

# Cycles, Markets, and Participants

Understanding the importance of economic indicators to the U.S. economy requires familiarity with the underlying cycles, markets, and participants in those markets—concepts typically included in an introductory macroeconomics course. This chapter briefly describes three kinds of cycles, three distinct markets, and several types of participants, including their sentiments and their actions. The intent here is to simplify a complex subject and relate theoretical constructs to real world economics and finance.

To make explanations clearer—and to avoid the famous economic apology, “all other factors held constant”—the following definitions focus on one factor at a time. Always remember the difference between the real world, where various effects get tangled together, and the laboratory, where we can isolate and dissect the individual parts. The key points to each are summarized so that you will have the underpinnings of the economic system.

## **THE ECONOMIC BUSINESS CYCLE**

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Practically everyone knows about the economic business cycle. The press may not describe it that way, but people often hear the terms *economic expansion* and *recession*. The economic business cycle is measured from peak to peak, or from trough to trough, and has five phases. The business cycle peak is the highest level reached in economic activity—the last month or quarter of economic data before indicators begin to decline. The first drop in a set of economic indicators suggests that the economy has just entered its first phase: *downturn*, more commonly known as *recession*. The downturn lasts as long as economic indicators continue to decrease. The second

phase of the business cycle is the *trough*. It is the lowest point in the business cycle and the weakest point in any economic series. The peak and trough of the business cycle are generally viewed as a point in time, such as a specific month as seen in Table 1.1. The recession can last for several months (or years in the case of the Great Depression). The average length of the 10 U.S. recessions in the post-World War II period was just over 10 months.

The *recovery* signals the third phase of the business cycle. A recovery is in progress the first month that a set of economic indicators begins to rise. It means that the recession is over. As a participant in the economy, you are unlikely to notice any improvement in business activity in the first few months of recovery. Keep in mind that the first month of recovery is just as bad as the second-to-last month of recession. You are barely one inch above the ground. The early stages of recovery often continue to feel like recession to the unemployed who cannot immediately find jobs and to retailers who have yet to liquidate still unwanted inventories. Typically, after the first few months, the economy gathers some steam, and growth becomes quite robust for about two years.

Economic *expansion* is the fourth phase of the business cycle. One can say that the recovery ends and the expansion begins when the output lost in the recession is recuperated.

The fifth phase of a business cycle occurs when the economy reaches a new *peak*; you do not know you are in the fifth phase until the peak has

**TABLE 1.1** Postwar Business Cycles

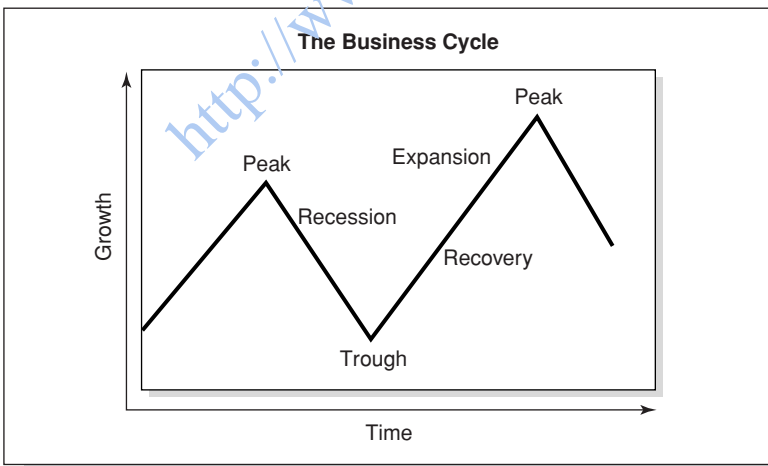
Peak	Trough	Months of Recession	Months of Previous Expansion
Nov 1948	Oct 1949	11	36
Jul 1953	May 1954	10	44
Jul 1957	Apr 1958	9	37
Apr 1960	Feb 1961	10	23
Dec 1969	Nov 1970	11	105
Nov 1973	Mar 1975	16	36
Jan 1980	Jul 1980	6	57
Jul 1981	Nov 1982	16	11
Jul 1990	Mar 1991	8	92
Mar 2001	Nov 2001	8	120

Source: National Bureau of Economic Research.

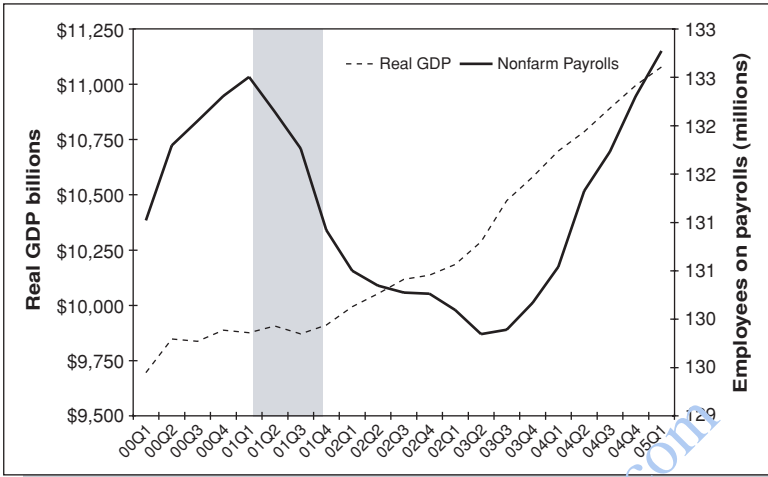
passed and the economy has already headed for a downturn. Figure 1.1 depicts a stylized version of the economic business cycle, but all economic indicators do not follow this pattern. Figure 1.2 depicts gross domestic product (GDP) and nonfarm payroll employment. GDP hardly declined and recovered quickly, but employment kept falling into the (official) recovery period and recuperated much more slowly.

