Student: _____
Date: _____

Instructor: Josue Cox
Course: Summer 2020: ECON-UA 231 - Money & Banking

Assignment: Problem Set 1

1. What is the typical relationship between interest rates on 6-month Treasury bills, 10-year Treasury notes, and Baa corporate bonds?

- ○ **A.** They tend to move randomly and independent of each other
- ○ **B.** All three rates are virtually exact representations of the rate of inflation
- ○ **C.** They tend to move together over time with the 6-month Treasury bill having the highest rate of interest
- ◉ **D.** **They tend to move together over time with the corporate bond having the highest rate of interest**

ID: End-of-Chapter Exercise 1

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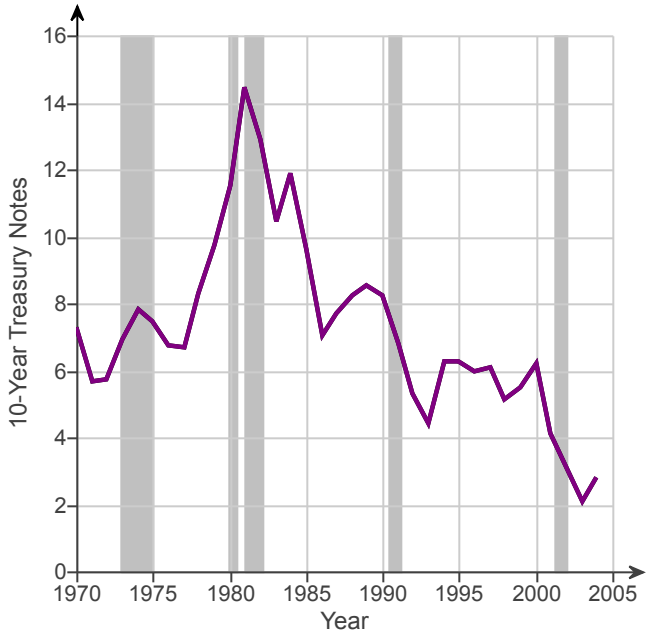
2. Refer to the time-series diagram to the right. How do we best describe the rate of interest *(yields on 10-year Treasury notes)* during the period 1995 − 2004?

Trend: (1) _____.

Volatility: (2) _____.

Magnitude: (3) _____.



(1)
- ○ Increasing
- ○ Constant
- ◉ **Decreasing**

(2)
- ○ Highly stable
- ◉ **Slightly erratic**
- ○ Highly erratic

(3)
- ○ Relatively high
- ○ Near historical average
- ◉ **Relatively low**

ID: Exercise 1.1

3.

The (1) _____ is the cost of borrowing or the price paid for the rental of funds expressed as a percentage per year.

The chief financial officer (CFO) of a large corporation that wishes to borrow $100 million to construct a factory in the United States should use the

(2) _____ market.

(1)
- (●) **interest rate**
- ( ) credit rate
- ( ) inflation rate

(2)
- ( ) deposit
- (●) **bond**
- ( ) stock

ID: Exercise 1.2

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4. When a firm issues stock, it has:

- ( ) **A.** borrowed from the public.
- (●) **B.** **taken on additional partners that own part of the assets of the firm and share in the firm's earnings.**
- ( ) **C.** purchased foreign currency.
- ( ) **D.** agreed to make periodic payments for a specific period of time to the owner of the security.

When a company's profits have been declining, the company is able to sell (1) _____ stock at a higher price.

(1)
- (●) **less**
- ( ) more

ID: Exercise 1.4

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5. People, in general, do not lend money to one another to buy a house or a car because:

- ○ **A.** of information problems.
- ○ **B.** they do not know about the capacity of other people to repay their debts.
- ○ **C.** they do not know about the effort other people will provide to repay their debts.
- ◉ **D.** **All of the above.**

How would your answer explain the existence of banks?

Banks exist because:

- ◉ **A.** **they are able to mitigate information problems.**
- ○ **B.** they are able to lend money without requiring any collateral.

ID: End-of-Chapter Exercise 6

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6. Which of the following is *not* an important financial intermediary in the economy?

- ○ **A.** Commercial banks.
- ○ **B.** Credit unions.
- ◉ **C.** **The Fed.**
- ○ **D.** Pension funds.

ID: End-of-Chapter Exercise 7

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7. Which of the following is an example of financial intermediation?

- **A.** U.S. Treasury sells bonds to fund government spending.
- **B.** IBM issues a bond that is sold to a retired person.
- **C.** **A saver makes a deposit in a credit union, and the credit union makes a loan to a member for a new car.**
- **D.** IBM issues common stock that is sold to a college student.

The term *bank* generally includes all of the following institutions *except*:

- **A.** **finance companies.**
- **B.** savings and loan associations.
- **C.** credit unions.
- **D.** commercial banks.

ID: Exercise 2.3

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8. (1) _____ are major disruptions in financial markets characterized by sharp declines in asset prices or failure of many financial firms.

(2) _____ is the development of new financial products and services.

(1)
- **Financial crises**
- Recessions
- Business cycle fluctuations

(2)
- Production
- Financial intermediation
- **Financial innovation**

ID: Exercise 2.4

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9. Why do managers of financial institutions care so much about the activities of the Federal Reserve System?

- **A.** Because the Federal Reserve conducts fiscal policy, which can have important impacts on the profitability of financial institutions.
- **B.** **Because the Federal Reserve affects interest rates, inflation, and business cycles, all of which have an important impact on the profitability of financial institutions.**
- **C.** Because financial institutions count on the Federal Reserve as being the lender of last resort and, as such, follow the Fed's activities closely to monitor whether there are enough reserves in the system to receive a bailout, if necessary.
- **D.** None of the above—financial institutions are only directly influenced by the activities of Congress and the Securities and Exchange Commission.

ID: End-of-Chapter Exercise 13

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10. How does the size of the U.S. budget deficit in 2010 compare to the time period since 1950?

