Econ 1115: Principles of Macroeconomics

Lecture 18: Money, Banks and the Federal Reserve

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b. is backed by gold.
c. is a medium of exchange but not a unit of account.
d. is any close substitute for currency such as checkable deposits.

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a. M1 but not M2.
b. M2 but not M1.
c. M1 and M2.
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Answer: c

Outline

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- Banks can hold excess reserves.

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- Calculate money multiplier if RR = 5% or 0.05

So let's play a game.

A bank has an 8 percent reserve requirement, $10,000 in deposits, and has loaned out all it can given the reserve requirement.

a. It has $80 in reserves and $9,920 in loans.
b. It has $800 in reserves and $9,200 in loans.
c. It has $1,250 in reserves and $8,750 in loans.
d. None of the above is correct.

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Answer: b

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Quantity Theory of Money

The quantity equation: $M \times V = P \times Y$

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- So, P changes by same percentage as P x Y and M. Rapid money supply growth causes rapid inflation.
- Most economists believe the quantity theory is a good explanation of the long run behavior of inflation

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In the real world, the money supply is determined by the Federal Reserve policies, consumer preferences, and banks' lending practices.

Money Demand

The money demand is how much wealth people want to hold in the form of money (liquid assets).

Depends on price levels. An increase in price reduces the purchasing power of money, so more money is required to buy goods and services.

Money demand is also inversely related to interest rates. The higher the interest rate, the greater is the opportunity cost of holding money.

Thus the demand curve for money is downward sloping.

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Why do people hold money?

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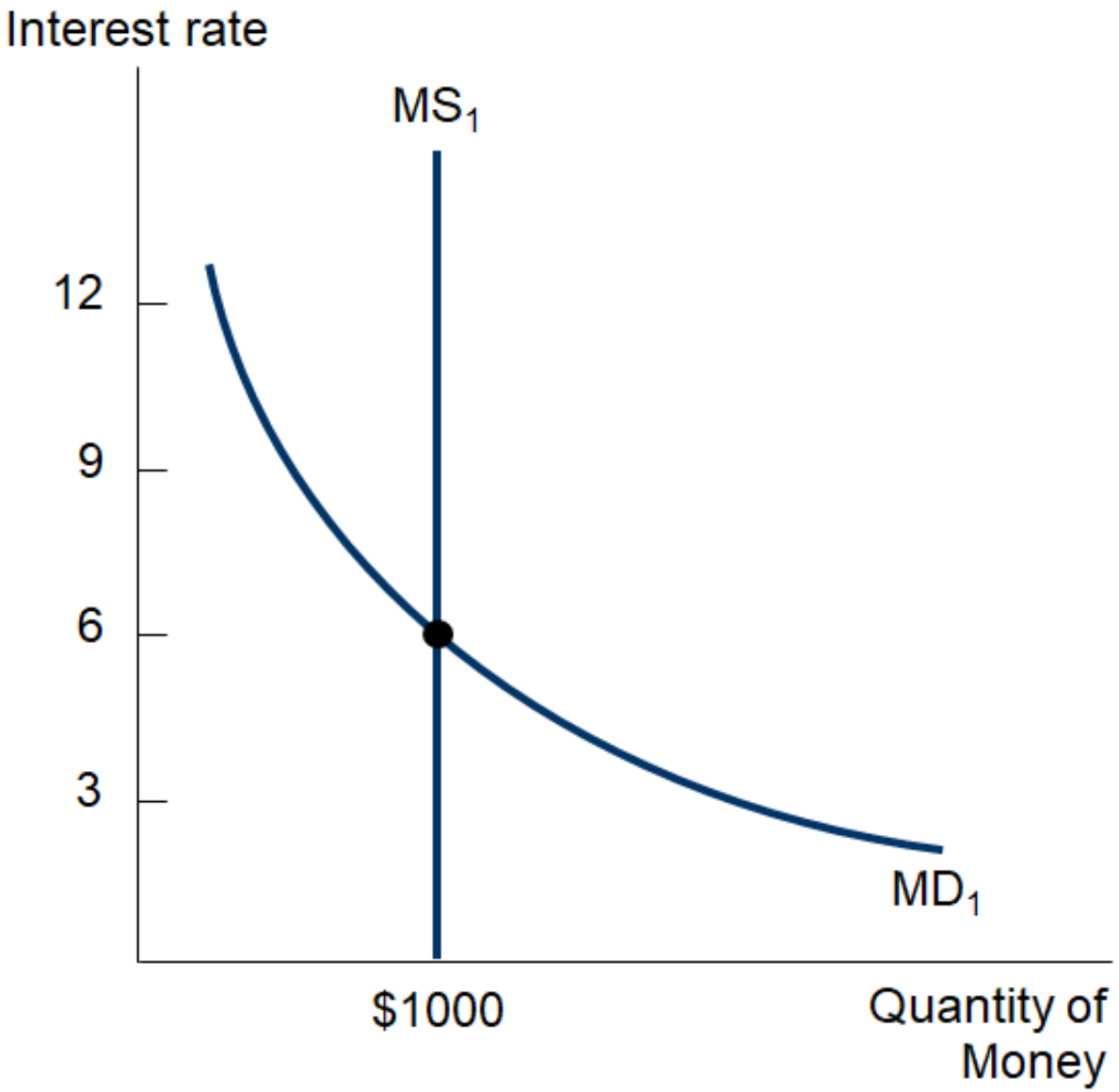
1. Transactive motive
2. Precautionary motive
3. Speculative motive