Aggregate indicators of the economy post new peaks, but individual series need not. For example, employment as measured by nonfarm payrolls reached a new high in January 2005, three years and two months after the end of the 2001 recession. In the same month, manufacturing employment was still down nearly 19 percent from its cyclical peak reached in March 1998—three years before the onset of recession. Structural change and productivity growth in the U.S. economy boosted service employment at the expense of manufacturing employment. Thus, while total employment was able to increase, the manufacturing sector never recovered the workers it had lost during this period. The all-time peak in factory payrolls was recorded in June 1979.

The National Bureau of Economic Research (NBER), the official arbiter of business cycles, includes several prominent economists on its Business Cycle Dating Committee who analyze many factors before pinpointing the exact date a recession began or ended. With respect to the 2001 recession, the NBER announced on November 26, 2001 that the business cycle had peaked March 2001, eight months earlier. It was not until July 17,



**FIGURE 1.1** The Business Cycle: This is the classic example of an economic business cycle. The real world, however, does not move in a straight line.



**FIGURE 1.2** Gross Domestic Product and Employment: This is an example of a recent business cycle. Real GDP peaked in the first quarter of 2001 and reached its trough in the third quarter. It surpassed the previous peak in the fourth quarter of that same year, revealing a short and shallow recession. Contrast this to nonfarm payrolls, which peaked in February 2001, bottomed out two years later in May 2003, and did not attain the previous peak until January 2005.

*Source:* Bureau of Economic Analysis, Bureau of Labor Statistics, and Haver Analytics.

2003 that the NBER Business Cycle Dating Committee announced November 2001 as the end of the recession, even though many economists—including Federal Reserve Chairman Alan Greenspan—conjectured that the recovery actually began in early 2002 when several economic indicators started to turn around.<sup>1</sup>

The timing of the 2001 recession was a bit sensitive because no one wanted to credit the September 11 terrorist attacks with having triggered a recession. As it turns out, the recession had indeed begun before the attacks on the World Trade Center and the Pentagon.

Although the NBER economists analyze several economic sectors and economic series, many economists use the rule of thumb that a recession requires at least two consecutive quarters of decline in real gross domestic product. (GDP is the most encompassing measure of production of goods and services.) Real—that is, inflation-adjusted—GDP fell in the third quarter of 2000 as well as the first and third quarters of 2001, but it was positive in the fourth quarter of 2000 and the second quarter of 2001. The

economy peaked in March and the recession actually began in April 2001, yet the Commerce Department's initial estimates did not show a decline in real GDP in either the first or second quarters. That is why the Business Cycle Dating Committee must consider more than just one economic series. Moreover, the NBER economists would be foolish to try dating a business cycle prematurely, especially in light of frequent revisions to economic series. The Committee does not want to be viewed as a forecasting mechanism and stated in their July 17 announcement:

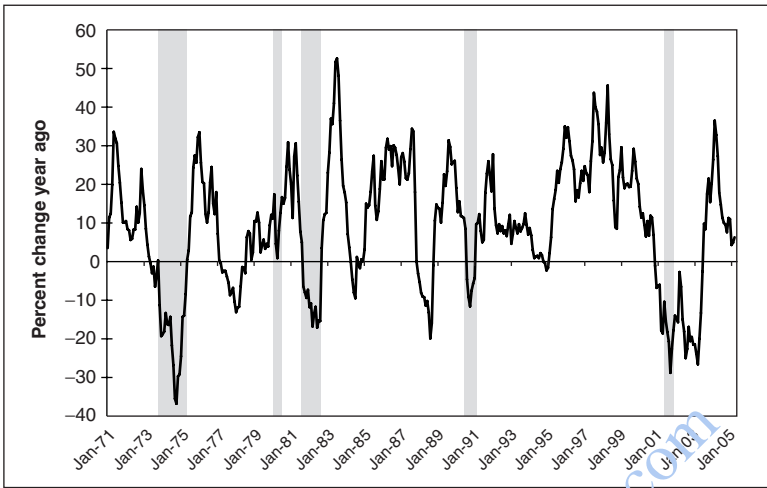
*The Committee waited to make the determination of the trough date until it was confident that any future downturn in the economy would be considered a new recession and not a continuation of the recession that began in March 2001.<sup>2</sup>*

### **The Stock Market Cycle**

The stock market also has cycles of peaks and troughs. Here the jargon refers to bull markets and bear markets, however, rather than expansions and downturns. The stock market cycle is not only correlated to the economic business cycle. It is actually a leading indicator of it. In fact, Standard & Poor's Index of 500 companies is one of the 10 series that make up the index of leading indicators. The S&P 500 is more broad-based than the Dow Jones Industrial Average, which only incorporates 30 blue chip corporations but gets more attention in the press. Nevertheless, the stock market is not a perfect leading indicator of the economy. (An astute person once noted that the stock market predicted 10 of the last 8 recessions.)

Although a plunge in the stock market has not always been followed by a recession—the 1987 stock market crash is one example as are the steep declines in stock prices in 1997, 1998, and 2002—an economic downturn has always been preceded by a stock market decline (see Figure 1.3). According to the late business cycle expert Geoffrey Moore, the stock market responds to economic activity through profits and interest rates. As the business expansion comes to an end, production costs rise and profits fall. At the same time, interest rates are likely to rise either because of increased loan demand, rising inflationary pressures, or Federal Reserve tightening. Both factors contribute to the drop in stock prices even as business activity continues to expand.<sup>3</sup> On average, changes in the stock market precede changes in the economy by six months, on the upside and the downturn.