- **A.** **It has expanded dramatically since 2007. In 2010, the deficit-to-GDP ratio was 10 percent, well above the historical average of around 2 percent since 1950.**
- **B.** It has constantly expanded since 1950. In 2010, the deficit-to-GDP ratio was 10 percent, well above the historical average of around 2 percent since 1950.
- **C.** It increased slightly from 1950 to 1983, and then recently decreased. In 2010, the deficit-to-GDP ratio was 10 percent, well under the 1983 peak of around 16 percent.
- **D.** It has not changed significantly since 1950.

ID: End-of-Chapter Exercise 14

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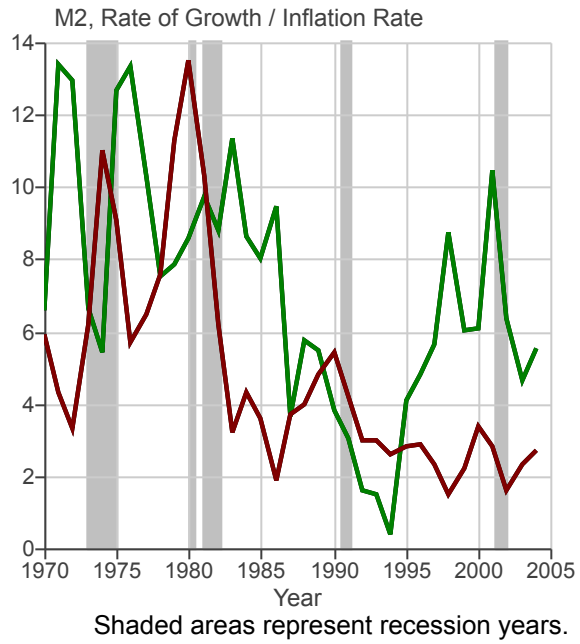
11. Evidence from the United States and other foreign countries indicates that:

- **A.** money growth is clearly unrelated to inflation.
- **B.** there is little support for the assertion that "inflation is always and everywhere a monetary phenomenon."
- **C.** countries with low monetary growth rates tend to experience higher rates of inflation, all else being constant.
- **D.** **there is a strong positive association between inflation and the growth rate of money over long periods of time.**



Shaded areas represent recession years.

ID: Exercise 3.3

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12. Monetary policy is the management of:

- **A.** government spending and taxation.
- **B.** **the money supply and interest rates.**
- **C.** unemployment and aggregate output.
- **D.** budget surpluses and budget deficits.

All of these statements are true about money and money supply except

- **A.** that money is important to the health of the economy.
- **B.** **that a recession always follows a reduction in the growth rate of the money supply.**
- **C.** that money can be anything that is generally accepted in repayment of debts.
- **D.** that money is linked to changes in economic variables that affect all of us.

ID: Exercise 3.4

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13. Fiscal policy involves decisions about:

- (●) **A. government spending and taxation.**
- ( ) **B.** the money supply and interest rates.
- ( ) **C.** unemployment and inflation.
- ( ) **D.** central banking and the Federal Reserve System.

A (1) _____ is an excess of government expenditures over tax revenues, while a (2) _____ occurs when tax revenues exceed government expenditures.

(1)
- (●) **budget deficit**
- ( ) trade deficit
- ( ) budget surplus
- ( ) trade surplus

(2)
- ( ) trade surplus
- ( ) trade deficit
- ( ) budget deficit
- (●) **budget surplus**

ID: Exercise 3.6

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14. Monetary policy is the management of (1) _____ and (2) _____.

The (3) _____ is the central bank responsible for monetary policy in the United States.

(1)
- (●) **money**
- ( ) stocks
- ( ) bonds

(2)
- ( ) business cycles
- (●) **interest rates**
- ( ) foreign exchange rates

(3)
- ( ) U.S. Treasury
- ( ) Federal Deposit Insurance Corporation
- (●) **Federal Reserve**

ID: Exercise 3.7

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15. When there is an increase in the value of the Japanese yen, all else equal:

- **A.** American businesses will see a decrease in demand for their goods in the United States only.
- **B.** American businesses will see a decrease in demand for their goods in the United States and in foreign countries.
- **C.** American businesses will see a decrease in the supply of their goods in the United States and in foreign countries.
- **D.** **American businesses will see an increase in demand for their goods in the United States and in foreign countries.**

When there is a decrease in the value of the American dollar relative to the Japanese yen, all else equal:

- **A.** Americans will import more Japanese goods than they did before.
- **B.** American goods will become more expensive relative to Japanese goods.
- **C.** Japan will export more goods to the United States than it did before.
- **D.** **Japanese goods will become more expensive relative to American goods.**

ID: End-of-Chapter Exercise 16

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16. How can changes in foreign exchange rates affect the profitability of financial institutions? *(Check all that apply.)*

Changes in foreign exchange rates:

- [x] **A.** **affect the profits made by traders in foreign exchange who work for financial institutions.**
- [ ] **B.** lead to central bank intervention in financial institutions' activities.
- [ ] **C.** cause changes in mortgage interest rates and other interest rates set by financial institutions.
- [x] **D.** **change the value of assets held by financial institutions.**
- [ ] **E.** do not affect the profitability of financial institutions if there is no central bank intervention.

ID: End-of-Chapter Exercise 17

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17. The table to the right lists the foreign exchange rates between U.S. dollars and British pounds (GBP) during April.

(1) _____ would have been the best day to convert $100 into British pounds.

(2) _____ would have been the worst day to convert $100 into British pounds.

