- 0.3	+ 0.4	+ 0.8	+ 3.4	Aug	+ 1.8	- 0.3	Jul	+ 2.5
Netherlands	+ 1.4	Aug	+ 1.8	+ 1.5	+ 1.6	+ 5.3	Jul	+ 5.3	+ 1.9	Aug	+ 0.8
Spain	+ 3.7	Aug	+ 3.3	+ 3.7	+ 3.0	+ 6.4	Jul	+ 4.6	+ 3.0	Q1	+ 2.5
Sweden	+ 1.6	Aug	+ 0.6	+ 1.5	+ 1.9	+ 3.7	Jul	+ 3.7	+ 3.8	Jun	+ 3.0
Switzerland	+ 1.4	Aug	+ 1.0	+ 1.3	+ 1.4	+ 2.9	Jul	+ 1.1	+ 1.0	2005	+ 0.9
United States	+ 4.1	Jul	+ 3.2	+ 3.5	+ 2.6	+ 4.2	Jul	+ 4.7	+ 3.9	Aug	+ 2.7
Euro area	+ 2.3	Aug	+ 2.2	+ 2.2	+ 2.1	+ 5.9	Jul	+ 4.1	+ 2.2	Q1	+ 3.2
MORE COUNTRIES	Data for the countries below are not provided in printed editions of <i>The Economist</i>										
Finland	+ 1.9	Aug	+ 1.0	na	na	+ 6.0	Jul	+ 4.0	+ 2.9	Q2	+ 3.7
Greece	+ 3.5	Aug	+ 3.7	na	na	+ 7.2	Jul	+ 5.1	na	na	na
Iceland	+ 7.6	Sep	+ 4.8	na	na	+11.5	Aug	+ 4.3	+10.2	Jul	+ 6.6
Ireland	+ 4.5	Aug	+ 2.3	na	na	- 0.2	Jul	+ 0.2	+ 2.2	Q1	+ 6.4
Luxembourg	+ 2.9	Jul	+ 2.6	na	na	+ 7.3	Jun	+ 6.4	+ 0.7	Jun	+ 2.0
New Zealand	+ 4.0	Q2	+ 2.8	na	na	+ 7.8	Q2	+ 4.7	+ 3.3	Q2	+ 2.6
Norway	+ 1.9	Aug	+ 1.9	na	na	+ 8.8	Aug	+19.9	+ 3.6	Q2	+ 3.8
Portugal	+ 2.3	Jul	+ 2.2	na	na	+ 4.8	Jul	+ 4.1	- 1.5	Jul	- 2.1

*RPI inflation rate 3.4% in Aug. †May-Jul.

6. Chapter 5, #3. Use graphs to help explain the answer to each of the cases.
7. Chapter 5, #7. Use graphs and/or equations to help explain your answer.
8. Chapter 5, #10. Use graphs to help explain your answer.
9. Suppose Ben Bernanke and all the other members of the Federal Open Market Committee that controls monetary policy suddenly declare that they want money growth to be faster than in before. Show what would likely happen to interest rates, using graphs and/or equations to help explain your answer.