This book is not primarily about stock market investment strategies or stock market timing. (Chapter 12 does offer suggestions to individual investors who want to use economic indicators for fun and profit.) However,



**FIGURE 1.3** The Stock Market and the Business Cycle: Five economic business cycles are depicted here (recessions shaded) with the corresponding movements in the stock market, represented by Standard & Poor's Index of 500 common stocks. *Source:* Standard and Poor's and Haver Analytics.

in making investment decisions, it is useful to know the current stage of business and stock market cycles. For example, to follow the adage “buy low and sell high,” you would buy stocks of consumer durable goods companies (such as producers of automobiles or furniture) when the stock market is turning around *but* while the economy is still in recession. The trough of the stock price for any given cyclical business would probably occur when you were wondering if the economy was ever going to grow again. During the 1990–1991 recession, Standard & Poor's Index for stock prices of consumer discretionary goods bottomed in October 1990—three months into the recession and five months before the recession bottomed in March 1991. This series climbed almost continuously through the following year. Prices followed a bumpier road after peaking in December 1999, and they did not bottom until March 2003, long after the economic recovery was underway.

### The Interest Rate Cycle

Interest rates also follow cycles. There is, however, greater diversity among interest rates than among economic indicators or stocks that do not move exactly in line with their particular cycles. According to Geoffrey Moore

and other economists who study business cycles, interest rates lag the economic business cycle.<sup>4</sup>

One reason the interest rate cycle seems less distinct than the business and stock cycles is that there is no such thing as “the rate of interest” as described in economics textbooks. Many interest rates exist, and they do not move in tandem. Indeed, long-term interest rates and short-term interest rates move at different times by different magnitudes. Corporate bond and municipal bond yields do not move in tandem with Treasury securities either, even if they are of the same maturity; and different bonds of different risk classes, such as Triple-A or junk bonds, also vary in response to the economy.

Short-term rates are likely to decline during a recession as demand for credit softens. At the same time, the Federal Reserve tends to promote a more accommodative monetary stance to ensure economic recovery. The Fed technically can only affect the federal funds rate (the rate that banks charge each other for the use of overnight funds) by adding or subtracting reserves. Other short-term rates such as CD (certificates of deposit) rates, commercial paper rates, and Treasury bill rates normally move in close correlation with the federal funds rate. Short-term rates such Treasury bill rates closely follow the business cycle with either leads or lags of roughly two months.

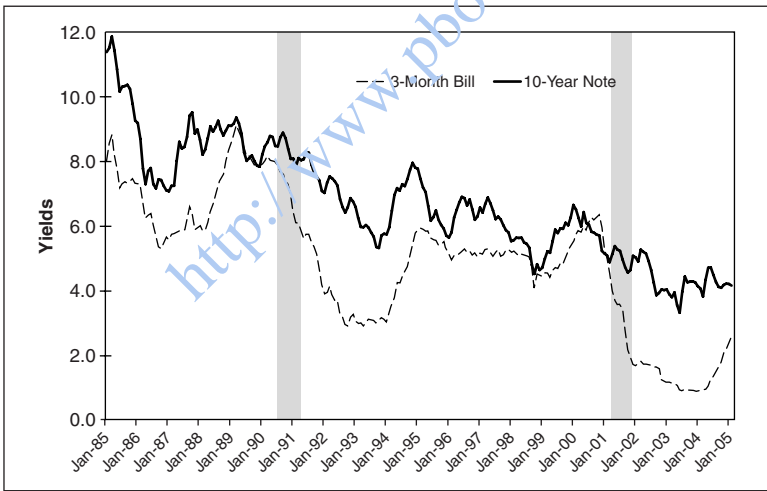
The picture changes with long-term rates, which may edge down slightly as the Fed continues to ease monetary policy, but not nearly as rapidly as short-term rates do. Long-term rates are very sensitive to inflationary pressures. This keeps the yields of long bonds (securities with maturities of more than 10 years) high even in the middle of a recession, when one normally expects rates to decline because economic demand is down. Consequently, the drop in long-term rates may take awhile. As the recession continues, however, economic recovery will hinge on long-term rates because they determine fixed mortgage rates, which in turn spur housing activity, the first sector to turn around in the economy. The shift to adjustable rate mortgage loans has modified this relationship somewhat because homeowners can now also benefit from falling short-term interest rates. During the 2001 recession, zero-interest financing on cars and SUVs offered by automakers helped to jump start the economy recovery—even before housing starts—in the fall of that year.

Although long-term interest rates have a lagged relationship to the economy, these rates have an impact on economic activity. Put differently, as the economy grows, demands for loanable funds can put upward pressure on interest rates—the cost of borrowing funds. Conversely, a declining economy puts downward pressure on interest rates—the cost of borrowing money—because fewer people seek out loans. Now consider the flip side: When interest

rates decline, more people are willing to borrow money; and when they rise fewer people are willing to borrow money. Thus the movement in interest rates is not made in a vacuum but has implications of its own.

Although short-term interest rates are roughly coincident indicators of the economy, long-term rates on bonds are lagging indicators. As a consequence, the general rule is that the interest rate cycle lags the business cycle. Figure 1.4 shows that short-term rates fell more dramatically than long-term rates during the two most recent recessions (1990–1991 and 2001). Incidentally, the spread between long and short rates, let's say the 10-year Treasury note and the federal funds rate, is considered a leading indicator of economic activity. When the spread narrows, it signals a potential economic recession and when the spread widens, it points to stronger economic growth.