The difference in pounds is £ **9.11** . *(Enter your response rounded to two decimal places.)*

Date	U.S. Dollars per GBP
4/1	1.9436
4/4	1.9165
4/5	1.9012
4/6	1.9246
4/7	1.9482
4/8	1.8797
4/11	1.8694
4/12	1.8430
4/13	1.7832
4/14	1.7774
4/15	1.7657
4/18	1.7376
4/19	1.7127
4/20	1.6786
4/21	1.6592
4/22	1.6556
4/25	1.6546
4/26	1.6729
4/27	1.6797
4/28	1.7073
4/29	1.7384

(1) ○ April 1 ○ April 2 ○ April 3 ○ April 4 ○ April 5 ○ April 6 ○ April 7 ○ April 8 ○ April 9 ○ April 10 ○ April 11 ○ April 12 ○ April 13 ○ April 14 ○ April 15 ○ April 16 ○ April 17 ○ April 18 ○ April 19 ○ April 20 ○ April 21 ○ April 22 ○ April 23 ○ April 24 ● **April 25** ○ April 26 ○ April 27 ○ April 28 ○ April 29

(2) ○ April 1 ○ April 2 ● **April 3** ○ April 4 ○ April 5 ○ April 6 ○ April 7 ○ April 8 ○ April 9 ○ April 10 ○ April 11 ○ April 12 ○ April 13 ○ April 14 ○ April 15 ○ April 16 ○ April 17 ○ April 18 ○ April 19 ○ April 20 ○ April 21 ○ April 22 ○ April 23 ○ April 24 ○ April 25 ○ April 26 ○ April 27 ○ April 28 ○ April 29

ID: End-of-Chapter Exercise 21

18. A strong U.S. dollar means that U.S. goods exported abroad will cost:

- (●) **A. more in foreign countries and foreign goods imported will cost less in the United States.**
- ( ) **B.** less in foreign countries and foreign goods imported will cost less in the United States.
- ( ) **C.** more in foreign countries and foreign goods imported will cost more in the United States.
- ( ) **D.** less in foreign countries and foreign goods imported will cost more in the United States.

ID: Exercise 4.4

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19. The (1) _____ is the market in which one currency is exchanged for another.

Which of the following is true if the dollar becomes weaker on the foreign exchange market—that is, the value of the dollar falls relative to the value of foreign currency?

- ( ) **A.** A trip to Europe will be less expensive in terms of dollars.
- (●) **B. Ford will export more cars to Mexico.**
- ( ) **C.** A BMW automobile produced in Germany will cost less to import into the United States.
- ( ) **D.** U.S. citizens will import more goods and services from abroad.

(1)
- ( ) New York Stock Exchange
- ( ) central bank
- (●) **foreign exchange market**
- ( ) U.S. Treasury

ID: Exercise 4.5

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20. Suppose that in a given country from one year to the next, the general price level rises while the quantity of goods produced also rises. What can we determine about the values of nominal and real GDP[1]?

- **A. Both nominal and real GDP will rise, but nominal GDP will increase more.**
- **B.** Nominal and real GDP will increase by the same amount.
- **C.** Nominal GDP will rise, but real GDP will remain unchanged.
- **D.** Both nominal and real GDP will rise, but real GDP will increase more.
- **E.** Nominal GDP will rise, but the change in real GDP cannot be determined.

1: Definition

Nominal GDP

The market value of new final goods and services evaluated at current market prices.

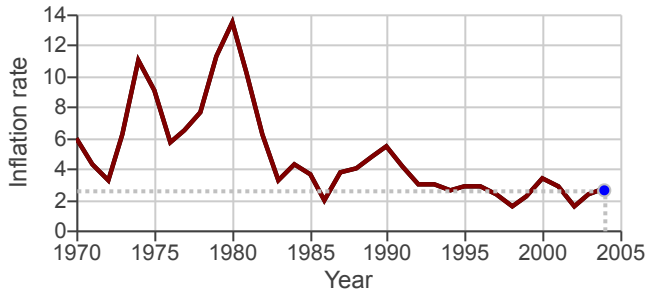
Real GDP

The market value of new final goods and services evaluated in constant euros, meaning using prices from some base year.

ID: Exercise A.1

21. The CPI as of December 2003 was 184. The rate of inflation (π) for 2004 (as shown in the diagram to the right) is 2.65%. What is the value of the CPI in 2004?

The CPI_{2004} is **189**. *(Round your response to the nearest integer.)*



ID: Exercise A.4

22. Given the following business plan information:

I need to borrow $5,000 for a car because it enables me to get a job as a traveling anvil seller. Larry the Loan Shark will loan me the $5,000 at an interest rate of 90%. Principle and interest are due in exactly 12 months. With the car, I will be able to earn $10,000 in extra income over the next 12 months. What is the net cash flow by taking out the loan?

The net cash flow is $ **500** .

ID: End-of-Chapter Exercise 1

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23. In which of the following situations do financial markets allow consumers to better time their purchases? (*Select all that apply.*)

- ☐ **A.** Buying groceries.
- ☑ **B.** **Purchasing a car or furniture.**
- ☑ **C.** **Paying the cost of repairing a flooded basement.**
- ☑ **D.** **Paying for tuition**

ID: End-of-Chapter Exercise 3

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24. Financial markets perform the basic function of:

- ○ **A.** assuring that governments need never resort to printing money to finance their expenditure
- ○ **B.** providing a risk-free means of storing wealth
- ◉ **C.** **matching savers with funds to lend to people who want to borrow funds**
- ○ **D.** mitigating the business cycle

ID: Exercise 1.1

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25. Which of the following statements regarding direct finance is not true?

- **A.** In the United States, less funds flow through the direct financial channels than through indirect financial channels.
- **B.** Securities are liabilities for the firm that issues them and assets for the individual that buys them.
- **C.** Direct finance occurs when borrowers sell securities directly to lenders.
- **D.** **Direct finance requires the use of financial intermediaries.**

Let's assume that a carpenter borrowed $2,000 to be paid off in a year to finance a machine that would make him work faster. As a result, he is able to take on more projects and collect $400 more earnings in the first year, after paying off the principal of $2,000. However, there is a 12% rental fee (interest) on his loan that he also has to pay off. The carpenter earned an extra $ **160** in the first year. *(Round your response to the nearest dollar)*

ID: Exercise 1.4

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26. Match (by number) each financial market[2] with its description:

Financial market	
Primary market	**3**
Capital market	**4**
Money market	**1**
Secondary market	**2**
Debt market	**5**

Description

1. A financial market in which only short-term debt instruments (generally those with original maturity of less than one year) are traded.
2. A financial market in which securities that have been previously issued can be resold.
3. A financial market in which new issues of a security, such as a bond or a stock, are sold to initial buyers by the corporation or government agency borrowing the funds.
4. A market in which longer-term debt (generally those with original maturity of one year or greater) and equity instruments are traded.
5. A market where bonds or mortgages, which are contractual agreements by the borrower to pay the holder of the instrument fixed dollar amounts at regular intervals until a specified date when a final payment is made, are traded.
6. A market in which dealers at different locations who have an inventory of securities stand ready to buy and sell securities to anyone who comes to them and is willing to accept their price.

