

Objectives for Chapter 7: The Foreign Exchange and Stock Markets

At the end of Chapter 7, you will be able to:

1. Define "*foreign exchange market*"? Define "*exchange rate*"?
2. Explain is the relation between the demand for foreign exchange and the supply of dollars?
3. Name and explain are the factors that affect the **demand for foreign exchange**? (Review the factors that affect the demand for any product)
4. Define the terms "*export*" and "*import*".
5. Define "*portfolio investment*" and "*foreign direct investment*"?
6. Name and explain the factors that affect **the supply of foreign exchange**?
7. Define "*appreciation*" and "*depreciation*" of a currency?
8. Explain the effects of appreciation (or depreciation) of the American dollar on American exports and imports?
9. Explain what will result in the foreign exchange market if interest rates rise in the United States more than they rise abroad. Use this analysis to explain the causes of the dollar appreciation from 1980-1985.
10. Explain what will result in the foreign exchange market if inflation rates are higher in the United States than in the countries with whom we trade.
11. Explain what will result in the foreign exchange market if income rises faster in the United States than in Japan.
12. Explain the difference between a "*sole proprietorship*", a "*partnership*", and a "*corporation*" as well as the advantages and disadvantages of each of these types of organization.
13. Explain the difference between a "*public corporation*" and a "*private corporation*".
14. Explain what affects the demand for stocks in general and what affects the demand for the stock of a particular company.

15. Explain what each of the following is as well as the advantages and disadvantages of each: savings account, CD, corporate security, and Treasury (government) security.
16. Explain what is meant by *“liquidity”*.
17. Explain the difference between *a “bill”, a “note”, and a “bond”*.
18. Explain the relation between the price of a security and the interest rate on it.
19. Explain the relation between the interest rate paid by a security and expected inflation.
20. Explain what a *“mutual fund”* is. Explain what a *“money market fund”* is. Explain the advantages and disadvantages of mutual funds.
21. Explain the advantages and the disadvantages of saving in the form of housing.
22. Explain what determines the value of a share of stock.
23. Explain what is meant by *“dividends”, “retained earnings”, and “capital gains”*.
24. Explain the difference between an *“investor”* and a *“trader”*.
25. Name and explain the four factors to consider in deciding how you should save.
26. Explain why it is very unlikely that one can “beat the stock market”.

Chapter 7 The Foreign Exchange and Stock Markets (latest revision August 2004)

We saw in Chapter 6 that a market is a place where buyers come to buy and where sellers come to sell. *The foreign exchange market is a place where buyers come to buy and sellers come to sell foreign monies*, such as Mexican Pesos, Japanese Yen, British Pounds, European Euros, Canadian Dollars, and so forth. *The stock market is a place where buyers come to buy and sellers come to sell stocks --- shares of ownership in corporations*. In the foreign exchange market, buying and selling takes place through the interaction of large banks all over the world. These banks, acting on behalf of their customers, interact through computer communication. On the other hand, much buying and selling in the stock market is done by brokers in a specific place, such as the New York Stock Exchange on Wall Street in New York City. Both of these markets are extremely important in the American economy. Because of their importance and because they illustrate the operation of markets very well, we will discuss them in this chapter.

1. The Foreign Exchange Market

Demand for Foreign Exchange

Why would anyone buy foreign exchange (the money of a foreign country)? If you have traveled in a foreign country, you have probably bought the money of that country. This means that you have exchanged your dollars for the money of that country. Otherwise, you most likely have not participated in a foreign exchange market. But a large number of businesses and individuals do participate in this market. There are basically four reasons they do so.

(A) The main reason to buy foreign exchange is to be able to buy foreign goods and services (called *importing*). Suppose you wish to buy your BMW. You buy it from a dealer in the United States. The dealer buys it from an importer. The importer buys it from the BMW Corporation located in Munich, Germany. The BMW Corporation wishes to be paid in Euros, the money of Europe since 2002. So the importer would have to buy the Euros to pay for the BMW automobiles. Let's say the importer needs 100,000 Euros to buy your BMW automobile. The importer goes into the foreign exchange market by going to an American bank, such as Bank of America. Bank of America communicates with a German bank (such as Deutches Bank) to help the American importer obtain the Euros it needs. The importer will give \$100,000 that it already owns to Bank of America and will get the 100,000 Euros in return (assuming that \$1 exchange for one Euro). Bank of America gets the 100,000 Euros by sending the \$100,000 to Deutsches Bank. Deutsches Bank gets the 100,000 Euros from one of its customers, Mr. Schmidt. Mr. Schmidt gives the 100,000 Euros that he owns to Deutsches Bank because Mr. Schmidt desires to have the \$100,000. With the two banks as intermediaries, the importer has given up the \$100,000 that it owned and received in return 100,000 Euros that it will use to buy your BMW automobile. Mr. Schmidt has given up the 100,000 Euros that he owned and received in return \$100,000 that he will use to buy some new computers for his business from IBM.

