ECON 3123: Macroeconomic Theory I

Tutorial Note 3: Investment and Financial Market

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Money Supply and Demand

Definition of Money $M1$: Currency and checkable deposits (Liquid assets)

$M2$: Less liquid assets

A financial asset is **liquid** if it can be quickly used to buy goods and services.

Remark. *As emphasized by Perry Mehrling (Columbia University) in his Money and Banking course, money is best analyzed as a* hierarchy *rather than by a single definition. Under the gold standard, gold sits at the apex as the ultimate settlement asset. Below gold are national currencies, whose values are defined by their convertibility into gold at a fixed parity. Bank deposits lie further down: they are promises to deliver currency on demand and ordinarily exchange at par. In stress—e.g., during recessions when banks face currency shortages—par convertibility may fail, and deposits can trade at a discount to currency or be temporarily suspended. Lower still are various securities, which are the least money-like in this ordering.*

Exercise 1. *(1) Which of the following statements about M1 and M2 is true?*

A Demand deposits are not part of M1.

B M2 is more liquid than M1.

C M1 is larger than M2.

D Savings deposits are part of M2.

(2) In some countries, prices in stores are listed in terms of U.S. dollars, rather than in units of the local currency. That's most likely because

A. the country's political system is unstable.

B. interest rates are higher using U.S. dollars than using the local currency.

C. there is no other store of value.

D. the country has experienced high rates of inflation.

Who is supplying money? **Central banks** typically change the supply of money, M^S, by buying or selling government bonds in the bond market, open to everyone.

Expansion vs Contraction: Whether more money is circulating in the market.

- Expansionary policy: More money is circulating. Central bank **buys** bond and **pays money** to the sellers.
- Contractionary policy: Less money is circulating. Central bank **sells** bond and **gets money** to the sellers.

Exercise 2. *(1) Suppose you read in the paper that the Federal Reserve plans to expand the money supply. The Fed is most likely to do this by*

A printing more currency and distributing it.

B purchasing government bonds from the public.

C selling government bonds to the public.

D buying newly issued government bonds directly from the government itself.

(2) A developing country does not have enough taxes to cover its expenditures and is unable to borrow. This government would be most likely to cover its deficit by

A purchasing government bonds from the public.

B selling government bonds to the public.

C selling newly issued government bonds directly to the central bank.

D buying newly issued government bonds directly from the central bank.

Functions of Money Money has three functions:

- medium of exchange: an instrument for transaction.

- store of value: an asset preserving purchasing power.

- unit of account: a numeraire measuring financial items.

Money is liquid, and can be directly used for transaction, while other financial assets may not. However, other financial assets provide (potential) positive **financial income**, including interest rate income. Other financial assets bear larger risk than money, but the return can be higher.

Exercise 3. *Compared with money, bonds have*

A. less risk and less liquidity.

B. less risk and more liquidity.

C. more risk and less liquidity.

D. more risk and more liquidity.

Money Demand

Interest Rate Consider ta one-year zero-coupon risk-free bond with face value \$100. Suppose you invest $\$P_B$ now. The rate of return of this bond is the interest rate:

$$i = \frac{100 - P_B}{P_B} \iff P_B = \frac{100}{1+i}$$