2: Definition

Financial markets

Markets in which funds are transferred from people who have a surplus of available funds to people who have a shortage of available funds.

ID: Exercise 2.1

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27. Complete the following table related to the structure of financial markets[3].

	Direct finance	Indirect finance
Savers	(1) _____	(2) _____
Borrowers	(3) _____	(4) _____

3: Definition

Financial markets

Markets in which funds are transferred from people who have a surplus of available funds to people who have a shortage of available funds.

(1)
- ○ Make deposits
- ○ Sell securities
- ◉ **Buy securities**
- ○ Take out loans
- ○ Hoard cash

(2)
- ◉ **Make deposits**
- ○ Sell securities
- ○ Take out loans
- ○ Hoard cash
- ○ Buy securities

(3)
- ○ Make deposits
- ◉ **Sell securities**
- ○ Buy securities
- ○ Take out loans
- ○ Hoard cash

(4)
- ○ Hoard cash
- ◉ **Take out loans**
- ○ Sell securities
- ○ Make deposits
- ○ Buy securities

ID: Exercise 2.2

28. The maturity of a debt instrument is the number of years (term) until that instrument's expiration date. Identify the term to maturity[4] of the following financial instruments:

A 30-year corporate bond. (1) _____

A money-market instrument with a maturity of 6 months. (2) _____

A Treasury note with a maturity of 5 or 10 years. (3) _____

A 90-day Treasury bill. (4) _____

4: Definition

Maturity

Time to the expiration date (maturity date) of a debt instrument.

(1)
- ○ Short-term
- ○ Intermediate-term
- ◉ **Long-term**

(2)
- ◉ **Short-term**
- ○ Intermediate-term
- ○ Long-term

(3)
- ○ Short-term
- ◉ **Intermediate-term**
- ○ Long-term

(4)
- ◉ **Short-term**
- ○ Intermediate-term
- ○ Long-term

ID: Exercise 2.3

29. (1) _____ are firms that assist in the initial sale of securities in the primary market.

(2) _____ are agents for investors who help match buyers with sellers of securities while

(3) _____ are those who buy and sell securities at a specified price for buyers and sellers.

(1)
- ○ Dealers
- ○ Foreign exchange markets
- ◉ **Investment banks**
- ○ Brokers

(2)
- ○ Dealers
- ○ Financial intermediaries
- ○ Investment banks
- ◉ **Brokers**

(3)
- ◉ **dealers**
- ○ financial intermediaries
- ○ brokers
- ○ investment banks

ID: Exercise 2.5

30. What is the difference between a mortgage and a mortgage-backed security?

- **A.** Mortgages are usually used to create a portfolio, whereas mortgage-backed securities are held separately.
- **B.** Mortgages are provided to households or firms, whereas mortgage-backed securities are provided mainly to financial institutions.
- **C.** No interest is paid on mortgage-backed securities, whereas interest and principal payments are paid on mortgages.
- **D.** **Mortgages are loans, whereas mortgage-backed securities are bond-like debt instruments.**

ID: End-of-Chapter Exercise 7

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31. Match (by number) each money market instrument with its description:

Money market instrument	
Commercial paper	**3**
Treasury bills	**5**
Repurchase agreements	**6**
Federal funds	**1**
Banker's acceptances	**4**

Description

1. These instruments are typically overnight loans between banks of their deposits at the Federal Reserve.
2. A debt instrument sold by a bank to depositors that pays annual interest of a given amount and at maturity pays back the original purchase price.
3. A short-term debt instrument issued by large banks and well-known corporations.
4. These money market instruments are created in the course of carrying out international trade. This is a bank draft (a promise of payment similar to a check) issued by a firm, payable at some future date, and guaranteed for a fee by a bank.
5. These short-term debt instruments of the US government are issued in three-, six-, and 12-month maturities to finance the federal government.
6. These instruments are effectively short-term loans (usually with a maturity of less than two weeks) for which Treasury bills serve as collateral, which the lender receives if the borrower does not pay back the loan.

ID: Exercise 3.1

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32. Match (by number) each capital market instrument with its description:

Capital Market Instrument	
Government Security	**2**
Stocks	**4**
Agency Securities	**1**
Corporate Bonds	**6**
Mortgages	**3**

Description

1. These long-term bonds are issued by institutions such as Ginnie Mae, the Federal Farm Credit Bank, and the TVA. Many of these securities are guaranteed by the federal government.
2. These long-term debt instruments are issued by the U.S. Treasury to finance the deficits of the federal government.
3. These are loans to households or firms to purchase housing, land, or other real structures, where the structure or land itself serves as collateral for the loans.
4. These are equity claims on the net income and assets of a corporation.
5. State and local bonds are long-term debt instruments issued by state and local governments to finance expenditures on schools, roads, and other large programs.
6. These long-term bonds are issued by corporations with very strong credit ratings.

ID: Exercise 3.2

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33. How do financial intermediaries[5] benefit by providing risk-sharing services?

- (●) **A. They are able to earn a profit on the spread between the returns they earn on risky assets and the payments they make on the assets they have sold**
- ( ) **B.** They are able to turn safe assets into high-risk, high-return investments
- ( ) **C.** Customers pay a fee to financial intermediaries for being able to invest in safer assets
- ( ) **D.** A collection of riskier assets is always more profitable for a bank or intermediary

5: Definition

Financial intermediaries

Institutions (such as banks, insurance companies, mutual funds, pension funds, and finance companies) that borrow funds from people who have saved and then make loans to others.

ID: End-of-Chapter Exercise 10

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34. One of the factors contributing to the financial crisis of 2007-2009 was the widespread issuance of subprime mortgages. How does this demonstrate adverse selection?

- **A.** Potential homeowners borrowed funds for high-yield, high-risk investments instead of mortgages.
- **B.** **Lenders loaned money to a pool of potential homeowners with the highest credit risk and lowest net wealth.**
- **C.** Lenders consciously loaned money to the riskiest homeowners with the highest interest rates to increase their profits.
- **D.** Financial intermediaries provided funds to potential homeowners under strict conditions.

