ECO 301: Money and Banking **Name:** ______________________________

In-class Exercise: Money Multiplier

Directions: Work in groups of up to four people and answer the following questions. All papers will be collected, but only one member's paper will be randomly selected and graded and all members of the group will receive the same grade.

By signing below, you agree that the following work represents the efforts of everyone in the group, and you are willing to accept as your own grade for the group project the grade earned from this representation of your group's work. Every member must agree to these terms to earn a non-zero grade for this assignment.

______________________________	______________________________	________________
Signature Group Member 1	Print Name	Date
______________________________	______________________________	________________
Signature Group Member 2	Print Name	Date
______________________________	______________________________	________________
Signature Group Member 3	Print Name	Date
______________________________	______________________________	________________
Signature Group Member 4	Print Name	Date

1. Suppose the required reserve ratio in 2%, banks hold an extra 3% of deposits in excess reserves, and consumers hold currency balances that are about 10% of what they hold in deposits in banks. Suppose the Fed makes an open market sale of $150 million of government bonds.

   (a) Compute the impact on the monetary base.

   (b) Compute the impact on the M1 money supply.

   (c) Compute the impact on the amount of deposits held in the banking sector.

   (d) Compute the impact on required reserves, excess reserves, and total reserves held by banks.

   (e) Describe the impact on the interest rate in equilibrium?

2. Suppose the required reserve ratio in 5%, banks hold an extra 10% of deposits in excess reserves, and consumers hold currency balances that are about 5% of what they hold in deposits in banks. Suppose there is \$500 billion of currency in circulation and \$3 trillion in total reserves.

   (a) Compute the quantity for monetary base.

   (b) Compute the M1 money supply.

   (c) Compute the amount of deposits held in the banking sector.

   (d) Compute the amount of required reserves, excess reserves, and total reserves held by banks.

3. Suppose the monetary base is \$800 billion, the required reserve ratio is 5%, banks do not hold any excess reserves, and consumers hold currency balances that are about 5% of what they hold in deposits in banks. Suppose uncertainty increases in the banking sector regarding consumer default and depositors needs causing them to increase excess reserves to 10%.

   (a) Compute the impact on M1 money supply.

   (b) Compute the impact on the amount of deposits held in the banking sector.

   (c) What will be the impact on the interest rate in equilibrium?

4. Suppose an increase in computer financial technology causes consumers to decrease the amount of money they hold in currency from 5% of the amount they hold in deposits to 1%. The monetary base in \$650 million, the required reserve ratio is 3% and banks hold an extra 2% of deposits in excess reserves.

   (a) Compute the impact on M1 money supply.

   (b) Compute the impact on the amount of deposits held in the banking sector.

   (c) What will be the impact on the interest rate in equilibrium?