We buy foreign exchange in order to buy foreign-made goods and services. (Travel is considered as buying a service.) So why then do we wish to buy foreign-made goods and services? To answer this question, let us go back to our list of the factors that affect the demand for any product. **First we will buy foreign-made goods and services if they are relatively**

cheaper than American-made goods and services. This involves comparing the prices of the American-made goods and services to the prices of the foreign-made goods and services, their substitutes. *(1) If the prices of American-made goods and services increase, the demand for foreign-made (imported) goods and services will increase. This will increase the demand for foreign exchange. Conversely, if the prices of American-made goods and services decrease, the demand for foreign-made (imported) goods and services will decrease. This will decrease the demand for foreign exchange. (2) On the other hand, if the prices of foreign-made (imported) goods and services increase, the demand for foreign-made (imported) goods and services will decrease. This will decrease the demand for foreign exchange. Conversely, if the prices of foreign-made (imported) goods and services decrease, the demand for foreign-made (imported) goods and services will increase. This will increase the demand for foreign exchange.*

People may also buy foreign-made goods and services because they like them (tastes and preferences). Either they believe that the foreign-made goods are of higher quality or they like the idea that they are foreign. *(3) If people like foreign-made products more, the demand for foreign-made (imported) goods and services will increase. This will increase the demand for foreign exchange. Conversely, if people like American-made products more, the demand for foreign-made (imported) goods and services will decrease. This will decrease the demand for foreign exchange.*

Finally, when incomes of buyers rise, they will buy more of all kinds of goods and services. This means that they will also buy more foreign-made goods and services. Therefore, *(4) an increase in incomes will increase the demand for foreign-made (imported) goods and services. This will increase the demand for foreign exchange. Conversely, a decrease in incomes will decrease the demand for foreign-made (imported) goods and services. This will decrease the demand for foreign exchange.*

(B) A second major reason people buy foreign exchange is called portfolio investment. *Portfolio investment means lending money to someone in another country.* One would lend money to someone in another country by opening a checking or savings account in a bank in another country, by buying a bond of a company in another country, by buying a bond of a government of another country, and so forth. Why would anyone open an account in a foreign bank, lend money to a foreign company, or lend money to a foreign government? (Buying a bond is a form of lending money.) One major answer is that, when they borrow from you, the foreign banks, businesses, or governments will pay you a higher rate of interest. Suppose you have \$10,000 that you wish to keep in a savings account. The bank in the United States will pay you interest of 2% per year. Suppose a bank in Canada will pay you interest of 15%. What do you do? Assuming the risks are about the same, you will open the savings account in the bank in Canada. Of course, to do so, you will have to convert your American dollars into Canadian dollars. *So, when interest rates rise in foreign countries, Americans are more likely to lend money in the foreign countries (in order to be able to get the higher interest). Therefore, the demand for foreign exchange increases. Conversely, when interest rates fall in foreign countries, Americans are less likely to lend money in the foreign countries. Therefore, the demand for foreign exchange decreases. On the other hand, when interest rates rise in the United States, Americans are less likely to lend money in foreign countries (and more likely to*

lend money at home). Therefore, the demand for foreign exchange decreases. Conversely, when interest rates fall in the United States, Americans are more likely to lend money in foreign countries (and less likely to lend money at home). Therefore, the demand for foreign exchange increases.

(C) **A third major reason people buy foreign exchange is called foreign direct investment. *Foreign Direct Investment involves owning and controlling a company in another country.*** Technically, one controls a company if one owns at least 10% of the shares of stock. General Motors of Britain, Germany, or Mexico are examples of foreign direct investment by an American-owned company. Honda of Ohio and Nissan of Tennessee are examples of foreign direct investment in the United States by Japanese-owned companies. *If General Motors wishes to build a company in Mexico, it will have to pay for it with Mexican pesos. Therefore, the demand for foreign exchange (Mexican pesos) rises. If Honda wishes to build another automobile factory in the United States, it will have to pay for it with American dollars. Therefore, the Japanese demand for foreign exchange (American dollars) rises.*

(D) There is one more important reason to buy foreign exchange --- **expectations**. The foreign exchange market is one for which expectations are very important. If one knew about changes in foreign exchange rates before anyone else knew, one could make a considerable fortune. *So, if you as an American expect that Mexican pesos will go up in price in the near future, your demand for them now will increase. Conversely, if you expect that Mexican pesos will go down in price in the near future, your demand for them now will decrease.*

Let us summarize. The demand by Americans for foreign exchange will increase if:

- 1. the prices of American-made goods and services rise*
- 2. the prices of foreign-made goods and services fall*
- 3. people like the foreign-made goods and services better*
- 4. Americans have higher incomes*
- 5. interest rates rise in foreign countries or fall in the United States*
- 6. American companies have a greater desire to build or buy companies in foreign countries*
- 7. Americans expect that the price of a foreign money will rise in the near future*

The opposite changes will cause the demand by Americans for foreign exchange to fall.