Of the three cycles, the stock market cycle leads the business cycle, which in turn leads the interest rate cycle. The lead-lag correlation between the business cycle and the interest rate cycle is not as decisive as the relationship between the stock market and the business cycle, largely because short-term rates and long-term rates behave differently over the business cycle.



**FIGURE 1.4** Short- and Long-Term Treasury Yields: Typically, long-term rates are higher than short-term rates. Note the flat yield curve (short-term and long-term rates were roughly identical) in 1989 before the Fed began its accommodative policy. The yield curve was briefly inverted in 2000 before the Fed began to ease credit conditions during the 2001 recession.

Source: Federal Reserve Board, Haver Analytics.

## MARKETS

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The financial arena encompasses several different markets. We will focus on three: the stock market, the fixed income market, and the foreign exchange market. Just as different cycles are related to one another, these markets are also correlated. (Regularly, bond traders eye the foreign exchange markets, while currency traders watch the long bond market. Who moves whom?) The relationships are not always clear, however, nor are they always consistent over time.

### The Stock Market

The stock market, also known as the equity market, is heavily influenced by economic factors. Strong economic activity is the impetus behind healthy growth in corporate profits, also known as earnings. In the long run, corporate earnings drive stock prices. In general, a healthy economy should yield a bull market because company earnings are growing. Conversely, poor economic prospects yield a bear market because earnings are falling. Investors in the stock market are not inflation lovers. In an expanding economy, accelerated inflation will curtail increases in stock prices even if corporate profits are rising. After all, some of the profit gain is due to rising prices, not increased worker productivity or higher sales volumes.

Declining interest rates are typically associated with growth in interest-sensitive sectors such as housing and capital investment. Thus falling interest rates are a boon to the stock market, too. In addition, the present value of capital increases with low (real) interest rates and declines with high (real) interest rates. Real interest rates are adjusted for inflation. If the current federal funds rate is 5 percent, and the inflation rate is 3 percent, then the *real* federal funds rate is 2 percent.

A weak foreign exchange value of the dollar should be conducive to rising stock prices. A weak or depreciated dollar is associated with healthy export growth and sluggish import growth because, as demand shifts from foreign-produced goods to domestically produced goods, U.S. manufacturers benefit from a depreciated dollar at the expense of foreign manufacturers. A weak dollar will make it more expensive for U.S. consumers and producers to buy foreign goods, and some are likely to shift to domestically produced goods, which are now lower priced. At the same time, consumers in other countries may find U.S. products cheaper than their own products and shift their demand to U.S. goods. This is frosting on the cake.

However, a caveat remains: the assumption that U.S. manufacturers are producing tradable goods. Depreciation in the exchange rate of the dollar does not help every industry. This is especially true of those in the

service sector. Dry cleaners, barbers, and coffee shop owners have nothing to gain from a depreciation of the dollar. On the manufacturing side, those that use raw materials produced overseas will find that their costs are increasing. Also, if barbers purchase shampoo manufactured overseas and dry cleaners use solvents manufactured abroad, their costs will go up as the dollar depreciates, and this could potentially hurt their profits.

The premise that a weak dollar bodes well for the stock market because it improves the U.S. trade balance—as we produce more domestically than we buy from foreign competitors—assumes that higher sales of U.S. goods can offset higher prices paid by producers using foreign raw materials. It also assumes that U.S. manufacturers are producing goods that U.S. consumers want. For instance, TVs and DVD players are produced abroad—not in the United States, so a weaker dollar would not help this market.

### **The Fixed Income Market**

Like the equity market, the fixed income market (also known as the debt market or the bond market) is affected by economic factors; but it is divided into long-term, intermediate-term, and short-term securities. The short-term securities market is typically referred to as the money market, whereas the bond market represents intermediate and longer-term securities. Different factors have greater significance to each of the markets. Short-term securities and, therefore, short-term rates are most affected by economic activity. If the economy is headed into recession, interest rates should be on a declining trend. If the economy is headed into an expansionary phase, interest rates are typically on a rising trend. This pattern occurs because short-term rates are to a large degree determined by credit demands. If credit demands are strong, as they would be when capital investment growth is healthy during an expansion, competition for loanable funds increases. If banks and other financial intermediaries have healthy loan demand, they can demand better credit qualifications from their borrowers and can demand that weaker companies pay higher rates if they lend them funds at all. Conversely, when credit demand is weak, as happens during a recession, producers do not borrow as much money because they now make fewer capital expenditures. This leads to lower interest rates.

Long-term interest rates, which are securities with a maturity of more than 10 years, are primarily impacted by inflation, with other economic factors playing a lesser role. Financial participants in the long bond market fear inflation more than anything else because accelerating inflation is the main culprit in reducing the value of bonds. Thus, when the inflation rate

begins to increase at a faster clip, long bond prices will drop. Because bond prices and yields are inversely related, a drop in prices brings a higher yield. When the rate inflation begins to moderate, long bond prices will rise. Higher bond prices produce lower yields.

### **Did You Know?**

Why does an inverse relationship exist between bond prices and yields? Because bonds are traded in the secondary market, a mechanism is required to equilibrate yields to the prevailing market rate. A coupon rate (the bond's original interest rate) is associated with every bond. If the old bond has a lower coupon rate than the current prevailing rate, it would have no value in the secondary market because no one would want to buy a low-interest bond when a better yield was available. In order to make the low coupon bond equivalent to current higher yields available in the market, the price of the bond would be reduced. Similarly, if an investor held a bond with a coupon rate higher than the current yield prevailing in the marketplace, the investor would not be inclined to sell it. However, the price of the bond could be sold at a premium, paying the investor for the higher value of the coupon.