ID: End-of-Chapter Exercise 12

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35. Match (by number) each concept with its description:

Concept	
Adverse selection	**3**
Asymmetric information	**4**
Moral hazard	**1**

Description

1. A situation where the borrower might engage in activities that are undesirable from the lender's point of view, because they make it less likely that the loan will be paid back.
2. Investing in a collection (portfolio) of assets whose returns do not always move together, with the result that overall risk is lower than for individual assets.
3. Occurs when the potential borrowers who are the most likely to produce an undesirable (adverse) outcome—the bad credit risks—are the ones who most actively seek out a loan and are thus most likely to be selected.
4. A situation where one party often does not know enough about the other party to make accurate decisions.
5. A process of borrowing funds from the lender-savers and then using these funds to make loans to borrower-spenders.

ID: Exercise 5.1

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36. As a bank, you make a loan to an individual seeking funds to open a coffee shop. When the loan is made, the borrower uses the funds to take a vacation to Greenland. [6]

This is an example of (1) _____ .

6: More Info

Asymmetric Information: Adverse Selection and Moral Hazard

The presence of transaction costs in financial markets explains, in part, why financial intermediaries and indirect finance play such an important role in financial markets. An additional reason is that in financial markets, one party often does not know enough about the other party to make accurate decisions. This inequality is called asymmetric information. For example, a borrower who takes out a loan usually has better information about the potential returns and risk associated with the investment projects for which the funds are earmarked than the lender does. Lack of information creates problems in the financial system on two fronts: before the transaction is entered into and after.

Adverse selection is the problem created by asymmetric information *before* the transaction occurs. Adverse selection in financial markets occurs when the potential borrowers who are the most likely to produce an undesirable (*adverse*) outcome—the bad credit risks—are the ones who most actively seek out a loan and are thus most likely to be selected. Because adverse selection makes it more likely that loans might be made to bad credit risks, lenders may decide not to make any loans even though there are good credit risks in the marketplace.

Moral hazard is the problem created by asymmetric information *after* the transaction occurs. Moral hazard in financial markets is the risk (*hazard*) that the borrower might engage in activities that are undesirable (*immoral*) from the lender's point of view, because they make it less likely that the loan will be paid back. Because moral hazard lowers the probability that the loan will be repaid, lenders may decide that they would rather not make a loan.

(1)
- ○ diversification
- ◉ **moral hazard**
- ○ adverse selection

ID: Exercise 5.2

37. Match (by number) each financial intermediary[7] with its description:

Financial Intermediary	
Commercial Bank	**3**
Savings and Loan	**4**
Credit Union	**1**
Mutual Fund	**5**

Description

1. These financial institutions are very small cooperative lending institutions organized around a particular group: union members, employees of a firm, and so forth. They acquire funds from deposits called shares and primarily make consumer loans.
2. These intermediaries raise funds by selling commercial paper (a short-term debt instrument) and by issuing stocks and bonds. They lend these funds to consumers and to small businesses.
3. These financial intermediaries raise funds primarily by issuing checkable deposits, savings deposits, and time deposits. They then use these funds to make commercial, consumer, and mortgage loans and to buy U.S. government securities and municipal bonds.
4. These depository institutions obtain funds primarily through savings deposits (often called shares) and time and checkable deposits. In the past, these institutions were constrained in their activities and mostly made mortgage loans for residential housing.
5. These financial intermediaries acquire funds by selling shares to many individuals and use the proceeds to purchase diversified portfolios of stocks and bonds.

7: Definition

Financial intermediaries

Institutions (such as banks, insurance companies, mutual funds, pension funds, and finance companies) that borrow funds from people who have saved and then make loans to others.

ID: Exercise 6.1

38. Identify each type of financial institution:

Institution	Type
Finance Companies	(1) _____
Commercial Banks	(2) _____
Life Insurance Companies	(3) _____
Savings and Loan Associations	(4) _____
Credit Unions	(5) _____
Mutual Funds	(6) _____
Investment Banks	(7) _____
Pension Funds	(8) _____

(1)
- (●) **Investment Intermediary**
- ( ) Depository Institution
- ( ) Contractual Savings Institution

(2)
- ( ) Investment Intermediary
- (●) **Depository Institution**
- ( ) Contractual Savings Institution

(3)
- (●) **Contractual Savings Institution**
- ( ) Investment Intermediary
- ( ) Depository Institution

(4)
- ( ) Contractual Savings Institution
- (●) **Depository Institution**
- ( ) Investment Intermediary

(5)
- ( ) Investment Intermediary
- (●) **Depository Institution**
- ( ) Contractual Savings Institution

(6)
- (●) **Investment Intermediary**
- ( ) Depository Institution
- ( ) Contractual Savings Institution

(7)
- (●) **Investment Intermediary**
- ( ) Contractual Savings Institution
- ( ) Depository Institution

(8)
- ( ) Depository Institution
- ( ) Investment Intermediary
- (●) **Contractual Savings Institution**

ID: Exercise 6.2

39. Properly categorize each of the following concepts:

Concept	Variable Type
Debt	(1) _____
Money	(2) _____
Income	(3) _____
Savings deposits	(4) _____
Wealth	(5) _____

(1) (●) **Stock variable** ( ) Flow variable
(2) (●) **Stock variable** ( ) Flow variable
(3) ( ) Stock variable (●) **Flow variable**
(4) (●) **Stock variable** ( ) Flow variable
(5) (●) **Stock variable** ( ) Flow variable

ID: Exercise 1.1

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40. Relate each concept to its corresponding definition:

Concept	Definition Number
Debt	**5**
Money	**2**
Income	**1**
Savings	**4**
Wealth	**3**

Definition

1. Earnings received from working, property rentals, entrepreneurship, or the ownership of financial assets.
2. A tool used to facilitate transactions, store wealth, or to be used as a yardstick to compare values.
3. What you own—the total collection of assets that serve to store value. This includes not only money but also other assets such as bonds, common stock, art, land, furniture, cars, and houses.
4. The difference between what is earned and what is spent. This adds to total wealth.
5. What you owe—the accumulation of spending over and above periodic earnings.