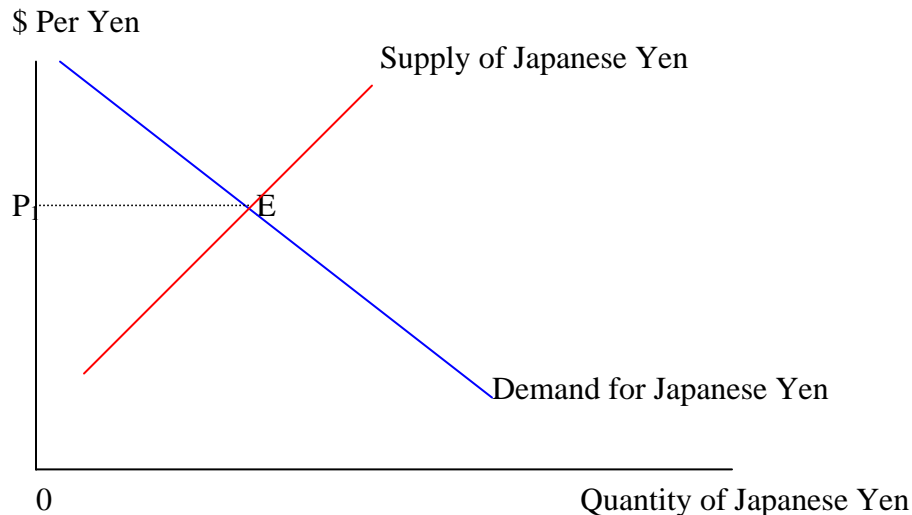
Supply of Foreign Exchange

Once we understand all of the factors that determine the demand for foreign exchange, it is easy to discuss the supply of foreign exchange. Who is selling foreign exchange on the foreign exchange market? The answer, of course, is foreign people. Why would they sell their money to you? The answer is that they want something from you --- your dollars. In the foreign exchange market, everyone is both a buyer and a seller. You buy Mexican pesos by selling your dollars to someone from Mexico. In the example above, Mr. Schmidt is selling his Euros in order to get dollars so he can buy computers. ***The supply of foreign exchange is the same as the demand for dollars.*** Since they are selling their money in order to obtain your dollars, the question becomes “why do they want your dollars?” The answer is that they want your dollars for the same reasons

you want their money. *They want your dollars because they want to buy American-made goods and services (because the prices of their own goods and services have risen, because the prices of American-made goods and services have fallen, because they like the American-made goods and services better, or because their incomes have risen). They want your dollars because interest rates rose in the United States or because interest rates fell in their own country. They want your dollars because they wish to build or buy companies in the United States. And finally, they want your dollars because they expect that the price of the dollar in the foreign exchange market will rise in the near future.*

Equilibrium

As in any market, the price of foreign exchange is determined by the demand for it and the supply of it. This is shown in the graph below. *Remember that the demand for foreign exchange reflects the behavior of Americans in the foreign exchange market. And the supply of foreign exchange reflects the behavior of foreigners in the foreign exchange market.* In this graph, the foreign money is Japanese yen. Americans are the ones who buy them. Japanese are the ones who sell them. The price of foreign exchange is given a distinct name: *the foreign exchange rate.*



Test Your Understanding

In each of the following cases, state whether the demand for foreign exchange and the supply of foreign exchange will (1) increase (shift right), (2) decrease (shift left), or (3) remained unchanged.