Intermediate securities take into account a time horizon of roughly 2 to 10 years. These rates behave much like long-term rates except they are not as sensitive as long-term rates to expectations of changes in the economy or inflation. The value of a 5-year security would not decline as much as the value of a 30-year bond in the event of bad news such as a spurt in inflation. The value of the long bond suffers with inflation because the principal loses purchasing power. A 30-year bond has more time to lose purchasing power than a 5-year or 10-year note: hence, the smaller sensitivity of the shorter maturity to inflation.

### **The Foreign Exchange Market**

The foreign exchange market is a truly global market in which the economic conditions of all countries matter. The four key factors affecting the foreign exchange markets are: (1) relative prices, (2) relative interest rates, (3) relative economic growth rates, and (4) the current account balances of each country. Although each of these is discussed separately, it is important to note that they can work against each other as opposing forces. As a result, a country with low inflation might have a weak currency because it has a large current account deficit or low interest rates.

**Relative Prices** These prices consider inflation rates of the countries in question. A high inflation rate is a common scourge for economies across the globe. Those economies with lower and more stable rates of inflation have stronger currencies. Therefore the acceleration of U.S. inflation rates would lead to a lower value of the dollar vis-à-vis other currencies. In contrast, declining rates of inflation would lead to a strong dollar relative to other foreign currencies. Inflation hurts the economy not only because purchasing power is lost, but also because inflation is often unstable and unexpected, and it distorts investment decisions.

In late 1997 emerging market economies in Southeast Asia began to face deflation for a variety of reasons including bank failures, stock market crashes, and weak economies. Deflation—outright falling prices—is as bad as inflation because it distorts purchase and investment decisions. It would not help the country's currency value. One example to the contrary is Japan. The Japanese economy has suffered steady deflation for seven years from the late 1990s through 2005 (with no end in sight), yet it continues to have a strong currency. The strong currency is due to the country's huge current account surplus—another factor that must be taken into account and is discussed next.

**Relative Interest Rates** These rates reflect the investment opportunities of various countries in question. The currency of a country with high interest rates appreciates relative to other currencies. Higher interest rates mean a higher rate of return on investments. This was evident in the early 1980s when high interest rates in the United States relative to other countries led foreign investors to buy U.S. Treasury securities. This demand for Treasury securities led to a demand for dollars, and the value of the dollar soared in the early 1980s before peaking in the first quarter of 1985. The flip side is that low interest rates in the United States, compared with the interest rates in other countries, will depreciate the value of the dollar. The Federal Reserve eased credit conditions significantly between 2000 and 2003, lowering its federal funds rate target by 550 basis points from 6.5 percent to 1 percent. The euro/dollar exchange rate bottomed out in 2000–2001 and appreciated 57 percent between mid-2001 and December 2004. During this period, the European Central Bank rate was higher than the fed funds rate.

**Relative Economic Growth Rates** These rates consider relative demands for goods and services. Strong economic growth in a country may actually lead to a weaker exchange rate for that country's currency because strong economic growth is associated with healthy personal income growth. Whenever consumers have more income to spend, they want to consume more. Once consumers have increased their demand for goods and services, some

of that demand is satisfied by a greater demand for imported goods, which in turn indirectly leads to a greater demand for a foreign currency wherever those imports are bought. This causes a decline in the value of the home currency.

If foreign countries are not growing as rapidly, *their* demand for imports (another country's exports) will not be as strong. Consequently, an offsetting demand for the currency will not arise.

**Current Account Balance** A country's account balance also affects the foreign exchange market. The current account includes the balance in trade and services (defined in greater detail in Chapter 5). Running continuous current account deficits weakens a country's currency. For example, a current account deficit in the United States means that we are buying more goods and services from foreign countries than they are buying from us. If we demand more imported goods and services, we also have a larger demand for foreign currencies. A greater demand for foreign currencies weakens the value of the dollar. The U.S. economy has been much stronger than the Japanese economy between 1990 and 2005. However, the U.S. current account deficit grew ever larger while the Japanese surplus skyrocketed. Consequently, the dollar depreciated over this period while the Japanese yen appreciated.

Prices, interest rates, economic growth, and the current account balance are all interrelated, making it difficult to isolate which of these factors is at play when the value of the dollar is moving at any given moment. The real world does not hold all factors constant, as economists would prefer, and this makes analysis tougher.

The foreign exchange markets are further complicated by political factors that weigh in a currency's valuation. Historically, political instability in any part of the world generally favored the U.S. dollar because the United States was considered a highly stable country, politically and economically. Since 2000, however, the winds have changed for a variety of economic and political reasons. Now investors also consider the euro, the yen, and the Swiss franc as alternative currencies in times of turmoil.

### **Various Markets: Cash versus Futures**

Stocks, bonds, and foreign exchange of the financial markets can be traded in the cash and futures markets. The cash market is easily explained. You can purchase 100 shares of Disney today at the market price. By the end of the day, you are a proud new shareholder of the Disney Corporation (even though the stock transaction officially settles three days later). Similarly, you can place a noncompetitive bid to buy one 10-year Treasury note for

\$1,000 at auction. You will own the note and receive semi-annual coupon payments. You are most likely a long-term investor if you make either of these transactions.