ID: Exercise 1.2

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41. Currency includes:

- **A.** paper money, coins, checks, and savings deposits.
- **B.** paper money, coins, and checks.
- **C.** paper money and checks.
- **D.** **paper money and coins.**

ID: Exercise 1.4

---

42. Which of the following is measured as a flow per unit of time?

- **A.** **income**
- **B.** wealth
- **C.** money
- **D.** money supply

(1) _____ is the total collection of pieces of property that serves to store value.

(1)
- Income
- Money
- **Wealth**
- Liquidity

ID: Exercise 1.5

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43. Most of the time it is quite difficult to separate the three functions of money. Money performs its three functions at all times, but sometimes we can stress one in particular. For each of the following situations, identify which function of money is emphasized.

Brooke accepts money in exchange for performing her daily tasks at her office, since she knows she can use that money to buy goods and services.

In this case, money is being used as a (1) _____.

Tim wants to calculate the relative value of oranges and apples, and therefore checks the price per pound of each of these goods quoted in currency units.

In this case, money is being used as a (2) _____.

Maria is currently pregnant. She expects her expenditures to increase in the future and decides to increase the balance in her savings account.

In this case, money is being used as a (3) _____.

(1)
- ○ unit of account
- ○ store of value
- ◉ **medium of exchange**

(2)
- ○ store of value
- ○ medium of exchange
- ◉ **unit of account**

(3)
- ○ medium of exchange
- ◉ **store of value**
- ○ unit of account

ID: End-of-Chapter Exercise 5

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44. In Brazil, a country that underwent a rapid inflation before 1994, many transactions were conducted in dollars rather than in reals, the domestic currency. During this period, the US dollar served what property or properties in Brazil?

- ○ **A.** Unit of account
- ○ **B.** Medium of exchange
- ○ **C.** Store of value
- ○ **D.** A and B are correct
- ○ **E.** B and C are correct
- ◉ **F. A, B, and C are correct**

ID: End-of-Chapter Exercise 6

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45. Which of the following represents an advantage of using commodity money[8] for transactions?

- **A.** It can never be debased – its purity, quantity, and value are easy to verify
- **B.** It is easily divisible, so that it is easy to 'make change'
- **C.** It is lightweight and portable
- **D.** **It has an intrinsic value beyond its use as a medium of exchange**

8: Definition

Commodity money
Money made up of precious metals or another valuable commodity.

ID: Exercise 3.1

46. Which of the following is a disadvantage of using fiat money[9]?

- **A.** Fiat money is not portable or widely accepted
- **B.** **Public authorities may be tempted to produce too much of it**
- **C.** Fiat money is not easily divisible or suitable for small purchases

9: Definition

Fiat money
Paper currency decreed by a government as legal tender but not convertible into coins or precious metal.

ID: Exercise 3.2

47. What is the main disadvantage of moving to e-money[10] or moving to a *cashless* society?

- **A.** The use of e-money does not work with vending machines or other coin-based transactions
- **B.** It is difficult to keep track of electronic purchases
- **C.** **There are problems with security and privacy**
- **D.** Funds are debited too quickly from the payer's account

10: Definition

Electronic money (e-money)
Money that exists only in electronic form and substitutes for cash as well.

ID: Exercise 3.4

48. Why is simply counting currency an inadequate measure of money?

- **A.** Currency is too broad a definition of money, and often means many things.
- **B.** Simply counting currency can often overstate an individual's wealth or income.
- **C.** **There are other liquid assets similar to currency that can be used as money to purchase goods and services.**
- **D.** All of the above are correct.

ID: End-of-Chapter Exercise 1

49. Rank the following assets from most liquid (1) to least liquid (6): [11]

Asset	Rank
a. Checking account deposits	**2**
b. Houses	**6**
c. Currency	**1**
d. Automobile	**5**
e. Savings deposits	**3**
f. Common stock	**4**

11: More Info

Liquidity

The relative ease and speed with which an asset can be converted into cash.

ID: End-of-Chapter Exercise 12

50. For each of the following assets, indicate which, if any, of the monetary aggregates includes them:

Asset

a. Currency (1) _____

b. Money market mutual funds (noninstitutional) (2) _____

c. U.S. T-bills (with maturities of less than 90 days) (3) _____

d. Small-denomination time deposits (4) _____

e. Large-cap mutual funds (5) _____

f. Checkable deposits (6) _____

(1)
- ○ M2 only
- ◉ **M1 and M2**
- ○ Neither M1 nor M2

(2)
- ○ M1 and M2
- ○ Neither M1 nor M2
- ◉ **M2 only**

(3)
- ○ M2 only
- ○ M1 and M2
- ◉ **Neither M1 nor M2**

(4)
- ◉ **M2 only**
- ○ M1 and M2
- ○ Neither M1 nor M2

(5)
- ◉ **Neither M1 nor M2**
- ○ M2 only
- ○ M1 and M2

(6)
- ○ M2 only
- ◉ **M1 and M2**
- ○ Neither M1 nor M2

ID: End-of-Chapter Exercise 15

51. The table to the right shows hypothetical values, in billions of dollars.

Use the table to calculate the M1 and M2 money supply for each year. *(Enter your responses rounded to the nearest dollar.)*

	2009	2010	2011	2012
Total M1	**1,873**	**1,855**	**1,864**	**1,881**
Total M2	**10,092**	**10,426**	**10,912**	**11,573**

Calculate the growth rates of the M1 and M2 money supply from the previous year. *(Enter your responses rounded to one decimal place. Use a minus sign to enter negative numbers.)*

	2010	2011	2012
M1 Growth rate	**− 1.0**	**0.5**	**0.9**
M2 Growth rate	**3.3**	**4.7**	**6.1**

Why are the growth rates of M1 and M2 so different?

- ○ **A.** The M2 monetary aggregate includes all the components of M1, and it always rises more rapidly than M1.
- ◉ **B.** **The components of M2 are rising much more rapidly compared to the components of M1.**
- ○ **C.** The components of M1 are rising much more rapidly compared to the components of M2.
- ○ **D.** The M2 monetary aggregate is usually more volatile than M1; therefore, M2 is rising much more rapidly.