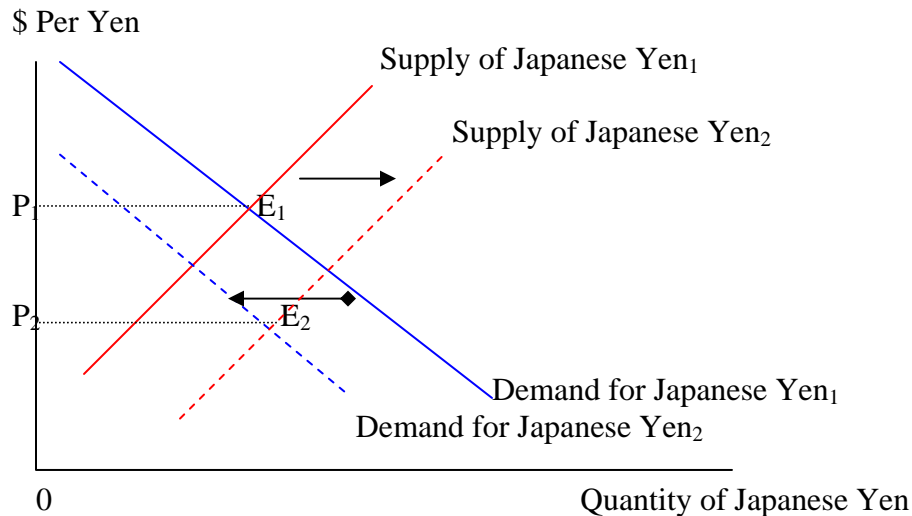
Demand Will: Supply Will:

1. Interest Rates Rise in the United States
2. Prices of Goods and Services Rise in the United States
3. Incomes Rise in the United States
4. The Quality of American-Made Goods Improves
5. Japanese Banks Decide to Buy American Banks
6. Americans Expect the Price of the Mexican Peso to Fall

Case 1: An Increase in Interest Rates in the United States

In 1980, interest rates began to rise greatly in the United States. They continued to be very high for several years. At that time, one would pay over 17% per year interest for 30 years to borrow money to buy a new home (called the *mortgage interest rate*). Businesses would pay an interest rate of over 20% to borrow money. Lending money to the United States government would generate interest of over 14% per year. The reasons for these very high interest rates largely involved high budget deficits in the United States (forcing the United States government to borrow considerably) and a reduction in the supply of money (so that there was less money to borrow). We shall discuss these events in great detail later in the course. At the same time, interest rates in Japan were quite low by American standards. At that time, a Japanese saver had basically two saving options. One would pay an interest rate of 4% while the other paid an interest rate of 4½%.

The graph on Page 6 shows the demand for and supply of Japanese yen. In 1980, the equilibrium price (exchange rate) was approximately 125 Japanese yen for \$1 (P_1) or \$0.008 for one Japanese yen. What are the results of the rise in interest rates in the United States? Let us examine the Americans first. Given these interest rate changes, would Americans be more likely or less likely to lend money in Japan? Obviously, the answer is less likely. Why would an American lend money in Japan to get an interest rate of 4% when she could lend it in the United States and get an interest rate several times that? **Therefore, the demand for Japanese yen by Americans fell.** This is shown on the graph on Page 8 as a shift to the left to Demand₂. Now, let us examine the behavior of the Japanese? Where do they wish to lend their money? Obviously, they would wish to lend much more money in the United States because they can receive much higher interest. To do so, they would have to buy dollars. When they buy dollars, they are selling the yen they own in the foreign exchange market. **So the supply of Japanese yen offered in the foreign exchange market increases.** This is shown on the graph as a shift in supply to the right to Supply₂. When the demand for Japanese yen decreases (shifts left) and the supply of Japanese yen increases, (shifts right), what happens to the price of Japanese yen? From looking at the graph, the answer is that it falls. In fact, by 1985, the price reached approximately 250 Japanese yen for \$1 or \$0.004 for one Japanese yen. The Japanese yen had fallen in price to close to half of its value five years earlier. In technical language, we say that the American dollar *appreciated* (gone up in value) in relation to the Japanese yen. Conversely, we say that the Japanese yen *depreciated* (gone down in value) in relation to the American dollar. Using language from the 18th century, some people would say that the American dollar was *strong* and the Japanese yen was *weak*.