Interest rate
MS1
12
9
6
3
MD1
$1000
Quantity of Money

Money neutrality

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- Real wage and relative prices

Velocity

It is the rate at which money changes hands

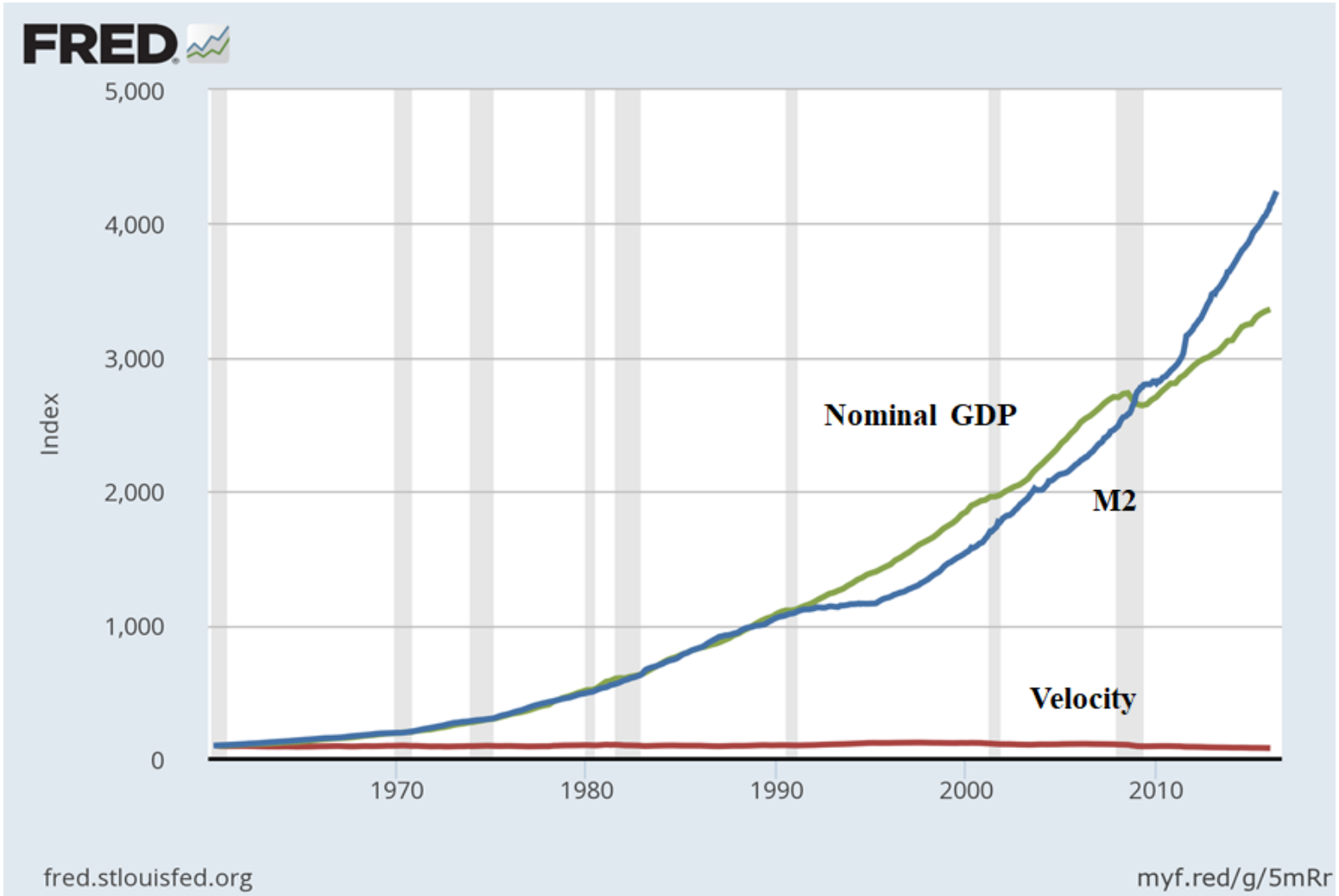
We can calculate velocity

$$V = \frac{P \times Y}{M}$$

P x Y = (price level) x (real GDP) = nominal GDP

M = money supply

V = velocity


FRED
5,000
4,000
3,000
2,000
1,000
0
Index
Nominal GDP
M2
Velocity
1970
1980
1990
2000
2010
fred.stlouisfed.org
myf.red/g/5mRr

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- Federal Open Market Committee (FOMC): Consists of the Board of Governors and a rotation of five regional Fed presidents. The NY Fed president is always included.
- The FOMC decides monetary policy.

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Hidden third mandate?
Recall the Phillips curve! Are both objectives possible at the same time?