ID: End-of-Chapter Exercise 19

	2009	2010	2011	2012
A. Currency	880	890	892	897
B. Money market mutual fund shares	675	685	683	692
C. Saving account deposits	5,500	5,780	5,968	6,105
D. Money market deposit accounts	1,214	1,245	1,274	1,329
E. Demand and checkable deposits	990	962	970	983
F. Small-denomination time deposits	830	861	1,123	1,566
G. Traveler's checks	3	3	2	1
H. 3-month Treasury bills	1,990	2,378	2,440	2,506

52. How much is $100 to be received in exactly one year worth to you today if the interest rate is 10%?

The value today is $ **90.91** . *(Round your response to the nearest penny.)*

This same $100 received in one year would be worth (1) _____ to you today if the interest rate rose to 15%.

(1) ◉ **less**
○ more
○ the same amount

ID: End-of-Chapter Exercise 1

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53. Which of the following information would you need to take into consideration when deciding to receive $5,000 today or $5,500 one year from today?

○ **A.** The present value of money.
○ **B.** Annual interest rate.
◉ **C. Both A and B.**

You would prefer to accept (1) _____ if the annual interest rate is 11%.

(1) ◉ **$5,000 today**
○ $5,500 one year from today

ID: End-of-Chapter Exercise 2

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54. Is it better for bondholders when the yield to maturity increases or decreases?

Bondholders are better off when the yield to maturity:

○ **A.** decreases, since this represents an increase in the coupon payment and an increase in potential capital gains.
○ **B.** increases, since this represents a decrease in the bond maturity and a decrease in potential capital losses.
○ **C.** increases, since this represents a decrease in the price of the bond and an increase in potential capital gains.
◉ **D. decreases, since this represents an increase in the price of the bond and a decrease in potential capital losses.**

ID: End-of-Chapter Exercise 4

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55. Assuming the terms of issuance to be the same for different types of loans, a government would choose to issue a:

- (●) **A. perpetuity.**
- ( ) **B.** fixed payment loan.
- ( ) **C.** discount bond.
- ( ) **D.** coupon bond.

ID: End-of-Chapter Exercise 8

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56. True or False: With a discount bond, the return on a bond is equal to the rate of capital gain.

- (●) **A. True: A discount bond has no coupon payments so the return on the bond is equal to the rate of capital gain.**
- ( ) **B.** False: Bond returns can never equal the rate of capital gain; there must be a capital loss or gain indicated.
- ( ) **C.** True: A discount bond pays fixed interest payments every year so the return is equal to the rate of capital gain.
- ( ) **D.** There is no way to determine this without the knowing the coupon amount and interest rate.

ID: End-of-Chapter Exercise 10

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57. If the interest rate is 10%, what is the present value[12] of a security that pays you $1,150 next year, $1,250 the year after, and $1,350 the year after that?

Present value is $ **3,092.79** . *(Round your response to the nearest penny.)*

12: Definition

Present Value
Today's value of a payment to be received in the future when the interest rate is *i*. Also called present discounted value.

ID: End-of-Chapter Exercise 14

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58. Calculate the present value of a $1,500 discount bond with 7 years to maturity if the yield to maturity is 3%.

The present value is $ **1,219.64** . *(Round your response to two decimal places.)*

ID: End-of-Chapter Exercise 15

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59. Consider a bond with a 6% annual coupon and a face value of $1,100.

Complete the following table. *(Enter your responses rounded to two decimal places.)*

Years to Maturity	Yield to Maturity	Current Price
2	4%	$ **1,141.49**
2	6%	$ **1,100.00**
3	6%	$ **1,100.00**
5	4%	$ **1,197.94**
5	8%	$ **1,012.16**

When the yield to maturity is (1) _____ the coupon rate, the bond's current price is below its face value. For a given maturity, the bond's current price (2) _____ as the yield to maturity rises. For a given yield to maturity, a bond's value (3) _____ as its maturity increases. When the yield to maturity is (4) _____ the coupon rate, a bond's current price equals its face value regardless of the number of years to maturity.

(1) ○ equal to ○ less than ◉ **greater than**

(2) ○ does not change ◉ **falls** ○ rises

(3) ○ falls ◉ **rises** ○ does not change

(4) ○ greater than ◉ **equal to** ○ less than

ID: End-of-Chapter Exercise 20

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60. If the interest rate is 4%, the present value of $1000 to be received 6 years from today is $ **790.31** . *(Round your response to the nearest two decimal place)*

You are in a car accident, and you receive an insurance settlement of $5000 per year for the next three years. The first payment is to be received today. The second payment is to be received one year from today, and the third payment two years from today. If the interest rate is 4%, the present value of the insurance settlement is $ **14430.47** . *(Round your response to the nearest two decimal place)*

The most accurate measure of interest rates is

○ **A.** current yield.
○ **B.** discounted present value.
○ **C.** the coupon rate.
◉ **D. yield to maturity.**

ID: Exercise 1.3

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61. A coupon bond with a face value of $600 that pays an annual coupon of $300 has a coupon rate equal to **50** %. *(Round your response to the nearest whole number)*

What is the *approximate* (closest whole number) yield to maturity on a coupon bond that matures one year from today, has a par value of $990, pays an annual coupon of $75, and whose price today is $1019.50?

- ○ **A.** 6%
- ○ **B.** 5%
- ◉ **C. 4%**
- ○ **D.** 8%
- ○ **E.** 7%

If the yield to maturity on a bond exceeds its coupon rate, the price of the bond will be (1) _____ its face value.

(1)
- ◉ **below**
- ○ above
- ○ equal

ID: Exercise 1.6

62. If a coupon bond has two years to maturity, a coupon rate of 9%, a par value of $1100, and a yield to maturity of 14%, then the coupon bond will sell for $ **1009.43** . *(Round your response to the nearest two decimal place)*

The price of a bond and its yield to maturity are (1) _____ .

Which of the following statements is not true?