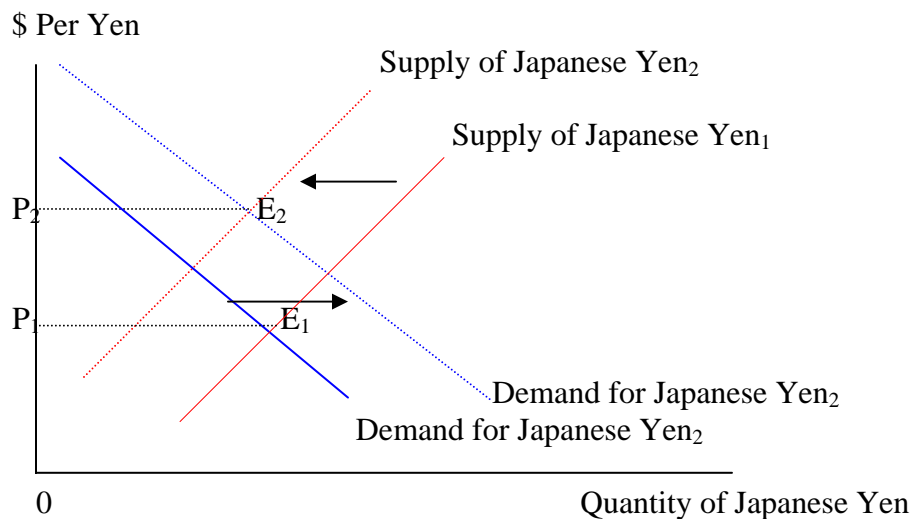
This story was a very important one for the United States. ***When the dollar appreciates, what happens to American exports? The answer is that they decrease.*** A product that sold in the United States for \$1 in 1980 would have cost a Japanese person 125 yen. By 1985, the Japanese person would have to pay 250 yen for the same good. The price to them doubled. At twice the price, they will buy fewer American products. ***When the dollar appreciates, what happens to American imports? The answer is that they increase.*** A product that sold in Japan for 250 Japanese yen would have cost an American \$2.00 in 1980. By 1985, the same product would have cost the American only \$1.00. At half price, Americans will want to buy more Japanese-made products.

Until the early 1980s, Americans had exported more goods and services than they had imported. But, for the reasons noted above, ***in the early 1980s, exports decreased while imports increased.*** By 1982, exports became less than imports for the first time in 70 years. This is called a ***trade deficit.*** Even though the interest rate situation has changed, the United States has had trade deficits ever since. There are two important results of these trade deficits. ***First, notice that they are accompanied by borrowing from foreigners.*** (Actually, it was the borrowing that caused the trade deficits, not the other way around.) Much of this borrowing from foreigners was done by the American government. This means that the government incurred a debt that will have to be paid back. ***Second, the American industries that depended on exports or the ones that competed with Japanese imports had been the industries that had created good jobs for people with no more than a high school education.*** Until the early 1980s, people could finish high school, go to work in companies, and work their way up to middle management. By their late 20s or early 30s, they would be earning enough for a middle class lifestyle. Since the early 1980s, it has been harder and harder to find these kinds of jobs. A college education has become much more important to one's financial success.

Case 2: Inflation in the United States

In the period of the late 1960s and early 1970s, prices of goods and services rose faster in the United States than they did in the countries with whom the United States trades. As a result of

that, what would happen in the foreign exchange market? First, let us examine the behavior of Americans. If prices of goods and services are rising faster in the United States than in Japan, Americans will want to buy more goods and services from Japan. The goods and services made in Japan are now relatively cheaper. Since Americans need yen in order to buy the Japanese goods and services, **the demand for yen will rise (shift to the right)**. Now let us examine the behavior of the Japanese. If prices of goods and services are rising faster in the United States, Japanese will want to buy fewer American-made goods and services. American-made goods and services are now relatively more expensive for them. Since Japanese desire fewer American goods and services, they will also desire fewer American dollars. To get dollars, they must sell their own money in the foreign exchange market. If they desire fewer dollars, they will sell less of their own money. **The supply of yen will fall (shift left)**. This is shown in the graph below.



In this case, what happens to the exchange rate. You can see that the price of the Japanese yen has risen from P_1 to P_2 . The American dollar has **depreciated** in relation to the Japanese yen. And the Japanese yen has **appreciated** in relation to the American dollar. As noted in the previous case, the exchange rate was \$1 equals approximately 125 Japanese yen in 1980. In 1972, the exchange rate was \$1 equals 360 Japanese yen. The dollar had depreciated to nearly 1/3 of its 1972 value as a result of the high inflation experienced by the United States.

Because the American dollar depreciated, the effects on international trade were opposite of the previous case. American exports increased as American goods and services became relatively cheaper for foreigners to buy. (A good selling in the United States for \$1 would cost a Japanese person 360 yen in 1972 and 125 yen in 1980.) American imports decreased as Japanese goods and services became relatively more expensive for Americans to buy. (A good selling in Japan for 360 yen would cost an American \$1 in 1972 and nearly \$3 in 1980.)