The futures market gives you the ability to buy or sell securities, equities, or foreign exchange for delivery at a future date—typically 3, 6, 9, or 12 months hence. If you are speculating on Treasury securities or the Dow Jones Industrial Average, your trades will be executed at the Chicago Board of Trade. Your purchases and sales will take place at the Chicago Mercantile Exchange if you are trading the S&P 500, foreign currencies, or Eurodollar (short-term interest rate) contracts.

The futures market is not for the faint of heart. The market is used for speculating as well as hedging on the direction of interest rates, foreign exchange values, stock prices (also agricultural, industrial and energy commodity prices). You can buy a long bond futures contract (“go long”) expecting that its price will rise with the implication that interest rates will fall. If prices decrease instead, you can lose a bundle because you are buying the contract on margin. (Buying on margin allows investors to make a small cash payment upfront rather than the full price. It is an easy way to lose your shirt if the market goes against you!) Conversely, you can sell a futures contract that you do not own if you anticipate a drop in bond prices and a rise in interest rates.

But the futures market is also useful for hedging—as insurance against future changes in prices. Let us say that you are a buyer for Sam’s Liquor Store who just ordered next fall’s supply of beer from Germany. You will receive your order in six months at which time you will pay the price that you agreed upon today. The dollar/euro exchange rate is currently at a 12-month high and you fear that the dollar may depreciate over the next six months making your beer order more expensive. You can buy a euros futures contract today for six months hence, essentially locking in your cost. It will cost you the price of the contract; but you are insured against price increases. It is worth noting that if the dollar appreciates, you will not benefit from a lower price because your costs are locked in.

## **MARKET PSYCHOLOGY**

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Economists assume that people are rational beings who are motivated by profits, who require greater return for taking on greater risk, and who use all available information when making decisions. If people are rational, then the financial market movement will likewise appear rational and the markets efficient. Put differently, an investor will be unlikely to make a risk-free profit in excess of market return on investment or speculation because

the market tends to adjust quickly to any inconsistency in the marketplace. In the long run, this is true.

Looking at the markets on any given day, you may think that participants are often less than rational given the market's sometimes peculiar behavior and psychology. For example, if market participants do not believe inflation really has been wiped out, fears of inflation might cause *real* (inflation-adjusted) long rates to be 8 percent instead of 4 percent. These anomalies could last for weeks, months, or years. An 8 percent real rate of interest persisted for more than a year in the mid-1980s. But it is important to note that market participants are behaving in a rational fashion if they have reason to believe that inflation will accelerate. Their attitude only appears irrational "after the fact," when it becomes apparent that inflation rates were actually stable.

Market psychology can depend on any number of factors that cause participants to have a negative or positive view of the market. Bond market psychology is negative when bond market participants believe inflation pressures are a potential risk; this causes bond prices to decline and bond yields to rise. Consequently, they will view strong economic indicators with a negative tinge even if total durable goods orders decline, indicating a weak economy. They may cite a rise in orders excluding transportation as an indication of strength. (Chapter 4 explains why financial market participants should look at durable goods orders *excluding* transportation.) Negative market psychology causes market participants to be on guard looking for strong economic data that would support a rise in interest rates.

When market psychology is positive, fixed income market participants are bullish and expect bond prices to rise and bond yields to fall. In this positive mode, financial market participants will view a drop in durable goods favorably even if durable goods excluding transportation jump sharply. Thus, negative market psychology (a "bad mood") looks for and reacts to adverse numbers, whereas positive market psychology (a "good mood") looks for and reacts to positive numbers. Money can be made whether the market is in a good or bad mood. All you have to do is correctly anticipate the market and correctly predict the economic news—no small feat, in either case.

Market psychology can shift rapidly. A change in market psychology is difficult to understand. Despite many years of studying financial market participants and their behavior, I am often baffled by the turn of events. As an economist, however, I tend to take the long-term view that rational behavior eventually wins out. In order to be a profitable short-term trader, you must be in tune with market psychology, even if you do not agree with the market rationale. Much of the time, the market rationale does not appear intuitive and this is why few day traders are profitable in the long run.

## EXPECTATIONS

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Financial market participants do not necessarily react to economic numbers that are reported per se. They react to economic indicators that are *different from market expectations*. Economists working for banks, investment houses, and private firms report their forecasts of key monthly economic indicators to news services and market analysis companies who then report the median of the economists they have surveyed. Economists also give the information to their clients. Market participants pool this information and develop their own consensus of economic forecasts. When the government releases an economic indicator, financial market professionals typically do not react to the release if the actual figure is in line with the consensus forecast. However, markets do react (and sometimes with much fervor) if actual figures are different from the consensus. Potentially, then, financial market participants can react twice to economic indicators—first, when forecasts are being formulated, and second, when the numbers are actually reported. For example, in late March 2005, economists predicted that nonfarm payroll employment would rise by 225,000 in March. The figures were to be reported on April 1, 2005. Financial market participants assimilated the information in making their trading decisions—the critical question was whether to expect a more aggressive pace of Federal Reserve tightening as a result of the news. The Bureau of Labor Statistics reported that nonfarm payroll employment, rose by only 110,000 in March, a fairly anemic rate. This news jolted the markets into rethinking their positions and reassimilating the new information. The news justified the belief that the Fed would probably continue to remove policy accommodation at a measured pace (25 basis points rather than 50 basis points). At the subsequent FOMC meeting on May 3, the Fed raised the fed funds target rate by 25 basis points.