- ○ **A.** Current yield is a better approximation of yield to maturity for long–term bonds when compared to short–term bonds.
- ○ **B.** The coupon rate on a coupon bond is fixed once the bond is issued.
- ◉ **C. Bond prices vary proprtionately with the interest rate for both coupon bonds and discount bonds.**
- ○ **D.** The longer to maturity, the greater is the change in the price of a bond from the same size change in the interest rate.

(1)
- ○ positively related
- ◉ **negatively related**
- ○ unrelated

ID: Exercise 1.7

---

63. Find the price of a 8.33% coupon bond with a face value of $6000, a 12.00% yield to maturity, and 5 years to maturity.

PV = Price of the bond = $ **5206.95** *(Round your response to two decimal places.)*

ID: Exercise 1.14

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64. Suppose today you buy a coupon bond that you plan to sell one year later. Which part of the rate of return formula incorporates future changes into the bond's price?

(1) _____ is the part of the rate of return formula that incorporates future changes in the price of the bond.

(1)
- ○ The current yield
- ◉ **The rate of capital gain**

ID: End-of-Chapter Exercise 5

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65. If interest rates decline, which would you rather be holding, long-term bonds or short-term bonds?

- **A.** Long-term bonds because their price is likely to fall
- **B.** **Long-term bonds because their price would increase more than the price of short-term bonds**
- **C.** Short-term bonds because their price would increase more than the price of long-term bonds
- **D.** Short-term bonds because their price is less sensitive to interest-rate volatility

ID: End-of-Chapter Exercise 11

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66. A bond has a face value of $1,000 and a 10% coupon rate, its current price is $940, and it is expected to increase to $950 next year.

The current yield is **10.6** %. *(Enter your response rounded to one decimal place.)*

The expected rate of capital gain is **1.1** %. *(Enter your response rounded to one decimal place.)*

The expected rate of return is **11.7** %. *(Enter your response rounded to one decimal place.)*

ID: End-of-Chapter Exercise 24

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67. As a real estate speculator, you are planning and able to buy a house that costs $200,000, borrowing the full amount with no money down with the goal of selling this same property in exactly one year. Mortgage interest rates are 5%, and the expected increase in housing prices is 2%. *(All rates and percentages are annual values.)*

What is your expected capital gain/loss when you *flip* the house in one year?

The expected capital gain (or loss) is $ **4,000** . *(Round your response to the nearest dollar.)*

What is your real rate of return?

The real rate of return is **− 3** %. *(Round your response to the nearest integer.)*

How will an increase in mortgage rates to 10% and an expected increase in housing prices of 9% affect your decision?

You will be (1) _____ .

(1)
- unaffected
- **more likely to buy**
- less likely to buy

ID: End-of-Chapter Exercise 6

68. A discount bond will have a negative nominal interest rate when the:

- **A.** bond is sold long before its maturity date.
- **B.** **current bond price is greater than its face value.**
- **C.** sum of the annual coupon payments and the face value of the bond is higher than its current price.
- **D.** current bond yield is smaller than its yield to maturity.

Which of the following statements is true?

- **A.** **Only a coupon bond can have a negative nominal interest rate.**
- **B.** Only a perpetuity can have a negative nominal interest rate.
- **C.** Neither a coupon bond nor a perpetuity can have a negative nominal interest rate.
- **D.** Both a coupon bond and a perpetuity can have a negative nominal interest rate.

ID: End-of-Chapter Exercise 9

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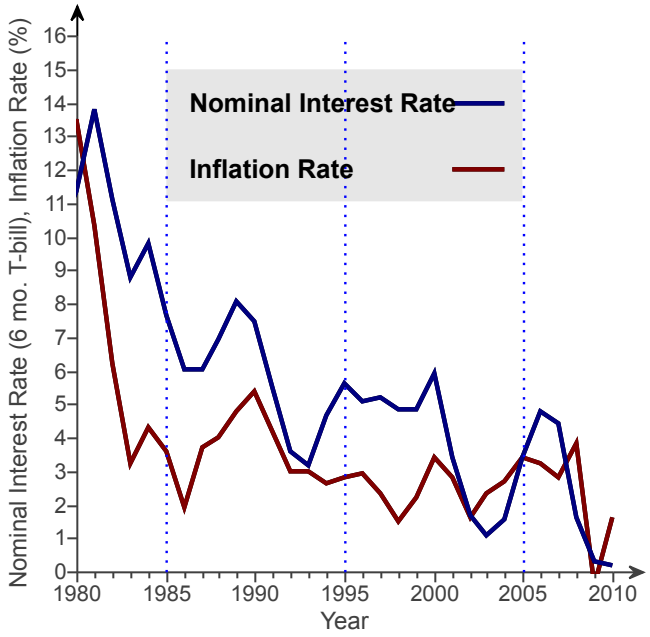
69. Interest rates were lower in the mid-1980s than in the late 1970s, yet many economists have commented that real interest rates were actually much higher in the mid-1980s than in the late 1970s.

Consider the diagram to the right that shows the nominal interest rate[13] and the inflation rate.

The real interest rate[14]:

- **A.** was negative from the early 1980s until about 2002 and then it became positive.
- **B.** **was higher in 1985 than 2005, when the real interest rate was zero.**
- **C.** tends to fall when the inflation rate falls.
- **D.** was higher in 2005 than 1985, when the real interest rate was negative.



13: Definition

Nominal Interest Rate

An interest rate that does not take inflation into account.

14: Definition

Real Interest Rate

The interest rate adjusted for expected changes in the price level (inflation) so that it more accurately reflects the true cost of borrowing.

ID: End-of-Chapter Exercise 12

70. If you lend money at a 10% nominal interest rate, but you expect inflation to be 6% over the life of the loan, then you expect your purchasing power to grow at a rate of **4** %.

The real interest rate is negative when the nominal interest rate is (1) _____ the inflation rate.

If the nominal interest rate is 2% and the expected rate of inflation is 3%, then the real interest rate is

- ○ **A.** 3%.
- ○ **B.** 2%.
- ○ **C.** 1%.
- ○ **D.** 0%.
- ◉ **E.** **−1%.**

(1)
- ○ greater than
- ◉ **less than**
- ○ equal to

ID: Exercise 3.3