Test Your Understanding

The previous two cases have analyzed the effects on foreign exchange markets of an increase in interest rates in the United States and of an increase in inflation in the United States. Do the same analysis for each of the following cases:

1. Incomes rise in the United States and fall in Japan
2. Both Americans and Japanese believe that American goods are of higher quality than before
3. Both Americans and Japanese believe that the Japanese yen will depreciate in the near future

4. Laws change in Japan making it easier for Americans to buy or build companies in Japan
5. Interest rates fall in the United States while they rise in Japan

2. The Stock Market

Business firms can be classified in many ways. One common classification is to group business firms according to the way they are owned. The most common form of business firm is the *sole proprietorship*, representing nearly 75% of all business firms. *A sole proprietorship is owned by one person.* Another type of business firm is the *partnership*. This type is similar to a sole proprietorship except that two or more people are the owners. Partnerships allow the business to become larger because more than one person finances the business. But partnerships have a big disadvantage: **each owner has unlimited liability for all of the debts of the business.** This means that, if one owner gets the business into so much debt that it cannot pay and then leaves the area, the other owners are liable for the entire debt. An owner can lose a home, car, savings account --- indeed, all that he or she has accumulated --- based on the undesirable actions of another owner. The largest businesses are *corporations*. A corporation is a legal person separate from its owners. It can be sued separately and pays taxes separately. Its owners are called *shareholders or stockholders*. One advantage of the corporation is that the owners have *limited liability*. This means that owners can lose only the amount invested in the business. Because an owner only risks a fixed amount of money, the owner does not care who the other owners are. This feature allows **easy transferability of ownership shares**. If I have invested \$10,000 in Company X, this is the most I can lose. If another owner, Peter, sells his ownership share to Mary, I do not care. I do not need to know anything about Mary because no decision of Mary can cause me to lose more than \$10,000. **Easy transferability of ownership shares allows corporations to raise large amounts of money.** As a result, **corporations tend to be large.** Indeed, nearly all of the large businesses are corporations.

Corporations are categorized as public or private. *A corporation is public if the shares are sold on an open market and are available to be bought by anyone who might wish to do so.* Most of the very large companies are public corporations. *A corporation is private if the shares are held by a specific group of people who will not sell them to outsiders.* Many private corporations are owned within a family. For example, Levi Strauss is owned exclusively by members of the Haas family. Among grocery stores, Albertsons and Vons (Safeway) are public companies while Raley's of Northern California is still a private corporation of the Raley family. Often corporations start as private corporations. When they need to grow, they "go public". This means that they sell shares of ownership to anyone willing to buy them. Selling shares to the general public for the first time is called an *Initial Public Offering (IPO)*.

Shares of stock of public corporations are traded. In most cases, they are traded on organized exchanges, such as the New York Stock Exchange or NASDAQ. Buyers come to these exchanges, usually through brokers, to buy shares of stock (that is, shares of ownership) in particular companies. Sellers also come to these exchanges, again usually through brokers, to sell the shares of stock that they own. Let us begin with the buyers. Why would a person wish to buy stock at all? And why would that person then buy the stock of a particular company?

The Demand for Stocks

As we saw earlier, there are seven factors that affect demand for any product. Of those seven, four will be particularly important in affecting the demand for stocks. **One is income. Buying stock is a form of saving for people.** As we shall see later, the higher one's income, the more one is likely to save. **So, as incomes rise (fall), people are likely to buy more (fewer) stocks.** This is a reason that stock prices tend to rise when the economy is doing well (people's incomes are rising) and tend to fall when the economy is doing poorly (people's incomes are falling). **The second important factor in affecting demand is the prices of the stocks themselves. The third important factor is the prices of substitutes to buying stocks. And the final important factor in affecting demand is expectations.**

The Substitutes for Stocks

Let us focus first on the third of these factors --- the substitutes to buying stocks. **What are the substitutes to buying stocks for one who desires to save?** Let us list a few and consider their advantages and disadvantages. First, you can save in a bank or other financial institution. Typically, you can save in the form of **a savings account or a Certificate of Deposit (CD).** Both accounts will pay you interest. The savings account gives you easy access to your money. The CD requires you to wait for your money until a specified time is past. Since the savings account can be converted into money more easily, we say that it is more liquid. **(Liquidity refers to the ease by which an asset can be converted into money.)** Because it is less liquid, the CD will pay you more interest. Both are risk-free because a government agency, the **Federal Deposit Insurance Corporation (FDIC)**, insures them.