Market participants are also likely to trade on rumors, which often make markets gyrate wildly, especially good rumors. Some rumors have basis in fact—others do not. Rumors concerning an economic indicator on the eve of its release, or within moments of its release, are common. Usually these rumors are unfounded. Back in the early and mid-1980s, such leaks did occur from time to time. Since the late 1980s, however, the Commerce Department and the Labor Department have gone to great lengths to conceal their figures until the stated release time, even though human errors still occur. On Thursday, November 5, 1998, Wall Street economist Ray Stone discovered nonfarm payroll figures on the Bureau of Labor Statistics web site that were supposed to be released on the subsequent day. He contacted key BLS officials to give them a chance to fix the error, but ultimately he reported the information to his clients before releasing it to

the media.<sup>5</sup> A few months later, the producer price index (another BLS release) was inadvertently released a day early as well. These BLS moments occurred in the early days of Internet postings. Security has tightened considerably since then and these 1998–1999 problems were the last major ones seen.

From time to time, snafus happen. The Federal Reserve accidentally posted the March industrial production release on its web site 15 minutes early on April 15, 2005. According to the Fed, this was due to human error.<sup>6</sup> On April 1, 2005, *Business Wire*, a news service paid by the Institute for Supply Management to release the surveys at their correct time and date, released the ISM non-manufacturing report instead of the *manufacturing* survey.<sup>7</sup> It was no April Fools' joke—just human error again.

## **WHO ARE FINANCIAL MARKET PARTICIPANTS?**

Financial market participants come in all shapes and sizes. Some have a short investment horizon while others take a long-term perspective. Some have a low risk tolerance while others have a high risk tolerance. Some investors are pure speculators, serving the function of intermediaries between those who borrow and those who lend funds. In addition to individuals in the financial services industry, financial market participants include investors such as homebuilders and manufacturers, who primarily invest in physical capital. Manufacturers who need funds to expand their facilities can issue bonds or sell equity in their companies by issuing shares of stock. Those individuals or companies with excess cash will choose to buy bonds or stocks.

Investors who sell funds in the financial market fall into three broad categories: traders, institutional investors, and individual investors. A great variety exists within these three groups. Traders are often speculative in their dealings, but even then show varying degrees of risk tolerance. Individual investors often take a long-term view—but not always, for age can factor here—and they can invest in high-risk growth stocks or lower-risk income securities. Financial markets are extensive. They deal in equities (stocks); bonds; money market instruments such as bankers' acceptances, certificates of deposit, or commercial paper; collateralized instruments such as asset-backed securities; tax-exempt issues; and foreign securities.

### **Traders**

Traders work in all markets—including stocks, bonds, commodities, foreign exchange, and money markets. They can trade in the pits of the exchanges

such as the Chicago Mercantile Exchange and the Chicago Board of Trade, or in the capital markets divisions of banks and brokerage houses. Depending on where they work, traders can buy and sell for their own account, their firm's account, or a customer's account. Traders can hold the security or shares of stock in inventory (go long) if they expect the market to increase in value. They can sell securities or shares of stocks that they do not own (sell short) when they expect the market to decrease in value. Bond traders will go long (buy bonds) if they expect bond prices to decline when inflationary expectations emerge. A similar process would occur with any money market instrument, tax-exempt instrument, or foreign security.

If you were to go to any trading room in a major bank or brokerage house, you would see each trader glued to several computer screens showing the values of interest rates, foreign exchange rates, commodity prices, and the stock market. These data allow the trader to move with the market at the blink of an eye. Traders react immediately to economic and political events. They start selling and buying positions as soon as the Commerce Department releases the news that real GDP grew or contracted during the quarter—or when the Labor Department announces that nonfarm payroll employment expanded or contracted. By the time most of the people in this country are still sipping their first cups of coffee, the typical trader has earned (or lost) his or her salary many times over.

As traders buy and sell bonds, certificates of deposit, bankers' acceptances, foreign currencies, stocks, and the like in reaction to the news, their trading floor economist gives an "instant analysis" of the economic release to the traders and the marketing staff, based on the complete government report. Will the increase in payrolls be large enough to provoke the Federal Reserve into tightening monetary policy or not? Will the rise in payrolls lead to an equally large rise in personal income and, therefore, promote consumer spending? Will the spending eventually become inflationary? These are questions for economists—but traders have already asked themselves the same questions and answered them without the benefit of the detailed analysis. The financial markets have reacted (or overreacted) in some fashion in the first five minutes of the numbers' release before trading floor economists have given their expert analysis.

### **Institutional Investors**

Institutional investors have different risk tolerances and time horizons for investments. For example, corporate treasurers usually deal with cash management issues. They might have an extra million dollars that needs to be invested over the weekend, for two weeks, or for a month. They must also determine the instrument in which they plan to invest: Treasury securi-

ties, federal agency securities, and commercial paper to name just a few. Other institutional investors may be mutual fund managers in charge of a portfolio of money market funds, bond funds, Treasury security funds, tax-exempt funds, and stock funds. Each of these fund managers might be limited in investment choices by the type of fund being managed. Thus money market fund managers might be interested only in 3- and 6-month securities such as CDs, commercial paper, or bankers' acceptances. In contrast, bond fund managers, interested in 5-, 10-, or 20-year securities, may divide their portfolio by risk—buying some Treasury bonds, some triple A-rated corporate bonds, and even some B-rated bonds.

Pension fund managers are major institutional investors as well. Depending on their mandate, they can buy debt instruments such as bonds and mortgage-backed securities in the short-term or long-term market or various stocks in the equity market.

If corporate treasurers have to make a decision on short-term investments of extra funds (for only a week or a month), then it makes little difference if rates are up or down by just one or two basis points. But they also must decide whether they should shorten or lengthen the maturities in their portfolios. Is the yield on the 10-year Treasury headed up or down? Should they invest now or wait for the next employment report?

### **Individual Investors**

All individual investors do not act in the same manner, either. Risk tolerances and saving propensities vary. An individual's motive to save and invest can be unlike that of everyone else in the market. An individual's demographic characteristics are determining factors in his or her investment style and purpose. Many individuals just out of college spend a good portion of their income on debt repayment. If they do save, their purpose may be to buy a car or a home within a few years, whereas a young couple that already owns a home may want to save for their children's college education. The time horizon in these two cases is different. In the first case, the new college graduate may want to remain fairly liquid as he or she accumulates a down payment for a car and waits for a good opportunity to purchase a home. In the second case, the young couple may know that it will be 5, 10, or 15 years before their children will use the funds for college. Saving and investing for retirement is an entirely different motive. For example, a 25-year old might invest the bulk of his or her retirement funds in a growth stock fund where a 45-year old may be more inclined to hold some bonds, and a 65-year old might look only for income-producing investments.

Options for small savers have increased dramatically in the past three decades, giving them nearly the same opportunities as wealthy individual

investors. Whether individuals are small savers or wealthy investors, however, they are still better off taking a long-term perspective in investment decisions.

Individual investors can get blindsided by overwhelming world events that play themselves out in the financial markets. As I watched the horror unfold on the morning of September 11, 2001, my thoughts could not help but focus on the impact this attack would have on financial markets immediately—and in the long run. Treasury securities were going to be in high demand because they are considered safe-haven investments. Stock prices were likely to fall—although security related stocks and defense stock shares were likely to rise. I suspected that gold prices would also increase, but the foreign exchange value of the dollar would decline in the near term. No matter how horrific the event, professional traders are trained to buy or sell securities. Individual investors are not.

Many world events cause financial market players to rethink positions on equities, bonds, and foreign currencies. Sometimes the New York Stock Exchange (NYSE) will close the exchanges so that investors do not make reckless decisions in times of turmoil. The NYSE closed from September 11–14, 2001. It closed early on March 30, 1981, when President Reagan was shot and on November 22, 1963, when President Kennedy was assassinated. However, the NYSE did not close when the United States invaded the Persian Gulf in 1991, an event that clearly impacted financial market behavior.

Despite improved technology and the proliferation of online computer services for the masses, a major difference between individual investors and the other two groups is access to data. Traders are hooked into all sorts of information services including newswire services, databases, and highly sophisticated computer systems that allow them to do anything from calculating investment alternatives to producing elaborate charts of economic indicators.

Institutional investors have access to these services as well. In contrast, individual investors are less connected to such resources because truly instant information services still cost money. Free online services such as Bloomberg and Yahoo! make information readily available—but even a few minutes of delay are precious in hot markets. The information is not always complete, so individual investors must make decisions based on incomplete data.

### **Did You Know?**

New York City Mayor Michael Bloomberg is indeed the founder and namesake of Bloomberg L.P., an empire of market information services.

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Individuals have direct and indirect links to the financial markets: As an individual, you may decide to purchase specific stocks, bonds, or even CDs at the local credit union or bank. You may also purchase shares in one or more mutual funds designed to make portfolio decisions for you. In this case, the mutual fund manager determines the quantity of stocks, bonds, and other money market instruments in the particular fund, which is part of a group of institutional investors. Similarly, if you contribute to a 401(k) plan at work, and these moneys are placed in a mutual fund, you are part of the institutional-investor crowd.

### **Investors in Physical Capital**

Financial market interactions involve two types of players: those who need funds for physical investment and those who provide the funds. Traders, as well as individual and institutional investors, are providers (sellers) of funds. Durable and nondurable goods manufacturers together with builders of single-family homes, apartment buildings, and commercial and industrial buildings produce physical investments that must be funded. They provide financial markets with shares of stocks and a supply of bonds. While individual and institutional investors may look for high yielding securities (and might favor a rising rate environment), investors in physical capital prefer a low interest rate environment to finance their borrowing. Often, you will find new bond issues brought to market when companies feel interest rates are bottoming out, or when they find “windows of opportunity” in a high rate environment. On the whole, investors in physical capital benefit from a low interest rate environment.

### **Government as Financial Market Participants**

State and local governments borrow to provide road and other services to their communities must issue tax-exempt securities. The federal government borrows to provide goods and services (military expenditures, education, health care) thereby giving the market a spectrum of securities ranging from 4-week Treasury bills to 30-year Treasury bonds. Like corporations, state and local governments may have some flexibility in the timing of their debt issues. The federal government does not have any leeway in timing the financing of the budget deficit. Because federal, state, and local governments also borrow funds, they prefer a low-interest rate environment as well.

This chapter suggests that practically every person and institution in this economy is a financial market participant in one way or another. Even though I kept the providers of funds separate from the users of funds, a

market participant can be both. You can borrow money to build a house at the same time that you invest funds in the stock market or buy bonds from your local municipality. Banks lend money to manufacturers and real estate developers, but they also purchase Treasury securities and tax-exempt municipal bonds.

### **KEY POINTS**

- The economic business cycle, the stock market cycle, and the interest rate cycle are three prime movers in the U.S. economy.
- Economic and political events cause financial market fluctuations.
- Primary financial markets include the equity market, the fixed income market, and the foreign exchange market.
- An economic or political event is just as likely to cause the financial markets to move in different directions as in the same direction.
- Market psychology is ever changing.
- Practically everyone in the economy is a financial market participant directly or indirectly, but investors are not homogeneous; this characteristic allows markets to develop.

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