Second, you may save by buying securities. **Securities represent the debt of either corporations or the United States government.** They pay interest each year until the amount is fully repaid when the security **matures.** If the security matures in a short time (one year or less), the security is usually called a **bill.** If the security matures over a medium term (typically one to ten years), it is called a **note.** And if the security matures in a long time (typically ten years or more), it is called a **bond.**

The longer the time to maturity, the greater the risk involved. This occurs because the securities are sold on markets. The price of a security changes as the demand for them or the supply of them changes. For example, assume you buy a ten-year bond for \$10,000. The bond pays 5% interest. This means that you will receive \$500 each year for ten years, after which you will receive your \$10,000 back. Suppose that, after a short while, you find that you need the money and therefore decide to sell the bond. How much you will receive from your sale depends on what has happened to interest rates. Let us say that interest rates are now 10%. No one will pay you \$10,000 for the right to receive \$500 per year in interest, since they can get \$1,000 (10%) by putting their \$10,000 somewhere else. So, if you must sell, you will have to sell for less than \$10,000. You will take a loss. Since the amount of interest paid each year (\$500) is fixed and the final payment (\$10,000) is fixed, **as interest rates rise, the prices of securities falls. And as interest rates fall, the prices of securities rises.**

There is a second risk that goes with buying securities --- inflation. In ten years, you will receive \$500 of interest plus your \$10,000 back. But if prices rise significantly, that money will not be worth as much as it is now. Your real interest rate will have fallen. If you expect

inflation over the next ten years, you will desire an interest rate paid to you that is more than 5%. *So the more inflation people expect, the higher the interest rates will be.*

There is yet a third risk that goes with buying securities --- the possibility that you may not be paid at all. The greater the risk involved, the more interest you will need to be paid to make it worth your while to take that risk. For that reason, government securities tend to pay lower interest rates than corporate securities. Corporate securities are rated by various rating agencies. Those rated AAA are considered very safe. Those considered least safe are called *junk bonds*. These junk bonds may pay a very high rate of interest.

Third, one may save in the form of a mutual fund. *A mutual fund pools money from a large number of savers.* Mutual funds are differentiated by what they do with that pool of money. *Money Market Funds use the money to buy short-term debt of very large corporations (called "commercial paper") or Treasury (Government) Bills.* They usually pay you a higher interest rate than most bank accounts and they are very liquid (one can usually write checks each month against these accounts). But they are not insured by the FDIC. *Bond Funds buy government or corporate bonds. Stock Funds buy stocks.* These provide you two big advantages. One is diversification. By buying many different bonds or stocks, they have spread the risks (that is, they do not "put all of their eggs in one basket", as you might have to do). Second, they can afford to hire experts to decide what to buy. You may not have that expertise yourself. Stock Funds are often very specific. Some buy only high-risk stocks that have the potential for great growth (these are called *"growth funds"*). Some buy only very safe stocks. And so forth.

Fourth, many people save in the form of their own homes. In California, the value of homes has risen greatly over the past quarter century, increasing people's wealth considerably. But this is not guaranteed. In the early 1990s, many people saw the value of their home drop greatly. Housing is an advantageous way to save in that there are tax benefits. Indeed, if one sells one's home and makes a gain, that gain will likely not be taxed at all. However, housing is a disadvantageous way to save in that it is not at all liquid.

The Price of the Stock Itself

Now let us consider the stocks themselves. If you buy stock, you will do so for an expected return. In this case, your return is not interest. When you buy a stock, you are buying a share of ownership in a particular company. *The value of the company (that is, the price of the shares of stock) is determined by the expected future profits of the company.* Your return is your share of the profits of that company. The return can come to you in one of two ways. The company can send you part of the profits in cash. This is called a *dividend*. Or the company can re-invest part of the profits in the business to make the business more valuable (called *retained earnings*). If the company becomes more valuable in the future, you will be able to sell your shares of stock for more than you paid for them. You will have realized a *capital gain*. Notice that, in deciding whether or not to buy a stock, it is the profits that will be realized in the future that are important to you. What the company has earned in the past is irrelevant (except as it gives you some idea about what the company will earn in the future). Because we never know what the future will bring, buying stocks can be very risky. Microsoft has been a very profitable company for many years. Will it continue to be very profitable for the next five or ten years? Who knows?

Expectations

The final important factor affecting demand is **expectations**. Here, we are referring to expectations about the price of the stock in the near future. For most savers, these expectations are not that important. These people are called *“investors”*. They buy a stock for the expected future profits of the company. They will hold that stock as long as they believe that the company will be making high profits. But other people do “bet” on the price of the stock. These people are called *“traders”*. They tend to buy stocks when prices are rising and sell them when prices are falling. These people are largely responsible for the daily instability of stock prices.

Test Your Understanding

1. Fill in the following table. You may need to do some research for some of the answers. In each case, answer “low” or “high”. Be sure you can explain why in each case. For each of the four categories, try to rank the forms of saving in order from lowest to highest.

Form of Savings	Expected Return	Risk	Tax Advantages	Liquidity
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Bank Savings Accounts

Bank CDs

Treasury Bills

Treasury Bonds

Corporate Bonds

Homes

Money Market Funds

Stocks

2. If all forms of saving had the same risk, the same tax situation, and the same liquidity, the expected return would be the same for all forms of savings. To explain this, assume that Treasury Bills are paying you an interest rate (return) of 10% while Bank CDs are paying you an interest rate (return) of 5%.

Explain what would occur to make the interest rate on both types of saving become the same.

3. Over the 20th century, the average return on stocks was higher than the average return on bonds. Use the above table to explain why this was so.

Strategies for Investing

The demand for any of the forms of saving described above depends on the factors in question 1 above: expected return, risk, tax advantages, and liquidity. Generally, there are trade-offs between these. *So, forms of saving that have low risk, tax advantages, or high liquidity usually have a low return. And conversely, risky forms of savings, forms of savings that have tax disadvantages, or forms of savings that are illiquid tend to have higher returns.*

In stock markets, information about expected returns, risks, tax advantages, and liquidity is widely available. Because information is so widely available, it is not possible to systematically “beat the market”. Suppose that you know that a stock of a given company will give you a return

of 10% while the stocks of other companies will give a return of only 5% (ignore risks, tax advantages, and liquidity for now). Of course, you will want to buy that stock. But many other people will also know this and they too will want to buy it. When they buy the stock, the price will rise. At a higher price, the return will fall, until it is no greater than that of the other stocks. There are only two ways you can “beat the market”: you can be lucky enough to buy a stock that turns out to be more successful than most people expected or you can have information about the company that is not available to others. And acting on “*inside information*” is severely restricted by law. Studies have been done comparing people who were “experts” in stock market investing with people throwing darts at the financial pages to decide what to do. The dart throwers tended to do just as well over the long term. Do not expect to be a millionaire at age 30 by playing the stock market.

In deciding what you should do, you need to know the attributes of each type of saving and you need to relate these attributes to your own personal situation. Do you need to be able to get access to the money soon? If so, you need something that is liquid and must correspondingly accept a lower return. Are you highly taxed? If so, you might need something with tax advantages and have to correspondingly accept a lower return. How do you feel about risk? The more risk you are willing to take, the greater your return could be (and also, of course, the greater could be your loss). If you do not like risk (as most people don't), then you might want to diversify. Have a little of this and a little of that. It is unlikely that all types of saving will be hurt at the same time. It is usually a good idea to buy stock in a company because you like the business of that company and believe it can be successful over a long time. If you do this, the best advice is just to hold on to that stock and not worry when its price falls. Over the long term, you will probably be OK. But do not expect to get rich by “beating the market”.

Practice Quiz for Chapter 7

- Which of the following would **increase** the demand by Americans for **Euros** (i.e. shift the demand to the right)?
 - Americans like American-made wine more than French wine
 - More Americans decide to travel to France this summer
 - The United States is in a recession
 - France has a higher inflation rate than does the United States
- Which of the following would increase the **supply of Euros** on foreign exchange markets (i.e., shift the supply to the left)?

a. The United States has a high rate of inflation	c. France experiences a recession
b. Real interest rates rise in the United States	d. General Motors decides to build a new factory in France
- Which of the following is an example of **portfolio investment**?

a. An American travels to France	c. An American opens an account at a bank in Canada
b. An American buys an automobile made in Japan	d. Americans build a new factory in Mexico
- In one year, the exchange rate was \$1 equaled 125 Japanese yen. Two years later, the exchange rate was \$1 equaled 80 Japanese yen. Which of the following is true?

a. the dollar appreciated and the yen depreciated	c. both the dollar and the yen appreciated
b. the dollar depreciated and the yen appreciated	d. both the dollar and the yen depreciated
- If **interest rates rise in the United States** and are much higher than in Japan,

a. the dollar will appreciate and the yen will depreciate	c. both the dollar and the yen will appreciate
b. the dollar will depreciate and the yen will appreciate	d. both the dollar and the yen will depreciate

6. The type of organization in which an owner has **limited liability** is the:
a. sole proprietorship b. partnership c. corporation d. all of the above
7. Which of the following assets is the most **liquid**?
a. savings account b. CD c. government bond d. house
8. If the price of a security (bill, note, or bond) is rising, the interest rate on that security is:
a. rising b. falling c. unaffected
9. The part of the profits of a corporation that is paid to the owners in cash is called:
a. dividends b. retained earnings c. capital gains d. money market funds
10. Which of the following statements is **true**?
 - a. The interest rate on a bond will be higher if people expect higher rates of inflation in the future
 - b. If one studies the market well, one should be able to “beat the market”.
 - c. Mutual funds are insured by the FDIC
 - d. The return on a form of saving is likely to be greater if the asset is very liquid and if it has tax advantages

Answers: 1. B 2. B 3. C 4. B 5. A 6. C 7. A 8. B 9. A 10. A